



# PET RECYCLING COMPANY NPC T/A PETCO

(Registration Number: **2004/032347/08**)

## PET Industry Waste Management Plan

Shared-Cost Plan rev00

5 September 2018

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## 1. Executive Summary

The PET Recycling Company NPC T/A PETCO, is pleased to present this Industry Waste Management Plan for the PET Sector, as part of the Federation of Plans submission under PackagingSA.

Our Plan proposes the following:

1. That PETCO continues to be an **industry driven and financed** environmental solution for post-consumer PET plastic.
2. That PETCO continues to be financed by a **self-funded EPR Fee**. This model presents the lowest risk to all stakeholders and is the most cost- efficient solution for society.
3. That PETCO continues to be **governed** by a Board of Directors comprising the full value chain of the obliged industry.
4. Several measures are proposed to ensure ongoing engagement with the **Department of Environmental Affairs** and the **Waste Management Bureau**, including regular reporting and the establishment of an **Advisory Board** on which the Department will be represented.
5. Extending the **product scope** of PETCO from PET Bottles to Edible Oil Bottles and Thermoforms as well as PET Strapping if necessary.
6. That PETCO will fund and conduct PET-specific activities as part of the Federation of Plans and, where appropriate, will also conduct multi-material activities e.g. equipping and training buyback centre SMMEs.
7. The setting of tonnage-based **targets** which are to increase Bottle, Edible Oil Bottle and Thermoform recycling rates from 65%-72%, 0%-39%, and 0%-35% respectively over 5 years of the Plan.
8. A **Transformation** Strategy that addresses all the elements in the recycling value chain and PETCO itself.
9. Increased recycling tonnages that result in **job creation** as a key outcome.
10. A total PETCO **budget** of approximately R1bn over 5 years.
11. A strategy that requires **members** to undertake measures to improve the recyclability of their products.
12. A comprehensive **National Awareness** programme improving awareness of PET recycling, sustainability, and the circular economy.
13. Continued support for the PET recycling chain via PETCO's **Market Demand** programme.
14. Continued support for **Collectors** across multiple interventions including training and equipment.
15. A **Municipal Support Programme**, where we propose support for Material Recovery Facilities, training, and skills development, and a framework for longer-term separation at source rollout.
16. A comprehensive **Waste Picker and Informal Sector Support Programme**.
17. Funding for **Separation at Source** accessible by municipalities, collectors, waste picker groups/co-ops and other entities.
18. Ongoing Beach and River **Clean-ups**.
19. An **EPR Best Practice** programme that addresses the waste hierarchy, industry and stakeholder collaboration, research & development, and design for recycling, amongst others.
20. Addressing the **regional secondary resource economy**.

PETCO looks forward to engaging with stakeholders on these proposals.

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## 2. Shared-Cost Plan

PETCO is putting forward two Industry Waste Management Plans in response to the call for Industry Waste Management Plans.

This first plan is our “Shared-Cost” plan submitted under the Packaging SA Federation of Plans. The Federation of Plans submission is PETCO’s primary submission.

The secondary submission, our “Full-Cost Plan”, is a contingency plan to be implemented if, for whatever reason, the “Shared-Cost” Plan is not implemented.

### 3. What is PETCO?

PETCO is the trading name of the PET Recycling Company NPC South Africa, a not-for-profit company incorporated in 2004. PETCO is an industry-driven and industry-financed environmental solution for post-consumer PET and is the PET Industry's first joint-effort to self-regulate post-consumer polyethylene terephthalate (PET) recycling.

Funded by a voluntary EPR Fee paid by producers who purchase PET resin, PETCO has made a sustained and positive impact on PET recycling in South Africa.

PETCO is Extended Producer Responsibility (EPR) in action. Producers of PET Bottles have voluntarily taken responsibility for their own products and ensured that their impact on the environment is minimised, whilst creating jobs and positively contributing to South Africa's economy.

#### A Track Record that has Delivered Results

To date, South Africa has one of the highest audited PET Bottle recycling rates in the world. PETCO grew purchases of bottles for recycling from 9 800 tonnes in 2005, to 93 235 tonnes in 2017. This corresponds to bottle recycling rates of 16% and 65% respectively. The local beneficiation of post-consumer bottles has grown and is a valuable driver of local job creation. Only a small percentage (approx. 4% in 2017) of post-consumer bottles are exported for processing elsewhere.

From one recycler in 2005 to six recyclers in 2017, PETCO has supported the growth of the recycling industry, resulting in approximately R1bn of re-processing infrastructure investment in PET recycling to date. Thousands of entrepreneurs have been trained and hundreds of SMMEs were supported with personal protective equipment, scales, cages, trailers and baling machines. Our stable cash flow and ability to quickly respond to changing circumstances has stabilised the value chain, allowing growth.

PETCO has worked with countless municipalities, schools, local NGOs, international organisations and South African government officials, as well as other Producer Responsibility Organisations, to make interventions across the value chain and over the length and breadth of South Africa.

These results have been achieved through partnerships with businesses, large and small, organisations and numerous individuals, making a tangible positive impact on the lives of South Africans, contributing significantly to the economy, minimising the impact of post-consumer PET on the environment and minimising the burden on the state by diverting this PET waste from municipal landfills.

PETCO is well-placed to continue delivering results in this next stage of South Africa's environmental legislation i.e. mandatory Extended Producer Responsibility for packaging products.

#### What Lies Ahead

The task ahead of us is framed by the requirements of the Section 28 notice for Paper & Packaging, published by the Minister of the Department of Environmental Affairs on 6<sup>th</sup> December 2017<sup>1</sup>.

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<sup>1</sup> <https://www.gov.za/documents/national-environmental-management-call-prepare-and-submit-industry-waste-management-plans>

These requirements are broad and challenging. PETCO has a record of accomplishment and experience that gives the organisation a firm foundation and the expertise to tackle these challenges with the renewed commitment of stakeholders and the backing of Section 28 EPR legislation.

The challenge of tackling waste and entrenching economic transformation is a societal issue requiring all stakeholders to play their part. In this proposed Industry Waste Management Plan for the PET Sector, PETCO sets out its plans for meeting the requirements of the Section 28 notice.

### The Format of this Document

In this document, PETCO sets out the proposed governance structure of PETCO NPC, the scope of products the Plan will cover, and the targets the organisation aims to achieve as well as details of the budget and a funding strategy.

The organisation’s approach to Transformation is also covered, this being a pivotal requirement in the South African context.

The “nuts and bolts” of the Plan are contained within several programmes which are intended to run for the duration of the Plan and are presented here.

The remainder of the Plan sets out PETCO’s Regional Economy Approach, Stakeholder Roles and Responsibilities, and Key Assumptions.

The final part of the Plan sets out the reference to specific items as listed in the Section 28 Call for Industry Waste Management Plans and lists the Parties to this Plan.

### PETCO’s Approach

This Industry Waste Management Plan supports the entire ecosystem of recycling, represented by the schematic below:



Figure 1: Activities across the product/recycling chain

PETCO has developed interventions for each point in the value chain. Some of these are continuations of what the organisation has been doing for many years, some expand upon existing work, and others are new proposals.

In this document, the full waste hierarchy is addressed. After reduction has taken place and products are best designed for recycling, PETCO then focuses on end-of-life solutions for PET packaging products, most notably recycling and the circular economy. This provides the best results in terms of landfill diversion and job creation, at the lowest cost to business and broader society.

## 4. Governance

### Board of Directors

PETCO's proposal for governance is that PETCO should remain a Non-Profit Company (NPC). This ensures that the maximum amount of funding is made available to implement the programmes and interventions detailed in this Plan.

The Board comprises PET producers as well as brand owners and retailers. This ensures that the performance of the EPR organisation is overseen by those with whom the Extended Producer Responsibility lies.

Each member of the Board is an elected representative of the sector and represents their sector (not their individual companies). Board positions are on a 3-year rotational basis, with existing and previous members able to stand for re-election.

There are two further Board-appointed positions. These positions are filled depending on the need and challenges faced by the organisation at the time. These may be representatives from the private sector, academia, government, consumer groups etc.

All Board positions (13 in total) are non-executive positions and are non-remunerated. Board positions carry with them fiduciary responsibilities as contained within the Companies Act, and Board members are not rewarded for their fulfilment of their Extended Producer Responsibility.

The PETCO Board commits to reflecting the Economically Active Population demographics by the end of the 5-year period.

### Advisory Board

We propose the formation of an Advisory Board. These positions will be non-remunerated and will not carry fiduciary responsibility.

The Advisory Board will consist of the CEO of PETCO, a representative of the PETCO Board of Directors, and senior representatives from the Waste Bureau, the Department of Environmental Affairs, the Department of Trade and Industry, South Africa Local Government Association and a representative from a Waste Picker Association (the latter on a rotational basis amongst organisations).

The Board will meet twice a year to ascertain progress of PETCO's Industry Waste Management Plan.

### Appointment of Management Team

The PETCO Board of Directors is responsible for appointing the Chief Executive Officer (CEO) who is accountable to the Board, as per the relevant Companies Act. The CEO in turn appoints the management team of PETCO. PETCO will commit to Employment Equity hiring practices to reflect the Economically Active Population of South Africa for new hires over the 5-year period.

### Appointment of External Financial Auditors

PETCO will continue to appoint external financial auditors on an annual basis as per the Companies Act.

### Appointment of Internal Auditors

PETCO will continue to procure the services of internal auditors for the sign-off of recycler tonnages.

### Reporting to the Waste Management Bureau

PETCO will report to the Waste Management Bureau (WMB) on a 6-monthly basis for the first two years, and then on an annual basis thereafter.

More frequent quarterly working group engagements with the WMB to co-ordinate and address issues facing recycling on a broader basis, e.g. collection infrastructure and national awareness, are detailed in the EPR Best Practice Section.

## 5. Product Scope

### Product Scope to date

Since 2004, PETCO's membership has consisted solely of PET Bottle producers i.e. those who voluntarily fund PETCO's activities and have produced products in PET Bottle form. The organisation has consistently sought to recruit broader membership.

In the past, PETCO's membership consisted of those in the beverage sector only. As an increasing range of products are being bottled in PET, the scope of members' products has changed to include various products in the food, household, and personal care sectors. Hence the document refers to PET Bottles rather than PET Beverage Bottles, as was the case in the past.

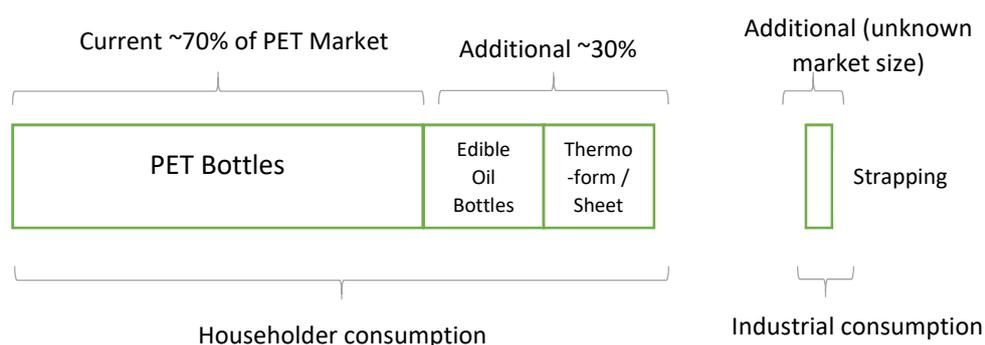
PET Bottles make up approximately 70% of the total PET market. Recycling statistics to date have reflected PET Bottles, but from time to time PETCO has reported on figures for the entire PET market, because the data is often requested.

