



Nidia Pabón is a Chemical Engineer, specialist in Integrated Environmental Management and with extensive experience in the formulation, design, implementation and monitoring of projects; in the design and implementation of environmental policies and in environmental management in industrial processes and infrastructure projects.

Currently, she works as a specialized professional of the Ozone Technical Unit of Colombia, being responsible for the execution of plans, programs and projects for technological updating and bilateral and multilateral assistance related to substances controlled by the Montreal Protocol.

Ms. Nidia Pabón

National Ozone Office - Colombia

Ministry of Environment and Sustainable Development

WEBINAR SERIES

CLOSING THE LOOP: ENVIRONMENTALLY SOUND MANAGEMENT OF END-OF- LIFE ODS AND HFC

Experience on developing and applying EPR mechanisms for ESM of EOL ODS/HFC in Colombia

Nidia Pabón
National Ozone Office – Ministry of Environment
and Sustainable Development, Colombia



El ambiente
es de todos

Minambiente

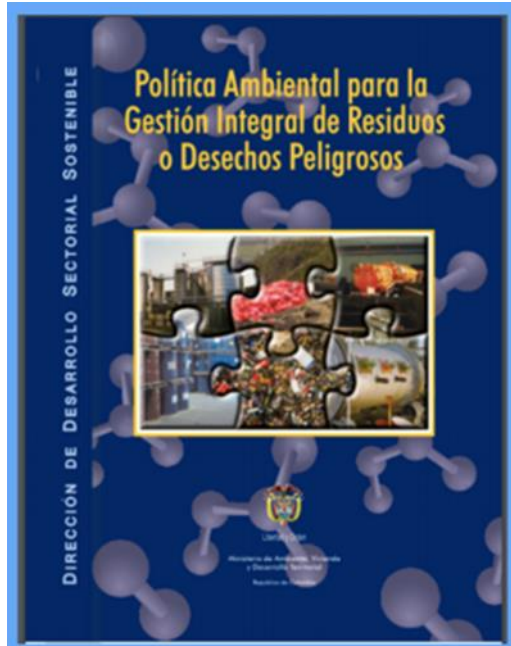


UNIDAD TÉCNICA OZONO
Colombia



This webinar is being organized within the
framework of a project funded by US EPA

National Policy for Hazardous Waste Management



2005, updated plan for 2021 – 2030

Scope: life cycle of HW/controlled substances



Promote the application of the hierarchy in the management of hazardous waste.



Promote the environmentally sound management of hazardous waste.



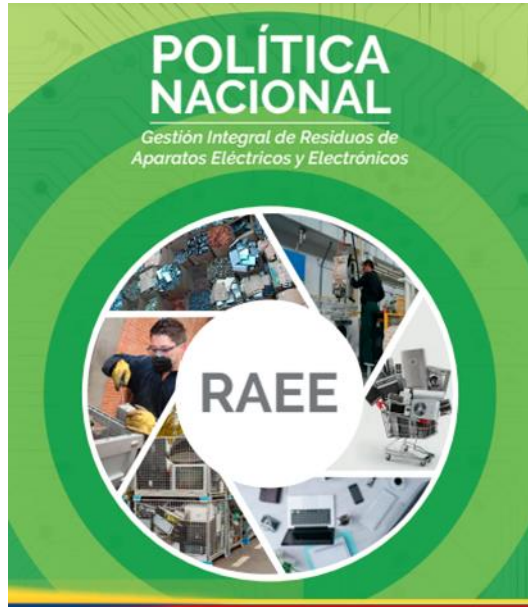
Advance in the growth and strengthening of the infrastructure for the collection and management of hazardous waste.



Strengthen the institutional capacity for the comprehensive management of hazardous waste.



National Policy for the Management of Waste of Electrical and Electronic Equipment (WEEE)



2017, action plan for 2017 – 2032
RAC equipment



Prevent and minimize the generation of WEEE.



Promote comprehensive management of WEEE.



Encourage the use of WEEE in an environmentally sound manner.



Promote the full integration and participation of producers, merchandising stakeholders and end-users of EEE.