### Proposed Product Scope

The Plan proposes that PETCO be responsible for all packaging products made of PET. This includes the existing product scope of PET Bottles i.e. soft drinks, water bottles, foodstuffs, household and personal care. PETCO's current membership comprises approximately 90% of the tonnage of this sector in South Africa.

PETCO is also proposing inclusion of edible oil products (e.g. cooking oil) and the thermoform<sup>2</sup> and sheet sectors (trays, blister packs etc). These sectors have not currently elected to be part of the voluntary PETCO model.

PETCO is willing to include selected producers of PET strapping (used for tying bales, stacks of bricks, poles and other such items) in the Plan. The organisation has already had a request from a strapping producer to be included in the Plan.



The solution for recycling of these additional products will lie with the current PET Bottle recycling chain. In many cases, they also form an end-use for PET Bottle recycling and provide a closed-loop solution.

<sup>2</sup> Thermoforming is a manufacturing process where a plastic sheet is heated to a pliable forming temperature, formed into a specific shape in a mold, and trimmed to create a usable product.

## 6. Integration with the PackagingSA Federation of Plans

PETCO is submitting this Industry Waste Management Plan as part of the Federation of Plans under PackagingSA.

PETCO's activities outlined in this Plan are the organisation's contribution to the Federation of Plans. PET-specific activities as well as multi-material activities are proposed.

PETCO will fund and manage the **PET Specific Activities** listed here, namely the Demand Support Programme and PETCO's own Admin and Operating costs.

PETCO is proposing a number of multi-material activities and will seek funding from the Federation of Plans to carry them out, either solely or jointly with other partners. These programmes are considered "Federation Activities" and are as follows:

- Collection, Sorting, Storage and Transport
- Municipal Engagement and Support
- Waste Picker and Informal Sector Support
- Cleaning Up
- EPR Best Practice

PETCO will fund marketing activities solely and jointly with the Federation of Plans, thus the **National Awareness** programme funded by PETCO will be considered a "**Federation Activity**".

## 7. Targets

Targets are presented here for ease of reference, although these are highly dependent on several factors listed in Key Assumptions; the most notable of these is the reliable access to funding without time delays, enabling cash flow to enable investment projects etc. to run on time with reduced risk.

### We recognise that:

Due to PETCO's efforts since 2004, PET Bottle Recycling rates in SA are already substantial for the PET Bottle Sector. The recycling rates for Edible Oil Bottles, Thermoforms and Sheet and other items will start off on a low or near-zero base.

For the job creation figures, PETCO has been using calculated figures up to this point. Targets and progress will be measured via a mix of calculation, estimates and actual data.

Transformation, participation in the economy, and moving small businesses and individuals up the value chain have not been formally tracked for reporting purposes. Some of this information is known and is being tracked, and will require additional data-gathering procedures in our execution of EPR.

**Targets all assume a 1 January 2019 start date pending DEA approval of this Plan.**

### Tonnages

Calculation of market tonnages consist of tonnages of raw material and preforms purchased and imported. PETCO will need to estimate and rely on declarations for the tonnage of imported finished goods until such time as systems are in place at member organisations to record this.

Recycling tonnages processed are based on independently audited figures of post-consumer PET purchases at the gate of recyclers. PETCO also includes the exports of PET waste and this data is obtained from the South African Revenue Service (SARS) statistics services.

For all tonnage targets, we propose either meeting the percentage or tonnage target in any year, whichever provides for year-on-year growth of the metric.

#### **PET Bottles** (in kilotonnes)

	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Waste Generated	169	183	197	213	230
Waste recycled	117	128	140	153	166
Waste Disposed	52	55	57	60	64
Recycling %	69%	70%	71%	72%	72%

*Table 1: PET Bottle tonnage targets*

### PET Edible Oil Bottles (in in kilotonnes)

	2019	2020	2021	2022	2023
Waste Generated	37	40	43	47	51
Waste recycled	3	6	10	16	20
Waste Disposed	34	34	33	31	31
Recycling %	8%	15%	23%	34%	39%

Table 2: PET Edible Oil Bottle tonnage targets

### PET Thermoform (in kilotonnes)

	2019	2020	2021	2022	2023
Waste Generated*	53	57	61	66	72
Waste recycled	3	6	10	16	25
Waste Disposed	50	51	51	50	47
Recycling %	6%	10%	16%	24%	35%

Table 3: PET Thermoforms tonnage targets

\*Note that volumes of imported finished goods may be significantly different from our estimates, thus changing market size.

### Job Creation

Over 5 years, we estimate that the number of jobs in PETCO-supported projects will grow from approximately 2 400 jobs to 3 110 jobs, thus creating approximately 710 new direct jobs. Income opportunities are estimated to grow by 75 000.

Job creation in the wider recycling economy is a notoriously difficult figure to measure, especially in the informal sector.

PETCO proposes to use 2018 as the baseline year, pending DEA approval of this Plan, and to measure progress against this baseline. There are many thousands of jobs sustained at collector level in Material Recovery Facilities (MRFs), buyback centres, and waste management companies that are not listed in this Plan as the numbers are unknown. PETCO will continue to work with researchers, PROs and other stakeholders to better survey and calculate the number of jobs sustained by recycling across material streams.

While pursuing substantial increases in employment within the sector, in its approach PETCO also seeks to minimise the risk of potentially harmful unintended consequences from interventions in the PET value chain, particularly to the lives and livelihoods of the most vulnerable.

Please note the methodology for calculating/estimating jobs in each entry below is explained in more detail in the following paragraphs.

Direct Jobs from PETCO activities	Methodology	PETCO 2018 Baseline	Number at 2023
Recyclers	Estimated/Surveyed	1 400	1 700
Collectors (PETCO Projects)	Estimated/Calculated	1 000	1 300
Material recovery facilities	Estimated	0	80
River and beach clean-ups (formal programme)	Estimated	0	30
<b>Total</b>		2400	3110

Table 4: Job creation targets over 5 years

Income Opportunities - wider sector	Methodology	2018 Baseline	Number at 2023
Collectors / Waste pickers (see calculation below)	Calculated	70 000	145 000

Table 5: Income opportunities created over 5 years

### Income Opportunities: Waste Pickers and the Wider Collection Sector

To date, PETCO has consistently used an “income opportunity” calculation figure based on the growth of PET tonnages recycled. Collectors and waste pickers handle multiple materials and their income streams are derived from multiple sources.

PETCO’s calculation assumes that one waste picker collects 200 bottles per day for 240 days per year (whilst also collecting other materials). This equates to 1.45 tonnes of PET bottles per year (at 33 000 bottles per tonne) and is one so-called “income opportunity”. PETCO proposes that this calculation method is continued as a basis for collection of all PET packaging products; however, we recognise that a better method of calculating jobs created should be pursued. We wish to transition informal waste picking to the formal economy by integration via interventions outlined in this Plan.

### Promotion of Small Business, Training & Development, and Participation of Historically Disadvantaged Individuals (HDIs)

Throughout our plan, we highlight transformation opportunities as part of our Transformation Strategy.

1. New recycling partners to be 51% black owned.
2. Existing recycling partners to achieve level 4 BBBEE.
3. At least one black-owned recycling company to be established.

4. A spend of 90% on black-owned companies / co-ops and individuals involved in PETCO collector projects.
5. Waste Picker spend to be almost exclusively on HDIs, although PETCO will not exclude non-South Africans.
6. Beach and River Clean-Ups to prioritise employment of HDIs.
7. HDI researchers to be given priority for PETCO's research spend, particularly at Master's level.
8. PETCO's Board and new staff hires to reflect the economically active population by year 5.
9. Other measures as highlighted throughout this Plan.

## 8. Budget

The cost of administering the PET Industry Waste Management Plan is presented below.

PETCO recognises that it is important to keep the administrative cost as low as possible, and that PETCO status as a non-profit company be maintained. This ensures that the maximum amount of funding is made available for recycling and that it flows to the recycling value chain and achieves the desired results.

**Note that this budget assumes a start date of 1<sup>st</sup> January 2019 pending DEA approval of this Plan.**

Our budget comprises the funding of our PET-specific programmes and of execution of multi-material programmes as part of the Federation of Plans, funded by the Federation.

Please see the *Integration with PackagingSA Federation of Plans* section for info regarding PET Activities and Federation Activities.

All in Millions ZAR	2019		2020		2021		2022		2023		Total	
Income / Revenue	R	117.7	R	175.2	R	199.9	R	241.3	R	288.7	R	1 022.9
<b>Expenses</b>	R	<b>117.7</b>	R	<b>175.2</b>	R	<b>199.9</b>	R	<b>241.3</b>	R	<b>288.7</b>	R	<b>1 022.9</b>
PET Specific Activites (subtotal)	R	108.7	R	165.8	R	189.9	R	230.9	R	277.7	R	973.1
<i>Demand Support</i>	R	93.6	R	149.6	R	172.7	R	212.5	R	258.1	R	886.4
<i>Admin and operating</i>	R	15.2	R	16.2	R	17.3	R	18.4	R	19.7	R	86.7
Federation Activities (subtotal)	R	9.0	R	9.5	R	9.9	R	10.4	R	10.9	R	49.7
<i>National Awareness</i>	R	6.0	R	6.3	R	6.6	R	6.9	R	7.3	R	33.2
<i>Collection (Collectors, Waste Pickers, Municipalities, Sep at Source)</i>	TO BE SOURCE FOM FEDERATION BUDGET											
<i>Federation funding contribution</i>	R	3.0	R	3.2	R	3.3	R	3.5	R	3.6	R	16.6

Table 6: PETCO 5-year budget

## 9. Financing

Adequate, long-term, secure and timely financing of PETCO is crucial to the organisation being able to fulfil its obligation of behalf of producers, fulfil the mandate of the Department of Environmental Affairs and sustain thousands of existing and new jobs.

PETCO recognises that:

1. Producers should fund activities carried out to fulfil their Extended Producer Responsibility obligations.
2. Most producers already fund these activities (as evidenced by PETCO's track record); a minority do not.
3. The mandate of the Department of Environmental Affairs to maintain and improve the state of the environment is urgent, whilst creating jobs and transforming the economy.
4. The financing mechanism could have a major negative financial impact on producers themselves, consumers of the products and society at large who may be left with the problems associated with waste.
5. PETCO is already self-sufficient in terms of raising funding and to date has not required any Government financial assistance.
6. PETCO does not wish to become a drain on the national fiscus and be reliant on state resources for its operation.
7. National Treasury does not ring-fence funding.
8. Any taxes imposed on the basis of the Section 28 EPR legislation would be collected via the South African Revenue Service, to be disbursed by National Treasury. Funds may then be passed on to the Department of Environmental Affairs, who may then pass them onto the Waste Management Bureau, who may then fund organisations such as PETCO.
9. National Treasury has indicated that with existing obligations (i.e. not considering the funding of PETCO), there is already an estimated revenue shortfall of many billions of rands over the foreseeable future. Ignoring the risk that funds flowing into National Treasury may be diverted to existing national expenditure obligations rather than back to Producer Responsibility Organisations (PROs) via DEA and the Waste Bureau, is irresponsible.
10. National Treasury is actively seeking additional revenue streams to fund the current deficit.
11. To date, two recycling schemes (Buyisa-e-bag and REDISA), which were not run or self-managed by the obliged industry, have both failed.

For these reasons, PETCO believes it to be a considerable risk should the organisation lose direct access to its funding mechanisms and be required to rely on state funding for its operation. The risk of substantial negative effect of additional taxes on producers and consumers, with consummate risk in PETCO not realising its funding requirements, is also very high. The risk to disruption and reduced income and job losses within the collection and recycling value chain is also substantial. The risk to livelihoods of informal pickers is significant, as those individuals have nothing to fall back on if recycling material flow ceases.

Another key issue for a self-managed funding model is that support of the PET recycling chain is very much dependant on external forces (oil prices, global trade etc.). As such, PETCO needs to be able to respond quickly to shocks in the market that may require local intervention. This flexibility and ability to respond quickly will be difficult if waiting for funding flows through Government departments.

PETCO is requesting specific exemption from a funding model where Government raises taxes on PET packaging products and PETCO is required to apply for funding from DEA or the Waste Management Bureau.

In noting the concerns of stakeholders regarding the ability for a private entity to collect government-mandated funding, we highlight that producers do not have to belong to PETCO and, *inter-alia*, pay an EPR fee to PETCO. Producers have the option of:

1. Belonging to PETCO;
2. Belonging to another approved EPR plan for PET (including their own approved Plan), and adhering to that Plan’s funding model or;
3. Adhering to any other payment mechanism that the Minister may create for the purposes of allowing producers to fulfil their EPR obligations should they not choose points 1 or 2 above.

PETCO proposes to continue raising an EPR Fee directly from its members. This amount is applied to the raw material and pre-form purchases, both locally produced as well as imported. PETCO has been able to do this successfully since its inception in 2004.

With regards to finished imported goods, importers will pay the equivalent EPR fee to PETCO based on the material composition of the product. Importers of finished goods may alternatively opt to pay the full fee to the Federation of Plans, who in turn will pay the PET EPR over to PETCO.

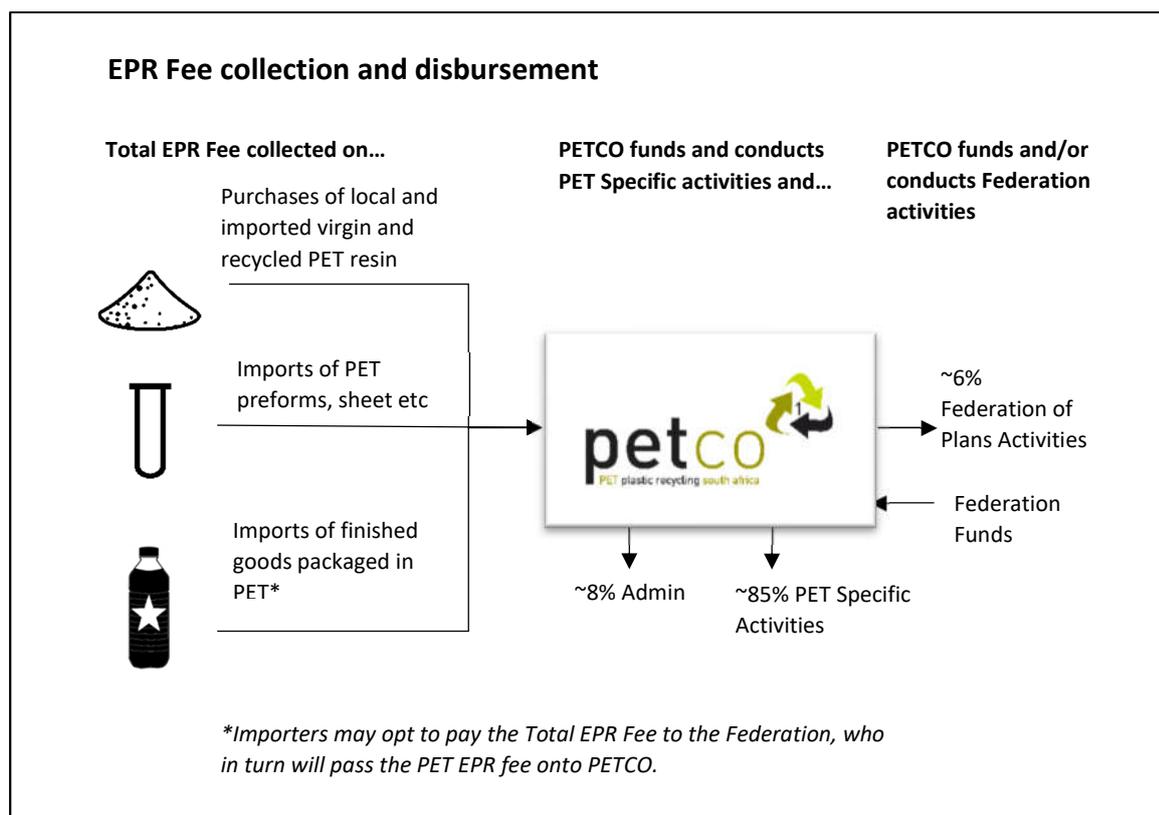


Figure 2: Funding flow of collected fees

	2019	2020	2021	2022	2023
<b>Total EPR Fee Bottles Per Tonne</b>	R359- R521	R476- R711	R475- R710	R473- R708	R471- R706
<b>Total EPR Fee Edible Oil Bottles Per Tonne</b>	R253	R388	R548	R767	R872
<b>Total EPR Fee Thermoforms Per Tonne</b>	R376	R510	R575	R807	R1126

Table 7: Differentiated Fees based on product category

#### Notes on the EPR fees:

1. Fees assume a start date of 1st January 2019 pending DEA approval of this Plan.
2. Fees are projected/estimated and will depend on the market size and economics of supporting the programmes at the time when fees are calculated.
3. Fees will only be collected on material for products sold for consumption in South Africa.
4. Range of EPR Fee for Bottles reflects known Demand Support parameters.
5. Demand Support parameters for Edible Oil Bottles and Thermoform are unknown at this stage, range cannot be depicted.

PETCO is proposing differentiated fees based on product category, broadly divided into Bottles, Edible Oil Bottles and Thermoforms. The reason for differentiated fees is that the Demand Support<sup>3</sup> required to support recycling of these products varies, and the recycling rate for each category varies as well. The recycling of Edible Oil Bottles and Thermoforms is costlier than that of beverage bottles; however, their recycling rates effectively start from zero tonnes, steadily growing to include a greater proportion of the total tonnage placed on the market. As their recycling rates approach those of PET Bottles, the higher cost of recycling starts to reflect in later years.

The EPR Fees collected on all products are jointly and evenly used to fund all programmes outside of the Demand Support Programme. In the Demand Support Programme costs are apportioned to reflect the differentiated cost of providing support to the PET recycling value chain for the product category. The methodology incentivises designers to improve the recyclability of their products in order to reduce the Demand Support required and thus reduce the EPR fee for their products.

As noted in the Member Requirements section, where designs of specific product lines prove to be consistently difficult to recycle, PETCO may raise the fee on those products within a category to compensate for the additional Demand Support they require. An example may be bottles that are highly pigmented, or that have labels that are difficult to remove etc. In all instances, PETCO seeks to provide producers with the opportunity to improve recyclability prior to implementing higher EPR fees. It must be stressed that PETCO's overarching mandate is to ensure the success of the PET Industry Waste Management Plan for the benefit of all its obliged industry members, broader society and the environment.

<sup>3</sup> More detail is available in the *Demand Support* section.

## 10. Membership Requirements

The role of engaged members in an EPR scheme is crucial. This is another factor why we believe a self-funded EPR fee collection is so important. Members are more likely to be active and engaged where they see a direct link between their actions, the performance of the PRO and the fees that they pay. This also results in products that are better designed to meet recycling criteria and sustainability considerations.

### Payment of the EPR Fee

This is also described under the *Budget* section.

Those companies who purchase PET Resin (both virgin and recycled) or preforms/sheeting will pay the EPR fee to PETCO on a rand/tonne basis, as has been happening since 2004 with our voluntary members. Our voluntary members represent approximately 90% of the volume of the PET Bottle market in South Africa.

Those who import finished goods (such as retailers) will pay the equivalent fee on those products on a rand/tonne basis of the weight of the packaging portion of that product. We understand that many who import finished goods may not have the systems in place currently to accurately track or measure the PET content of goods. We propose that for the first 3 years of the PET Plan's implementation, the importers of finished goods declare the number of products and weight of PET packaging imported and pay the EPR fee on this declaration. Importers may alternatively opt to pay these fees to the Federation of Plans, who in turn will pass the relevant funding to PETCO. This will allow for systems to be put in place to record the packaging composition and payment to PROs more accurately for the remaining 2 years of the Plan, and the years thereafter.

Differentiated fees will apply to products that are more difficult to recycle e.g. thermoform and sheet products, edible oil bottles and bottles which have pigment or difficult to remove labels.

### Product Design

This is further described in the *EPR Best Practice* section.

Members who have difficult to recycle products, or whose products by the nature of their design are deemed to undermine the success of the PET Plan, will be required to provide PETCO with a plan of how the design of these products will improve in terms of their recyclability. This plan must include timeframes and milestones. Failure to improve the recyclability of products may result in higher EPR fees applied to these products to ensure they receive the necessary financial support in order to be recycled.

Members who regularly introduce new products which are difficult to recycle may have higher EPR fees applied to all their products to ensure that the necessary financial resources to recycle those products are covered.

## Product Labelling

In some cases, such as with thermoforms, there is no recycling economy in place, and one will need to be developed. This will require differentiation of recyclable vs non-recyclable products. Recyclable thermoform products will need to carry a logo or other marking that is easily identifiable by consumers and collectors to ensure they enter the recycling stream, and that non-recyclable products do not enter the stream. This labelling requirement will also carry an additional accreditation process and carry a license fee – the latter to cover the costs of the auditing and accreditation process. PETCO will develop this labelling together with its members and other PROs under the Federation of Plans.

For other products, we will work with our members to adopt on-pack recycling information, such as the On-Pack Recycling Logo (OPRL) or similar systems that are currently being carried on some South African products. This labelling system informs consumers about whether an item is recyclable or not and, if so, how to recycle it. Such information is more useful than having consumers remember Polymer Identification codes or other such systems which don't necessarily reflect recyclability. Below is an example of such labelling by one of PETCO's current retail members, Woolworths.

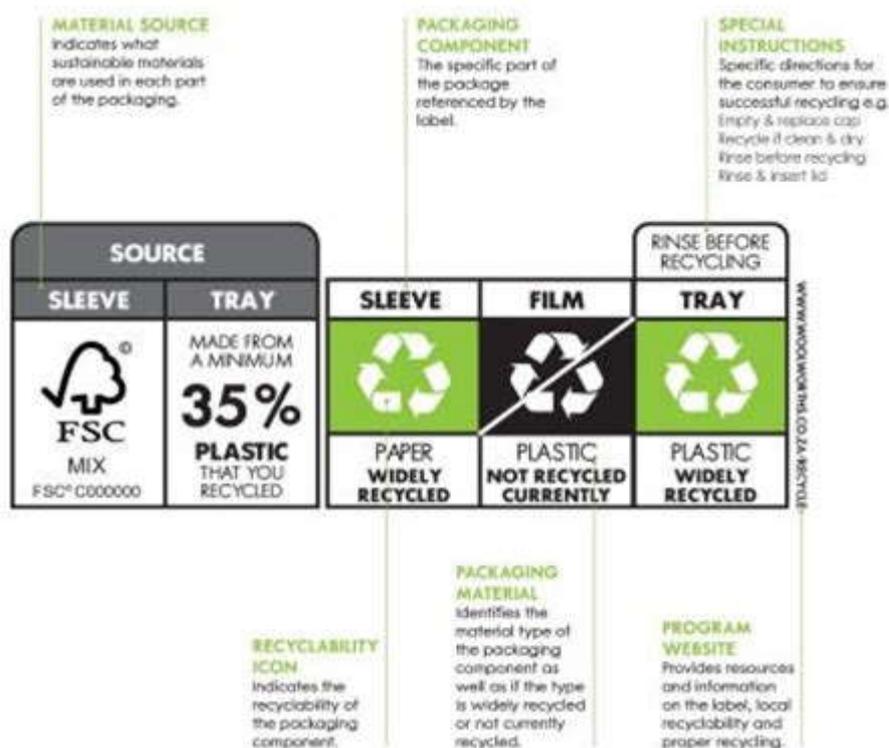


Figure 3: Example of on pack labelling

## Member Plans and Targets

Under the PET Plan, producers who are members of the PETCO Plan may need to produce 5-year plans detailing individual efforts with regards to reduction, design for recycling, use of consumer labelling, and use of recycled material. The application of such a requirement will be determined by the impact of a product's design on the recycling sector.