Management guiding principles

HAZARDOUS WASTE

- Prevention.
- Caution.
- The polluter pays.
- Responsibility of the generator in all stages of waste management.
- **Extended Producer Responsibility.**
- Access to information and public participation.
- Proximity / Fewer cross-border movements.
- Self-sufficiency.

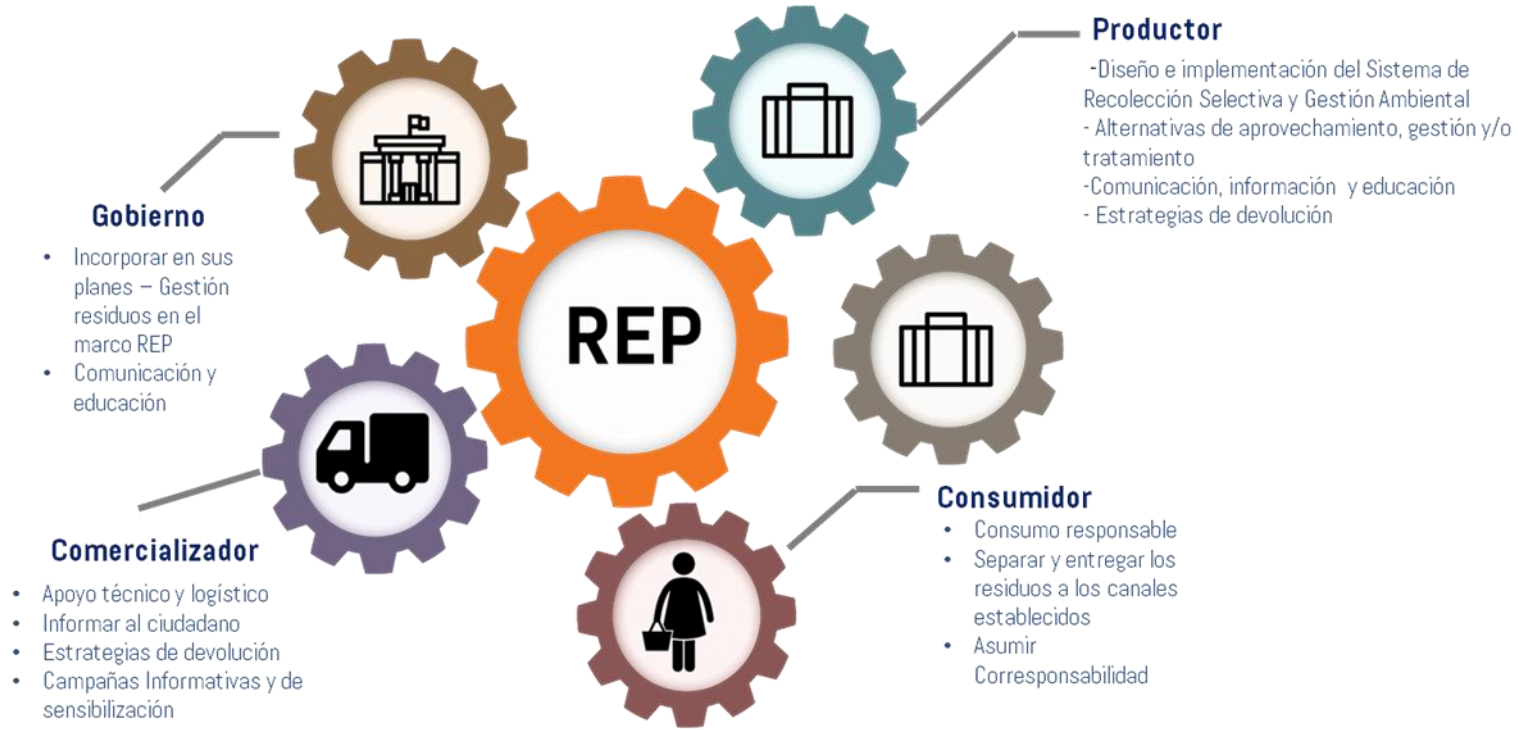
WEEE

- **Extended Producer Responsibility.**
- Product life cycle.
- Prevention.
- Sustainable production and consumption.
- Gradualness.
- Active participation.
- Decentralization.
- Innovation, science and technology.