These plans will have targets and will be periodically reviewed by PETCO to ensure members are contributing to the overall success of the PETCO Industry Waste Management Plan.

Consistent failure to meet objectives or show significant improvement may result in PETCO undertaking a number of corrective measures.

## 11. Transformation and Enterprise Development

Transformation is an imperative in the South African economy. PETCO's approach is to promote transformation across the recycling value chain and into the wider EPR scope of work.

PETCO recognises that a diverse range of people have value to add to the collective development of South Africa, and all should have equal opportunity to participate in its development. This will ensure robust and sustainable growth of the recycling economy and will serve to support a broader cross section of South Africans, particularly the historically disadvantaged. This is in line with the National Development Plan.

### Transformation Strategy

The Transformation Strategy seek to achieve the following goals:

- Increase employment (FTEs, Decent Work, HDI, Women/Youth/Disabled);
- Increase the number of SMMEs;
- Increase employees of existing SMMEs;
- Strengthen capacity and motivation, and increase participation of additional stakeholder partners; and
- Contribute to GDP.

Our Transformation Strategy is to look at every component of the recycling value chain and to ask how we can we drive transformation.

Throughout the plan, additional transformation opportunities are highlighted.

### Recycling

A key aspect of transformation in this PET plan is to assist with the establishment of a new, black-owned recycling business. The nature of PET recycling is that they are large-scale, capital-intensive businesses.

To maximise the chance of success of a new, black-owned (at least 51%) recycling business, PETCO will seek a partnership with the DTI's Black Industrialist Programme with PETCO as the Subject Matter Expert to secure the necessary capital outlay for such a company. The Industrial Development Corporation (IDC) has also expressed an interest in this project.

PETCO will require all new recycling partners to be at least 51% black owned to qualify for the Demand Support Programme.

Further to driving the establishment of a black-owned company, PETCO will require all existing recyclers to put forward a transformation plan of their own and to reach a Level 4 BBBEE rating with milestones over the 5-year period. PETCO will require all new recycling partners to be 51% black owned to be eligible for the Demand Support Programme.

## Collectors

PETCO will continue to support the efforts of new and existing collection businesses and buy-back centres. Our approach is to provide training and equipment, as well as business support. PETCO has a package of interventions depending on the size of the collector, with each intervention designed to move the business up a level – from small, to medium, to large – in terms of monthly tonnage. We also ensure that collection businesses have a market to sell to via our Demand Support Programme. Steady and continued growth of demand underpins the sustainability and growth of collection businesses.

For this 5-year period, PETCO will concentrate most of its funding from the Federation on small and medium businesses and will target a spend of 90% on black-owned businesses. A key outcome of the collector support is to not only grow volumes collected, but to improve the quality of collected material as well. Furthermore, the Industrial Development Corporation has expressed an interest to consider investments in black-owned businesses throughout the value chain.

## Waste Pickers

Waste pickers form a valuable link in the value chain. Their needs are varied and urgent. No set of interventions can be crafted without their engagement and input. PETCO has a crucial role to play to strengthen and scale collaborations between the informal and formal parts of the PET recycling economy and to successfully integrate waste pickers into the formal recycling value chain.

PETCO will ensure continued growth of the PET recycling market and demand for waste pickers' products via our Demand Support programme. Without this continued demand, all other interventions are at high risk of failing.

Interventions are aimed at increasing waste picker collection volumes whilst operating in a safer, healthier environment. Apart from increasing incomes by supplying training and equipment, PETCO will need to address several additional challenges faced by waste pickers. PETCO is proposing Federation-funded programmes that provide access to market information, establishes more Waste Picker Associations, and provides a platform to access social services and health care such as mobile clinics. PETCO will provide information, mentoring and support to assist the transition from the informal to formal economies, seeking out collaborative opportunities to those who transition into the formal part of the PET economy.

Our interventions are designed to allow waste pickers to grow their tonnages and start accessing the interventions we have identified in our Collectors Programme, and thus start fully integrating their services into the formal economy. We feel this is the best way to uplift this sector of the economy.

## Separation at Source Funding

As part of the Federation of Plans, we are proposing that funds be raised by the Federation to contribute to separation at source programmes. These funds will be open to municipalities, waste management companies, collectors, and organised waste picker entities (e.g. in co-ops) who are running separation at source programmes. It must be noted that our approach is to help waste pickers organise themselves to the point where they can be considered Collectors who are "tender-ready" and able to render separation at source service to residents. A good example of this is the Vaalpark Separation at Source pilot project in Sasolburg, Free State. We will target a 90% spend on black-owned businesses where funding is provided to private entities including waste pickers.

All projects wishing to access the Separation at Source funding will need to demonstrate how the informal sector will be identified, affected and included.

### Skills Development

We believe transformation incorporates skills development as a key element to equipping South Africans with the necessary tools to empower themselves whilst enabling the recycling sector to grow.

Existing training programmes will be strengthened and structured into a multi-level, integrated skills development programmes from basic collector training to entrepreneurship, marketing and beyond. A particular emphasis will be placed on SMMEs and those transitioning into the formal sector. However, training will also target selected, strategic parts of the value chain such as design and technical manufacture.

Further to the training proposed in the Collections and Waste Picker programmes, and the Subject Matter Expert support that PETCO will provide to the black-owned recycling company, PETCO proposes several internship programmes to broaden the pool of skills available to the recycling and EPR industry.

PETCO will have its own internship programme to expose young professionals to the work that we do and our method of carrying out programmes with high impact and integrity. We will also facilitate internships with our recycling partners and collector beneficiaries to give people hand-on experience on the sorting and processing side of the recycling value chain.

We're also proposing several skills development initiatives with municipal officials, further detailed in the *Municipal Support* section of this plan.

### PETCO's Internal Transformation

PETCO currently has a level 8 BBBEE score.

PETCO's BBBEE score was verified in 2017 by Empowerdex and scored exceptionally well in Enterprise & Supplier Development, and Socio-Economic Development. PETCO's Skills Development Scoring could do with much improvement and the organisation is already targeting improvements in this area.

PETCO commits to reflecting the Economically Active Population for its Board and new staff hires by the end of the 5-year period.

All these measures will greatly improve PETCO's BBBEE scorecard rating.

## 12. National Awareness

PETCO aims to increase consumer participation in recycling activities, litter collection and awareness initiatives in order to increase support for the current and future collection and recycling of bottles and ultimately the number of new collectors.

Aware consumers can also help drive responsible and sustainable behaviour up the value chain, e.g. by demanding products containing increasing percentages of rPET and by demanding products that have been designed with recycling in mind.

PETCO's vision is that capacitated, empowered consumers are informed about PET and know that it is recyclable and safe to use; they understand the potential and value of PET and recycled PET (rPET); they use their influence and buying power to drive positive recycling behaviour by demanding products that contain recycled content and that are recyclable.

PETCO's Theory of Change (ToC) to achieve this vision is as follows: By having more consumers aware of recycling initiatives and opportunities for their participation, they will create an enabling environment for collectors (e.g. investing in collection bins; engaging in separation-at-source; supporting existing collections programmes), as well as potentially becoming collectors themselves. A ToC is important as it assists with monitoring and evaluation by articulating expected processes and outcomes that can be reviewed over time.

PETCO's primary focus will be to increase consumers' access to accurate information about PET recycling, both within the South African context and internationally, and increasing their knowledge of recycling and the mechanisms by which they can participate in the recycling process. By increasing their access to knowledge and information, PETCO aims to motivate increasing numbers of consumers to participate in collection and recycling behaviour.

PETCO recognises the importance of building national awareness for the long-term sustainability (socio-economically and environmentally) of the South African PET industry. Growing awareness and consumer education make it possible to move from a throwaway culture to a recycling culture.

We will continue our support for the #Thuma Mina Green Deeds campaign in partnership with the Department of Environmental Affairs to combat illegal dumping and littering and promote a clean and beautiful South Africa.

The National Awareness strategy with leverage synergies and funding with other PROs directly and via the Federation.

### School and University Engagement

PETCO will actively encourage, support and contribute to the education of learners (both secondary and tertiary) through national schools' recycling competitions and schools' collection projects undertaken with our partners. Furthermore, as part of a cohesive overarching outreach strategy, PETCO will visit tertiary educational institutes, schools, communities and environmental organisations to create awareness around the proper handling of plastics and PET recycling.

Programmes and competitions will be run at schools and universities, together with our recycling and sustainability partners, to instil in youth the importance of the sustainable utilisation of environmental resources, critical for efficient and effective long-term waste management.

Furthermore, PETCO will organise exhibitions and workshops that promote awareness of PET recycling. PETCO will also develop resource materials, such as fact sheets, videos, presentations and digital media for download and general consumption.

We are aware of and have experienced the great energy and enthusiasm of these bright young minds. We look forward to collaborating with institutions to help PETCO achieve its objectives in this Plan.

### Providing Awareness Materials and Toolkits

Utilising an assortment of communication tools and platforms, PETCO will promote awareness of PET recycling and the sustainable utilisation of environmental resources. This will be done both independently and in partnership with other organisations.

Fact sheets to support consumers and partners will be produced covering a range of topics (from a “Basic Collector’s Guide” to a “University Guide” to a “Guide to Starting your own Swop Shop”). PETCO will also work to support those involved in the development, design, marketing and procurement of PET packaging with specific guidelines on design to facilitate recycling.

### Clean-up Campaigns

PETCO will organise and support existing clean up and litter awareness throughout South Africa. Through key partnerships with Plastics|SA as well as other NGOs, local business, government agencies and municipalities, specific clean up campaigns will be organised and promoted in targeted areas across the country. PETCO will provide funding towards necessary equipment and supplies for these clean up campaigns, such as bags, to support recycling activities. PETCO will also, through our partners, support the collection of waste materials once these clean up campaigns have been completed. We will encourage the implementation of split bag clean-ups to separately collect recyclable and non-recyclable items.

Note these campaigns are in addition to the formal, ongoing clean-up efforts listed in the Cleaning-Up section of this Plan.

### Consumer Incentives

PETCO will investigate incentives to encourage further participation in clean-ups and other community activities, such as providing airtime and other reward-based systems.

### National Consumer Awareness Strategy

Ultimately, the PETCO National Awareness Strategy needs to result in shifting the behaviour of the South African consumer towards embracing more sustainable practices. Awareness and motivation must be coupled with an easy pathway to bring about the desired change.

Our National Awareness Programme lends itself to collaboration with other PROs and the Waste Management Bureau via the PackagingSA Federation of Plans as well as initiatives from other private and public-sector organisations. One of the key aspects is the leverage of partnerships with municipalities and separation at source contractors, as every S@S programme requires direct, targeted awareness raising to the participants (which includes awareness material etc., which

municipalities are currently funding) to be successful, and there is an opportunity for leveraging partnerships here, specifically with municipalities.

By creating awareness and unlocking collections, this improves the supply of PET (and other materials) into the secondary resource system.

Awareness campaigns are carefully designed, planned and executed to achieve the greatest impact and achieve specific objectives. In the case of PETCO's awareness programme it has also been designed to leverage the work being done in other programmes.

PETCO has extensive experience in running awareness campaigns for the last 14 years with much success, consistently achieving multiplier effects on our advertising spend. PETCO's Awareness Programme will build on this success and covers the following channels:

- Publicity – via Digital, Print, Radio and TV exposure;
- Newsletters to an ever-growing database;
- Dissemination of Facts Sheet and 'How To' Guides;
- Running competitions across various platforms;
- Traditional advertising campaigns;
- Promotional events;
- Clean-up campaigns; and
- Implementation of Reverse Vending machines together with partners.

Various Schools Programmes form an integral part in the education spectrum of the National Awareness Programme.

The programmes and initiatives can be broadly grouped into one of three areas, each supporting the other and linking overall to PETCO's EPR and ED objectives.

## 13. Demand Support Programme

### Introduction

For any recycling economy to function, there must be demand for the materials collected.

This fundamentally underpins all other efforts.

Without a demand for the material, it will not matter how much separation at source takes place, how high the participation rates are, how recyclable the products are, or what transformation strategy is implemented.

Ensuring market demand is the key component of our Plan and ensures that collectors and waste pickers have sustained demand for their products at market-related prices. The key stakeholder in our Plan must then be the PET Recyclers i.e. those companies who buy post-consumer PET and re-process these materials to make new products. PETCO currently works with all six PET Recyclers that operate in South Africa.

A successful Demand Support Programme is what allows the recycling value chain to thrive. Recyclers, Waste Pickers and Buyback Centres all require good steady demand for their products. Recyclers benefit because they know there is a “safety net” which will allow them to keep buying bottles even during downturns – this equally benefits waste pickers and collectors.

### Members’ role in Demand Support

When it comes to foodgrade-recycling, PETCO’s members have an important role to play. In purchasing rPET, this drives the demand for the collection of post-consumer PET, and therefore reduces the level of funding required to address post-consumer PET waste.

### The Challenges Recyclers face

Recycling is a commodities-based business. Recyclers of PET sell products whose price is governed by global commodity prices. As such, there are periods when it becomes uneconomical to recycle, and recyclers are forced to lower prices for their raw materials (e.g. post-consumer bottles) to such a point that collectors may stop collecting them.

### Financial Support of the Recycling Value Chain

Since PETCO’s incorporation, the organisation has supported the growth of the recycling value chain enabling recyclers to weather economic downturns. A variety of support mechanisms are used and are premised on assisting recyclers more when times are bad, and less when times are good – thus ensuring the organisation does not over- or under-support recycling, and that the financial spend remains efficient and effective.

Support for recyclers is provided on a long-term basis of 5-year contracts. All products within the same end-use market (e.g. fibre, foodgrade, etc.) receive the same support across recyclers to ensure that the playing fields are level. Support is provided on the basis of post-consumer PET purchased, and funds are received by recyclers in arrears and upon fulfilment of their own recycling targets in terms of PETCO’s mandate.

This “safety net” allows recyclers to plan ahead, build capacity and invest in collection networks, whilst still paying market-driven rates for collected material. This support is crucial to maintaining networks during periods of economic downturns, which recyclers often face. This support is what has helped collectors and the informal sector, including waste pickers, to grow their market from under 10 000 tonnes in 2005, to approximately 100 000 tonnes in 2018, whilst also fetching higher prices for their material.

Collection of PET packaging products will continue to take place on a national basis.

**PETCO has currently contracted with all of South Africa’s PET recyclers to provide recycling services and are in the process of renewing these contracts for the next 5-year period to coincide with the period of the Industry Waste Management Plan.**

**Transformation opportunity:** PETCO is planning to assist with the establishment of at least one black owned recycling by the end of the 5-year period. PET Recycling is characterised by high capital costs. PETCO will need to engage with organisations such as the Department of Trade and Industry’s Black Industrialists Programme for capital and with existing recyclers for skills development and technical partnerships. As per our Transformation Strategy, we will require all new recycling partners to be 51% black-owned, and all existing partners will need to achieve a Level 4 BBBEE rating with milestones by the end of the 5-year period.

### Development of End-Use Markets

A growing recycling economy benefits from increasing its mix of end-use markets. Since 2005, we have had a large end-use market in the polyester fibre sector (used for making shirts, duvets, pillows, roof insulation, etc.). Since 2009, the foodgrade and bottle-to-bottle sector has been growing, which now accounts for almost half of all processed tonnage. South Africa now has two bottle-to-bottle foodgrade factories, an outstanding achievement globally.

Foodgrade and bottle-to-bottle recycling allows PETCO to move to a fully circular economy by keeping PET, as a resource, at maximum value; however, alternative end-use markets still need to be developed to ensure a home for all PET packaging products, as not all are suitable for closed-loop recycling.

It is worth noting that the production of thermoform packaging (e.g. trays and punnets) in South Africa has for a long time been an end-use market for PET Bottle recycling, and contains high levels of recycled content – thus reducing the need for virgin raw materials to begin with.

### Circular Economy

The recycling of PET packaging has grown steadily over the past 14 years, and coupled with that has move a proportional shift towards recycling PET back into foodgrade material i.e. back into packaging. This is the essence of the circular economy where resources are returned to the system from which they originated. We see continued growth of foodgrade recycling being where the growth in recycling tonnages will come from and thus make the PET packaging production and end-of-life chain become ever more circular.

## Alternative Mechanical Recycling Developments

PETCO supports an increasing number of PET strapping producers, as well as recyclers producing PET tiles, hair extensions and other such products.

The production of pallets for the fruit export market is an exciting potential development, as it has the potential for fairly large volumes of recycling of more difficult-to-recycle bottles (such as heavily pigmented bottles), as well as thermoforms and sheeting which have not been recycled to date.

The Industrial Development Corporation has expressed an interest to partake in the development of new end-use products.

## Energy Recovery

Utilising post-consumer PET for energy recovery does have its place in the waste hierarchy. Whilst PETCO recognises that this is a solution of last resort, the organisation notes that adoption may be necessary and we may need to initiate it during the 5-year plan.

PETCO's plan for all products is to drive their development to be more fully recyclable (e.g. design for recycling); however, some products, particularly with regards to imported finished goods in thermoforms, sheets and blister packs may be more suitable for energy recovery than for recycling in the short-term. Such a project will be done jointly with other plastic and packaging streams as the energy recovery facilities use a range of input material.

For the first 5 years of the Industry Plan, PETCO will avoid utilising waste to energy if at all possible, as it falls lower down the waste hierarchy, and the organisation will seek to achieve its targets without utilising this methodology.

## Recycler Numbers and Registration

By supporting recyclers via service contracts, PETCO has them registered as vendors.

There are currently six PET recyclers in South Africa, and it is estimated that this will grow to between seven and nine, depending on the size of recyclers that are established and by how much existing recyclers may be able to expand their operations.

## Waste pickers and Demand Support

Should a mechanism exist that allows for direct payment of waste pickers for their service, and it is shown to be effective, then we may consider diverting some of the demand support funding from being channelled to recyclers and channel it instead to waste pickers as "Supply Support".

## 14. Collections, Sorting, Storage and Transport

PETCO is proposing running Collection, Sorting, Transport and Storage Programmes funded by the Federation and builds on years of experience through a variety of activities also known as Visible Recycling Projects.

The Industry Waste Management Plan proposes to build on these successes, experiences and networks to amplify the work in this sector and provide a holistic approach to the full value chain.

Together with our public and private stakeholders, PETCO sees the role of training and mentorship of collectors as being critical, as well as supplying entrepreneurs with equipment specifically to improve their working conditions and assist them to grow and sustain their businesses.

These programmes focus on the development of HDI-eligible entrepreneurs and SMMEs but does not exclude non-HDI individuals and businesses. We recognise the value of all businesses and the employment opportunities they create when their businesses succeed and grow.

The combination of training, provision of equipment & infrastructure, and ongoing support allows us to assist entrepreneurs to move up the value chain and become sustainable businesses able to supply the growing demand for recyclable material.

Incubation refers to the long-term support offered to SMMEs. The primary difference between business development support (BDS) and incubation is that incubation is often more extensive and provides the businesses with resources essential for operations, whereas business development support, although as effective, provides support at arm's length.

PETCO and its partners offer the following services to SMMEs:

- Mentorship and capacity building;
- Access to finance;
- Networking opportunities; and
- Development programmes.

### Collector Training

PETCO'S Training vision is to make quantifiable and sustainable impact on the economy by promoting viable growth of small enterprises focusing on youth and women.

Together with our PRO partners and the International Labour Organisation, we've developed a training programme that takes entrepreneurs from the very basics of waste collection and sorting, through to more advanced concepts of business development and marketing.

The training occurs over 3 phases and takes several years. Accredited training providers are used, prioritising the appointment of service providers that are historically disadvantaged.

## Equipment & Infrastructure

The provision of equipment to entrepreneurs and SMMEs follows the same pattern as training. When collectors are processing small volumes, PETCO provides them with basic equipment such as Personal Protective Equipment, Scales, Trolleys and Cages.

As the business grows, PETCO provides trailers or small balers. As they grow even further, high potential-growth entrepreneurs and SMMEs are provided with weighbridges or large balers.

## Ongoing Support

SMMEs are closely monitored to track the recycling volumes and to determine whether they are growing. This helps PETCO identify barriers to growth and intervention strategies. Interventions range from providing further training or equipment, speaking to recyclers about off-take of material, or working with local municipalities or other authorities where issues occur regarding land or waste access.

All of the above strategies will be incorporated into PETCO's existing research, auditing and reporting activities, and supplemented where needed. Close monitoring of the SMMEs will reduce the failure rate and mismanagement of projects. PETCO will build a M&E Framework for participants in the programme, in which KPIs are defined and against which the organisation can measure the performance of the business.

## Material Recovery Facilities

Material Recovery Facilities (MRFs) can be of the large, high capital-intensive variety (R250m+), or of the medium-sized capacity (R30m), or small buyback centres with sorting facilities (R7m).

The range, scope and nature of interventions requires co-ordination with municipalities over the five-year period, including a legal framework for intervention in Separation at Source Projects (discussed in the *Municipal Support* section of this Plan).

In the interim, our Plan for MRFs consists of allocating funds via the Federation for such interventions to be used to fully support a few MRFs, or more likely to partly fund multiple MRFs together with other PRO's under the Federation of Plans.

The Industrial Development Corporation has expressed an interest to consider investment in new or expanded MRFs.

## Integration of the Informal Sector

PETCO's capacity will be expanded to engage in a structured and sustained manner with the informal participants in the value chain. This will include:

- Developing meaningful, reciprocal, long-term relationships with other organisations and key role-players working in and with the informal sector as well as directly with participants in the informal sector.
- Leveraging the collaboration of strategic partners including PETCO members and recycling partners.

- Developing awareness, understanding and trust of PETCO and PETCO-supported projects within the informal sector.
- Establishing and improving processes for engagement with the informal sector to encourage and assist them to participate in and benefit from ED programmes.
- Providing information, mentoring and support to assist the transition from informal to formal.

All of our interventions with collectors, SMMEs and the establishment/growth of MRFs will require an assessment of the waste picker and informal sector activity in the area. PETCO will work with supported projects or waste pickers themselves to ensure that their work is included as part of the formal economy.

Where PETCO does not implement projects directly, but is aware of projects being implemented, the organisation will seek to do the same assessments to minimise the negative impacts on waste pickers and aim to improve their situation overall.

### Measuring Progress

The nature of waste collections means that collectors often work with a range of materials to remain viable. PETCO will collaborate extensively with other PROs to ensure measurement and reporting of job creation, transformation, and upliftment of the informal sector is completed in a way that ensures double-counting across material streams does not occur.

### Transporters and Storage Facilities

Transport of post-consumer PET waste does not require specialised vehicles or other infrastructure, and PETCO finds that many transporters of PET waste also transport other types of waste and goods.

As such, PETCO has no specific interventions for transporters, as the role they play falls within the space of national logistics and does not require special intervention or support from PETCO as an EPR organisation to fulfil its function or meet its mandate.

PETCO does not foresee that waste transporters or storage facilities will need to register with PETCO for the Plan to be effective, but they may do so if they wish.

### Number of Collectors, Sorters and Storage Requirements.

It is quite difficult to know how many of these are required. With regards to collectors, they often work in multiple material streams, and the numbers that can be accommodated depends on the number that are established and how they grow, and what capacities each has. As mentioned, transporters are not solely transporters of waste, and storage facilities are largely unnecessary beyond that of the collectors and recyclers themselves.

## 15. Municipal Engagement and Support

### Background and Status Quo

Municipalities face challenges on many fronts including the fact that waste management has received relatively little attention and funding. The 2016 Community Survey from Statistics South Africa reveals that approximately 62% of households receive a weekly solid waste collection service. The remainder receive service via a central collection point or communal dump – or no service at all.

Basic waste management has a long way to go to ensure all South African residents and business are adequately serviced, and in the interim the issue of Separation at Source (i.e. the collection of separated recyclable material from households) must find its way alongside this.

An excerpt from DEA's Separation at Source Status quo report indicates that:

*“The outcomes of the municipalities” state of readiness assessment indicate that all the eight metropolitan municipalities are ready to implement separation of waste at source. From the seventeen (17) returned questionnaires from secondary cities, eight were found to be ready to implement S@S and the remaining nine (9) are not ready. The reason for the nonreadiness of the nine municipalities is attributed to the fact that collection is still not provided to the whole municipality, there are no bylaws on waste, there is no human and financial resources allocated to waste management.”*

Very few homes currently receive a Separation at Source service of any kind, but it is recognised that separation at source can yield better quality recyclable material in greater quantities. The main barrier for municipalities and private industries alike (and indirectly, by citizens and consumers) is the cost to do so.

Besides the cost, another issue that must be addressed is the legal aspect of who owns the waste at the household level, and who is responsible for it. Municipalities have the constitutional mandate to ensure that waste is collected and disposed of. Producers, via the Section 28 Call for Industry Plans from the Department of Environmental Affairs, will now have a legal obligation for the end of life solutions for that same waste at household level. There is potential conflict or overlapping of mandates in this regard.

### Engagement and Support Interventions

PETCO proposes the following initiatives and interventions to adequately address municipal support and separation at source over the short term (5-year Plan period) and the medium to longer term (5-10 years and beyond).

#### Development of a Municipality-Industry Post-Consumer Packaging Waste Framework

A framework to be developed together with the Waste Management Bureau, the Departmental of Environmental Affairs, the South African Local Government Association, and municipalities to:

- Clarify legal aspects of the various legislated mandates, include roles, responsibilities, and ownership
- Set forth methodology for how and when Separation at Source is implemented
- Identify the selection procedure and timeframes for implementation

This framework must be completed by the end of the initial 5-year period.

In the interim, we propose direct interventions funded collectively by the Federation of Plans, detailed below:

#### Provision of Material Recovery Funding and/or Infrastructure

As detailed in the Collection, Sorting, Transport and Storage section, PETCO proposes Federation funding for the provision of infrastructure and equipment for Material Recovery Facilities. The project funding will need to be co-ordinated with municipalities and the Federation of Plans.

**Transformation Opportunity:** MRFs to be run/staffed by HDIs.

#### Separation at Source Funding

PETCO proposes that Federation funding is set aside to contribute to separation at source programmes. These funds will be open to municipalities, waste management companies, collectors, and organised waste picker entities (e.g. co-op's) who are running separation at source programmes.

#### Training

We have seen a large appetite for training on recycling from municipalities. PETCO has had many engagements over the years, and we will continue this valuable practice where the need is identified.

Training of municipal officials equips them with knowledge of the industry, and how to better support collectors and the informal sector in their jurisdiction.

**Transformation Opportunity:** Training to be completed by BBBEE accredited trainers.

## 16. Waste Picker and Informal Sector Support

The role of the Informal Sector and Waste Pickers has been widely recognised as crucial for the recycling economy in developing nations.

### Waste Picker Integration Guidelines

The Department of Environmental Affairs are developing Waste Picker Integration Guidelines, due for publication in 2019. The guidelines will be consulted when co-designing the interventions and support for Waste Pickers and the Informal Sector.

### Recognition of Service

Waste pickers and the informal sector the world over, including in South Africa, make repeated calls for their work and service to be recognised.

The PETCO Plan formally recognises the role and service of waste pickers. Beyond the interventions listed below, working with DEA and the WMB to have waste picking recognised in relevant national statistics and data alongside other parts of the value chain, is a priority.

The role and service of waste pickers will also be integrated into PETCO's broader training and communication campaigns – the latter including Government, Business and Consumer campaigns.

A longer-term intervention with regards to recognition of service is to enable waste pickers to become “tender ready” and to service municipalities and the private sector for waste management services – thus deriving income both from the sale of material and the provision of service. The same applies to enabling waste pickers to access the Separation at Source Fund.

### Separation at Source Fund

PETCO proposes that Federation funding be set aside to contribute to separation at source programmes. These funds will be open to municipalities, waste management companies, collectors, and waste pickers entities (including organised groups) and individual waste pickers.

### Waste picker programmes

Programmes for waste pickers will be jointly developed with them, and will include interventions such as:

- Provision of training and equipment
- Providing platforms for access to social and health services
- Developing information sharing platforms (see below).
- Establishment of infrastructure hubs
- Piloting and assessing the direct payment of waste pickers for their service.

## Funding Research

The recent Waste Pickers Research Forum held in Pretoria in February 2018 highlighted the research already conducted regarding waste pickers and buy-back centres. It is clear that more research into this area is needed. Many projects with waste pickers may be pilot projects and researching the impact of these will be an important step in designing longer-term programmes.

**Transformation Opportunity:** Priority given to HDI Masters students.

## Access to Information

There have been calls for the price of recyclables to be fixed or regulated in some way. PETCO is not supportive of such measures, as they will be counterproductive and will harm the sound economic functioning of the recycling sector, ultimately to the detriment of all including waste pickers themselves.

However, it is recognised that the root of the issue is that Waste Pickers and the Informal Sector feel disempowered with regards to pricing and in some cases exploitation by unscrupulous operators may be occurring.

To counter this, and in addition to the upliftment measures in our Plan, we propose setting up an information sharing platform/desk, operated for and by waste pickers themselves. These measures will enable waste pickers to investigate international price drivers of local recycling. They will also be able to share advertised prices and compare them with the prices they are receiving based on their location, mix of materials and product type, allowing them to seek the best possible price from buyers of material.

The design of any such price information sharing will need to be done within the confines of competition law.

PETCO also proposes supporting waste pickers with access to information by providing for limited free Wi-Fi at selected buyback centres and facilitate other buyback centres with the same.

## Hosting Conferences

PETCO will assist with funding via the Federation for one Waste Picker Conference per year.

## Establishment of Associations

PETCO recognises that the South African Waste Pickers Association (SAWPA) is perhaps the most well organised and vocal association of waste pickers at this time. We are encouraged by their ability to represent the voice of their membership. We feel that more such associations should exist to enable better engagement with this sector, and propose to support organisations such as Groundworks and Wiego (via Federation funding), and others to continue their work in supporting waste pickers.

## Ring-Fencing Funding & Transparency

Transparency is a key factor of the PETCO PET Plan. PETCO recognises the sensitivity associated with waste picker projects.

PETCO proposes to ring-fence funding for waste picker projects. These funds will not be used for projects outside of the allocated budget line items without prior agreement from affected stakeholders. Note that ring fencing is proportional to PRO income i.e. if the PET market retracts, then PETCO's income retracts and all ring-fenced project budgets by necessity face retraction.

PETCO proposes regularly hosting forums with affected stakeholders detailing the project applications and requests we have received, how or why proposals were accepted or rejected, where money is spent and with whom, and for what purpose. PETCO will maintain records that can be inspected by known and established organisations that work with waste pickers such as WIEGO, ILO, Groundwork and academic researchers. This is over and above the access to such information available to the Waste Management Bureau and DEA.

## 17. Cleaning Up

The goal of Extended Producer Responsibility programmes is to ensure that there is minimal impact of products on the environment once consumers are done using them.

Well-functioning EPR schemes must go hand-in-hand with well-functioning and adequate provision of solid waste management services. PETCO is aware that solid waste management services are sorely lacking for a large proportion of the population. Even where such waste management is occurring, the end-point is often a poorly managed dumpsite, and not a sanitary landfill.

The end-goal of maintaining a clean and litter free environment is beyond the capacity of any one stakeholder, and each needs to do their part.

Cleaning up litter is an expensive process. The process of littering is both a failure of public education and of a lack of adequate solid waste management infrastructure. However, it is recognised that these failures will not be fixed in the near future and litter continues to pose significant challenges to our environment. Plastic litter in particular accumulates in the environment and so must be dealt with urgently.

PETCO's first aim is to negate the chance of litter occurring, by ensuring that products are responsibly disposed of and recycled. Where this does not occur, there is the chance that products will end up in the environment. This is often manifested either on roadsides (plastic bottles being a popular method of "on-the-go" refreshment and sustenance), as well as along river beds and on beaches. The latter usually occurs after heavy rainfall dislodges products further upstream in rivers. There is a responsibility for industry to deal with this litter whilst working with stakeholders to improve waste management overall.

Clean-up campaigns staffed by volunteers are an important aspect of this effort; these will be dealt with under the Awareness Campaigns section.

### Formal River and Beach Clean-Up Activities

Our Plan proposes the ongoing Federation funding of management and clean-up of rivers and beaches for the full 5-year period of the Plan, focussing on hotspots that have been identified as particularly troublesome. PETCO currently does provide funding to PlasticsSA for cleanup activities, however a more formal programme for ongoing clean-ups with dedicated funding is proposed.

This will be combined with consumer education targeted at households in these catchment areas believed to be the source of pollutants. These interventions will be combined with our Municipal Support and Collection programmes to set up facilities to divert waste from river catchments into waste management or recycling streams.

**Transformation and Job Creation Opportunity:** Work to be carried out by employed members of the communities within catchment areas. Black-owned contracted companies to be prioritised.

## 18. EPR Best Practice

PETCO's EPR Best Practice Programmes combines several new and existing initiatives that assist stakeholders with best practice and foster technical excellence. The EPR Best Practice Programme is a platform which gives effect primarily to ensuring the priorities of the Waste Hierarchy are integrated into the generation, recycling and recovery of PET Waste, as well as furthering the Transformation Agenda.

This programme lends itself to collaboration in conjunction with other Packaging Waste Streams via the PackagingSA Federation of Plans.

The Waste Hierarchy describes that Waste should be dealt with in the following order: 1) Reduction of Waste in the first instance; 2) Re-use; 3) Recycling; 4) Recovery and, finally, 5) Disposal to landfill

PETCO recognises that in some cases, the best Environmental Option may not be in line with the Waste Hierarchy. Packaging plays an important part in food preservation and carbon reduction. In some cases, it may be more environmentally sound to maintain a minimum pack weight than to ensure it can be recycled. Similarly, it may be that it is better to reduce the recyclability of a pack to improve the shelf-life of the product it contains and, in so doing, reduce the environmental footprint. Such factors must be balanced on merit and these are accounted for in the PETCO Plan.

### PET Internship Programme

This programme is another key component of our transformation strategy. Increasing the pool of skilled individuals is necessary to reach long-term transformation goals. Interns who are Historically Disadvantaged Individuals will receive priority placements.

### PETCO Internship

PETCO internships offer the organisation the opportunity to provide young graduates and new professionals with the opportunity of spending 9 – 12 months gaining work experience and valuable insight into the functions of an EPR organisation and the recycling sector in South Africa.

### PET Recycler and Collector Internships

PETCO will work together with the projects we support to identify internship opportunities. These interns will gain valuable experience in the recycling value chain.

### Reduce

Producers are incentivised to reduce the weight of PET packaging (also known as light-weighting) as it saves on material and transport costs. PETCO will continue to engage with Producers on where light weighting may or may not impact the viability of measures further down the value chain. These engagements will continue both on an *ad hoc* basis and within technical working groups, detailed below.

PETCO will encourage Life Cycle Assessments on products to assist the industry to establish optimal light-weighting whilst allowing the recycling industry to remain viable.

## Re-use

In the context of PET packaging, re-use is generally one of the more limited options to do on any large scale. Even when bottles or trays are re-used for another purpose, it is often not long until the re-used item makes its way into the waste stream. Re-use awareness is detailed further in the Awareness programme. On a small commercial scale, re-use may be possible and viable in rural areas where high transport costs and a high demand for end-use products makes re-use viable. There is limited use of returnable PET beverage products in the Western Cape, and these will continue for the foreseeable future.

## Recycle

The main thrust of PETCO's Industry Waste Management Plan is to build on the momentum and success of our Recycling Programme. We have already worked extensively on "Design for Recycling Guidelines" to assist the Industry in designing products that make them viable to recycle. We will continue to update and distribute these guidelines and include standing agenda items in the technical working groups to address issues as they arise and promote best practice and innovation in this area.

To further enhance the recyclability of products, PETCO has begun developing a Product Grading System for PET packaging products which will be used to rate products based on the Design for Recycling Guidelines. This information will be tracked and shared with the Industry to facilitate greater strides in this crucial area. This grading system will also assist in setting future EPR fee rates and will allow PETCO to charge members differential rates if needed to ensure that costs are fairly distributed amongst producers.

## Member Plans and Targets

Under the PET Plan, producers who are members of the PETCO Plan may need to produce 5-year plans detailing their efforts with regards to reduction, design for recycling, use of consumer labelling and use of recycled material. This will be informed by the impact that a member's products have on the recycling value chain.

These plans will have targets and will be periodically reviewed by PETCO to ensure members are contributing to the overall success of the PETCO Industry Waste Management Plan.

Consistent failure to meet objectives or show significant improvement may result in corrective measures to be undertaken by PETCO e.g. payment of higher EPR fees.

## Recovery

As mentioned previously, this is a solution of last resort. Energy recovery from packaging waste is still in its infancy in South Africa with many obstacles to overcome, as detailed in our discussion document released in 2016<sup>4</sup>. The next logical step is to form a technical working group with other PROs under PackagingSA and in conjunction with industry bodies such as Plastics|SA to define set projects, timelines and outcomes for introducing Energy Recovery to South Africa on a commercial

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<sup>4</sup> <http://petco.co.za/wp-content/uploads/2016/10/PETCO-Waste-to-Energy-Discussion-Documents-rev03-October-2016.pdf>

scale in a way that does not undermine any of the items higher up the Waste Hierarchy. This is to be read in conjunction with the Market Demand section of this plan.

### Data Alliance

Credible and comparable data is a key component of PRO systems world-wide. PETCO, under PackagingSA, will establish the Data Alliance consisting of various chapters pertaining to the reporting requirements of the Industry and various Stakeholders. These chapters may include, but are not necessarily limited to:

- Plastic Packaging Data Chapter
- Packaging Data Chapter
- Waste Management Bureau Industry Waste Management Plan Chapter in conjunction with DEA/WMB

The Data Alliance will be tasked with providing credible data for use within the industry, the South African public, DEA and to represent South African Packaging Waste Data at a Global level.

The Data Alliance will also establish reporting protocols with the Waste Management Bureau for consistent reporting across waste streams. The Alliance will regularly liaise with DEA and the WMB to collaborate in the fields of data management and reporting, full cost accounting, planning and forecasting, interpretation and data integrity.

### Technical Working Groups – Overview

Working groups provide the platform for identifying common industry problems, finding solutions and promoting best practice. Furthermore, these platforms provide the opportunity to implement joint projects to achieve specific goals. Such projects will consist of smaller once-off engagements and pilot projects to provide the industry with the knowledge and expertise required to engage in more formal, long term joint-ventures and projects set forth in the other Programmes listed in this plan.

Working groups to be arranged under PackagingSA or, where relevant, directly via PETCO.

### Technical Working Groups – Packaging Sector

Working groups to be arranged under PackagingSA or where relevant directly via PETCO, with members consisting primarily of the Producers of packaging. These working groups may be held bi-annually and may consist of:

- PET Packaging Design & Design for Recycling Members
- Re-use and Recovery Working Group
- Research and Development

And others as needed.

### Technical Working Groups – Collection & End-of-Life Solutions

Working groups to be arranged under the Federation of Plans or, where relevant, directly via PETCO, with members consisting primarily of those in the Collection, Recycling and Recovery value chains as well as Municipal representatives and other PROs. These working groups will be held bi-annually and may consist of:

- Energy Recovery Forum
- National Awareness Working Group
- Collection & Sorting including Municipalities, MRFs, PRFs, Kerbside collection and Buyback Centres
- Informal sector and reclaimer support working group including buy back centres, social NGO's, picker associations, municipalities etc

And others as needed.

### African Marine Waste Network

PETCO will continue its activities with the African Marine Waste Network. Crucial work is being done within this network to identify and address the issues of all types of Waste, include PET, from ending up in oceans. Continued co-ordination and joint action are required to raise awareness at a public, Government and Industry level.

PETCO is currently heading up the Networking component of the overarching strategy and is providing funding to the Marine Waste Network. PETCO will continue with this important work under the Plan, to be funded via the Federation.

### Research and Development

PETCO proposes the Federation set aside budget for research and development to undertake studies under themes such as:

- Social sciences (e.g. informal pickers, consumer behaviour)
- Modelling (e.g. packaging consumption, separation at source)
- Technology (e.g. recyclability, end-use markets)

## 19. Regional Economy

We recognise that South Africa has an important role to play in the regional and circular economies of our southern African neighbours and, in some cases, further afield in Africa.

Recycling is a volumes-based endeavour, and many countries do not have enough packaging consumed or collected locally to make recycling viable. The long-term goal for each country should be to have local beneficiation of products, but the interim will require solutions from established recycling economies such as South Africa's where volumes already support recycling.

Many South African producers have presence in other African markets and some are looking to PETCO South Africa for solutions to pressing problems faced in the continent. This is particularly an issue with PET and other plastics given the growing focus on plastic waste in marine environments. The recent closing of China's door to waste products has exacerbated this issue for many nations across the world – both in the developed and developing world.

Furthermore, PETCO also recognises that local South African recyclers may require the import of particular feedstock from time to time to fill gaps in local supply – either due to it not being produced in enough quantities locally, or that collection networks are unable to capture and transport it at reasonable cost, even if subsidised. In such cases, it also makes sense to solve two problems at once.

Any regional intake of post-consumer PET must be done whilst being mindful of our own targets and national imperatives.

PETCO will maintain its role together with Plastics|SA in reviewing permit applications for the import of waste and will continue working with regulators to ensure sound policy and regulation that neither inhibits our economy, nor burdens us with unwanted waste products.

PETCO's approach to a regional economy will require constant vigilance to assess markets and will seek to ensure local capacities and targets can be met, whilst making small allowances for imported PET waste. Working together with all stakeholders, the longer-term intervention will be to assist recyclers to expand capacities beyond what the South African market can provide, and thus provide additional capacity for more sustainable intake of material from beyond South Africa's borders.

## 20. Roles

The successful implementation of EPR programmes requires all stakeholders to be engaged. In this Plan, we set out the roles as we currently see them.

### Producers

Producers as defined in the Section 28 Call for Industry Waste Management Plans are collectively responsible for funding PETCO to the extent required to fulfil the industries EPR obligations and commitments as set out in this Plan.

The EPR fee is paid over to PETCO by the purchaser of raw material or imported preforms, sheets or thermoforms. Purchasers may opt to pass on the EPR fee in full or in part, or not at all. Importers of finished goods will pay the equivalent fee on their products directly to PETCO, or via the Federation of Plans.

Producers also have additional roles to play and these will be detailed in their plans for material reduction and recycling design as set out in the EPR Best Practice section of this Plan. Note that a single company may fall under multiple categories depending on the products that they import, depending on whether they are brand owners or retailers – this is most notable in the case of retailers.

### Brand Owners

Specify the recyclability of their products according to the Design for Recycling Guidelines.

Specify use of recycled content for their packaging.

Allow for recycling information to be present on their products e.g. On Pack Recycling Logo.

### Retailers

Convey recycling messaging to consumers.

Provide feedback to relevant stakeholders regarding consumer concerns, queries and demand.

### Importers of finished or semi-finished goods

Pay the EPR fee to PETCO or to the Federation of Plans based on tonnage of PET present in the products imported.

Communicate design requirement and EPR imperative to manufacturers of imported goods.

Seek to import recyclable packaging products compatible with South African end use markets.

### Bottlers/Fillers/ Convertors / Sheetters / Thermoformers

Pay the EPR fee to PETCO based on tonnage of virgin and recycled PET resin or preforms, sheet or thermoforms purchased or imported.

Collaborate with customers to produce packaging according to Design for Recycling Guidelines.

## Raw Material Producers

Provide PETCO with information on raw material purchases,

Provide technical information regarding safety of PET etc.

## PETCO

PETCO's role is to ensure funds made available for execution of the tasks as set out in this Plan are spent effectively and efficiently, maximising the return on investment for society.

Operate with continued success and upholds the organisation's values of respect, empowerment, integrity, professionalism, and sustainability.

## Recyclers

Operate sound businesses that adhere to all applicable laws and environmental sensitivity.

Keep PETCO informed of the progress of their plans, invest in infrastructure and provide innovative solutions to recycling of all PET packaging products.

Adhere to PETCO's values.

## Collectors

Operate sound businesses that adhere to all applicable laws and environmental sensitivity.

Provide good service and highest quality material to recyclers.

Seek to improve, grow increase the economic and environmental sustainability of their businesses.

Maintain positive working relationships with waste pickers.

## Waste Pickers and the Informal Sector

Continue to positively contribute to the success of recycling in South Africa.

## Municipalities

Work with PETCO and stakeholders to collaboratively test and research various options in terms of separation at source services and other waste treatment measures, which may include requirements for municipal resources, funding or land.

Maintain positive working relationships with waste pickers.

Fully capacitate Solid Waste Management Departments with skilled individuals.

Work with PETCO and stakeholders to assess extent of available land for implementation of collection and separation at source schemes.

Develop Integrated Waste Management Plans.

Implement separation at source, where required by National government, in collaboration with Industry.

### National and Provincial Government

Consult with stakeholders prior to introducing legislation and regulations which may hinder the successful implementation of these plans.

Seek to clarify the legalities regarding the possible competing or overlapping mandates for the collection or removal of waste from households. Set up the municipal-industry post-consumer packaging waste framework referred to in this Plan.

### Department of Environmental Affairs and the Waste Management Bureau

Monitor implementation of plans.

Enforce compliance of free-riders to belong to an approved Plan, or comply via any alternate mechanism available.

### Consumers

Where separation at source is made available, to make every effort to utilise the programmes. Low participation rates are often the leading cause of Separation at Source Schemes being unviable.

To pressure brand owners and retailers to consider the full sustainability and life cycle of their packaging, including the recyclability thereof.

To demand recycled content in packaging wherever possible.

Use civic power to ensure littering and dumping of recyclables is low or non-existent.

### Development Finance Institutions

Seek to fund and partner on projects in terms of project development (e.g. feasibility funding) and implementation of commercial projects.

### NGOs (Social and Environmental)

To alert stakeholders to problems areas where they find them.

### Academia

Seek to identify further areas of research, guidance and input as necessary.

## 21. Key Assumptions and Notes

Important points that might not be raised elsewhere:

### **Market Size**

All targets, income and subsequent spends are driven by market size. PETCO is projecting an 8% annual growth of the PET market per year for the next 5 years.

### **Finished Imported Goods**

This is an unknown, as there is no reliable data available for the amount of PET contained within finished imported goods. PETCO believes the figure to be negligible, or at most a small tonnage, for PET Bottles. Edible Oil Bottles and Thermoforms may be higher. The latter particularly because many products are imported with PET thermoforms included, such as with toys, hardware and fruit.

### **Ringfenced Funding**

For budget items where ringfencing occurs, this is proportional to the overall income obtained.

## 22. Parties to the Plan

### PETCO Members

PETCO current members, representing 90% of the PET Bottle market:

- ALPLA South Africa
- Bizee Corporation t/a ATA Agencies
- Bowler Plastics (Pty) Ltd.
- Coca Cola Beverages South Africa (CCBSA)
- Coca-Cola Africa (Pty) Ltd.
- Coca-Cola Peninsula Beverages
- Safripol (A division of KAP Diversified Industrial (Pty) Ltd.)
- Little Green Beverages
- Mpact Plastics
- Nampak Liquid Packaging
- New Age Plastics cc
- Nioro Plastics cc
- Pick 'n Pay
- Polyoak Packaging
- Purpleline Plastics (Pty) Ltd.
- RPC Astrapak
- Serioplast

- Split Line Manufacturers cc
- Tsitsikamma Crystal Spring Water (Pty) Ltd.
- Twizza (Azores Manufacturers)
- Woolworths Holdings (Pty) Ltd.

#### Additional parties

- Producers
- Recyclers
- Collectors
- Waste Pickers and Informal Sector
- Municipalities
- National and Provincial Government
- Consumers
- Development Finance Institutions
- NGOs
- Academia

## 23. Definitions

The definitions below do not offer legal opinion but are listed here to assist with understanding of this plan.

<b>Word</b>	<b>Definition</b>
Collector	A company, co-operative or individual (usually a business) that collects or purchases post-consumer packaging material for on-sale to another collector or to a recycler. Sorting and baling material activities are typically undertaken, and in some cases, flaking of PET material. Collectors often handle multiple material types.
Economically Active Population (EAP)	The workforce population distribution is based on the Quarterly Labour Force Survey (QLFS) published by Statistics South Africa on the Economically Active Population. The EAP includes people from 15 to 64 years of age who are either employed or unemployed and who are seeking employment. The EAP is meant to assist employers during the analysis of their workforce to determine the degree of under-representation of the designated groups. Further, it guides employers by assisting them in the setting of their numerical goals and targets in order to achieve an equitable and representative workforce.
Extended Producer Responsibility	An environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle.) (i.e. end of life management of the product)
Federation of Plans	Collection of Producer Responsibility Organisation plans under PackagingSA
Full Time Equivalent (FTE)	At least the income of a full-time job paid at minimum wage. R20 per hour, 8 hours per day, 5 days per week, 52 weeks per year.
Informal collector	An informal collector is a person who salvages post-consumer reusable or recyclable materials that have been discarded. He/she operates in the informal market. In this context, an informal collector operates by going door-to-door to salvage recyclable materials or salvages from a landfill site. Cross reference to "waste picker"
Material Recovery Facility	A specialised plant that receives, separates and prepares recoverable materials for marketing to end user manufacturers.
Minimum Wage	Minimum wage of R20/hr as proposed by National Treasury.
Obligated Industry	Those companies with whom Extended Producer Responsibility lies.
PET Bottles	PET packaging associated with beverages, food, household items etc excluding Edible Oil Bottles. e.g. cooking oil.
PET Edible Oil Bottles	PET packaging associated with food such as cooking oils.
PET Thermoform	PET packaging such as punnets, trays, blister packs.
Post-consumer	After use by the consumer.
PRO - Producer Responsibility Organisation	Producer Responsibility Organisation, i.e. a collective entity set up by producers or through legislation, which becomes responsible for meeting the recovery and recycling obligations of the individual producers.
Recycler	A recycler is a business that converts sorted recyclable materials into a new product (secondary raw material). For PET Recycling, flake is not counted as a new product.
Recycling	Any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not

	include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.
Separation at Source	Separation at source refers to the end consumer separating recyclables from other waste at the point of generation. In the context of this document it refers to the end consumer separating recyclables from other waste at household-level for separate collection. The end consumer also includes businesses such as restaurants and hotels.
Waste Disposed	Balance of Waste Generated less Waste Recycled.
Waste Generated	Total tonnage of packaging placed onto the South African market, locally produced and imported.
Waste picker	A waste picker is a person who salvages post-consumer reusable or recyclable materials that have been discarded from a landfill or door-to-door. Cross reference to “informal collector”
Waste Recycled	Total tonnage of post-consumer waste that: 1) Originates from South Africa and is purchased by recyclers for the purposes of recycling plus 2) Tonnage that is exported from South Africa e.g. in bale or flake form.

## 24. Section 28 Reference

The table below references the specific requirements detailed in section 6.1) of the CALL ON THE PAPER AND PACKAGING, ELECTRICAL AND ELECTRONIC AND LIGHTING INDUSTRY TO PREPARE AND SUBMIT INDUSTRY WASTE MANAGEMENT PLANS TO THE MINISTER FOR APPROVAL gazetted on 6<sup>th</sup> December 2017.

An industry waste management plan, contemplated in paragraph must,

Requirement	Reference
a) identify all the parties to the industry waste management plan;	Section: Parties to the Plan Most of the PET industry and all of the PET recycling industry, as a minimum, is party to the Plan.
b) provide details of the governance model for the industry waste management plan, including how industry representivity and participation will be addressed;	Section: Governance Industry managed EPR
c) provide the annual projections over a five-year period of the – i quantities and types of waste generated from locally manufactured products and products imported that will become waste and will be managed through the industry waste management plan; ii quantities of waste that will be reused, recycled or recovered; iii quantities of waste that will be disposed of;	Section: Targets
d) indicate how the waste hierarchy is going to be given effect to in the implementation of the industry waste management plan prioritizing reduce, re -use and recycling, then recovery;	Section: EPR Best Practice
e) include measures to prevent pollution or ecological degradation;	Section: Market Demand Section: Collections, Sorting, Storage and Transport Section: Cleaning Up Section: EPR Best Practice Section: Roles and Responsibilities
f) include measures or programmes to minimize the generation of a particular waste stream and final disposal of that waste stream;	Section: Membership requirements Section: Market Demand Section: EPR Best Practice Section: Roles and Responsibilities
g) include measures or actions to be taken to manage the waste;	Section: Market Demand Section: Collections, sorting storage and transport

Requirement	Reference
h) identify the manner in which the waste transporters, storage facilities and processors who will receive the waste through the industry waste management plan will be identified and registered;	<p>Section: Market Demand Section: Collections, Sorting, Storage and Transport</p> <p>Processors are registered via our Demand Support Programme. Waste Transporters and Storage facilities do not have to register with PETCO, but they may do so if they wish.</p>
i) identify any incentives that will be applied in order to encourage the end user to practice good waste management;	Section: National Awareness Consumer incentives are prosed in relation to clean-up campaigns.
j) identify the potential number of waste transporters, storage facilities and processors that will be required;	<p>Section: Market Demand Section: Collections, sorting storage and transport</p> <p>Recyclers, approximately 7 to 9, depending on size. Collectors, transporters and storage facilities – not possible to predict. Number not needed for execution of Plan.</p>
k) indicate the manner in which the waste collected and processed will be recorded;	Section: Targets Independently audited purchased figures at recycler gates for local processing figures, and SARS data for exports.
l) provide estimations of the costs of implementing the industry waste management plan for a period of five years and the submission of an annual business plan to the Bureau including a breakdown of the activities of the industry waste management plan together with their costs;	Section: Budget and Financing
m) be aligned to the National Pricing Strategy for Waste Management (Extended Producer Responsibility; government managed model) as published under Government Notice 904 of August 2016;	Section: Budget and Financing This government managed tax model will have a high risk of being detrimental to PET recycling. We are proposing an alternative model that better aligns to multi-stakeholder needs.
n) provide targets for waste minimization through the reduction, re -use, recycling and recovery of waste for a period of five years;	Section: Targets
o) provide details of the manner in which the historically disadvantaged individuals and transformation will be integrated in the implementation of the industry waste management plan;	Section: Transformation Also highlighted throughout the Plan

Requirement	Reference
p) provide where applicable, an estimate of the revenue that will be generated through the implementation of the industry waste management plan for a period of five years;	Section: Budget and Financing
q) indicate how the industry waste management plan will raise national awareness regarding the management of the particular waste stream;	Section: National Awareness
r) provide detailed measures on how the industry waste management plan will address issues of social responsibility in the specific waste sector and issues of historically disadvantaged communities;	Section: Collections, sorting storage and transport Section: Waste Picker and Informal Sector Support
s) provide specific measures in which historically disadvantaged individuals will meaningfully participate in the waste sector and the implementation of the industry waste management plan;	Section: Collections, sorting storage and transport Section: Waste Picker and Informal Sector Support See additional proposals throughout the Plan
t) provide specific targets on job creation, the promotion of small businesses, training and development, including the meaningful participation of the historically disadvantaged individuals that will be realized in the waste sector;	Section: Transformation Section: Targets Section: Budget and Financing
u) indicate the frequency and methods of auditing and reporting to the Bureau waste management plan envisaged;	Section: Governance Section: EPR Best Practice
v) provide measures to be implemented to give effect to the best environmental practice for the management of a particular waste stream;	Section: EPR Best Practice
w) provide details of the manner in which the informal sector will be integrated in the implementation of the industry waste management plan;	Section: Transformation Section: Collections, sorting storage and transport Section: Waste Picker and Informal Sector Support Section: Roles and Responsibilities

## 25. Appendix A: S@S and Waste Picker Fund proposal

During the public participation process, there were calls for more information about the proposals for the Separation at Source fund and the Waste Picker and Informal Sector Support.

### Separation at Source Fund

We propose the establishment of a Technical Committee comprising the Federation members and affected stakeholders to jointly develop the mechanisms by which entities will access funding for Separation at Source funding. We envisage that there will be a committee that meets every 4 to 6 months to evaluate applications to the fund.

Note this fund will include provision for piloting methods of paying waste pickers directly for their services.

The performance of all projects will be evaluated.

In all cases, the Federation will have final sign-off of any projects implemented that use Federation funding.

### Waste Picker and Informal Sector Support

We propose that a technical committee, comprising of water picker representatives and the Federation jointly develop the interventions and plans for access of funds, to be reviewed in the manner as outlined in this Industry Waste Plan.

In all cases, the Federation will have final sign-off of any projects that use Federation funding.

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