Extended Producer Responsibility (EPR) - WEEE

- It is the duty of the producer (manufacturer or importer) of electrical and electronic equipment, throughout the different stages of the product life cycle.
- Extended producer responsibility is an emerging principle in a new generation of product-focused policies; first coined in Sweden by Lindhqvist in the 90s.
- In a broad sense, the EPR is the principle by which producers maintain a degree of responsibility for all the environmental impacts of their products throughout their life cycle, from the extraction of raw materials, through production, and until the final disposal of the product as waste in the post-consumer stage.

Extended Producer Responsibility (EPR)



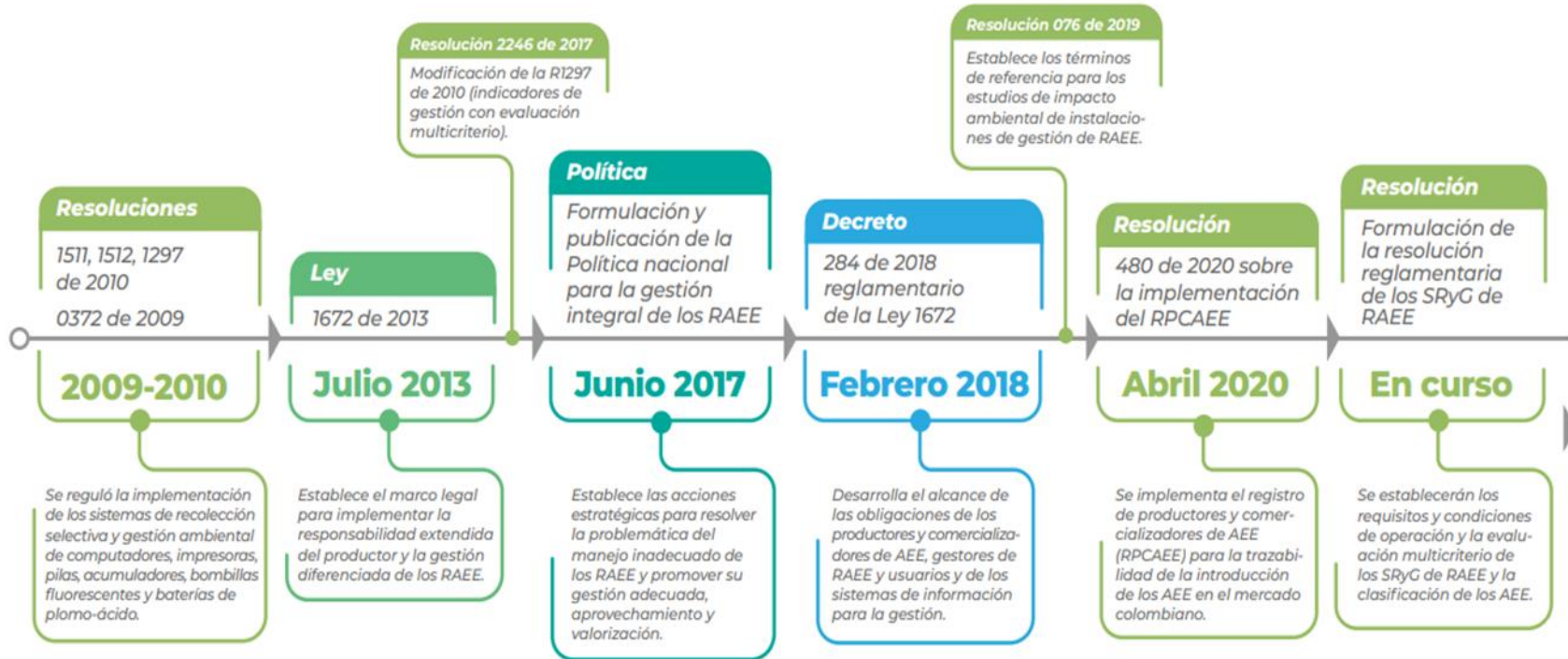
Regulatory development of post-consume waste management

- Returnable products.
- High-volume generation, that is, of mass consumption.
- That you can recognize the Producer who puts it in the market.
- High potential for recycling or recovery of its components.
- With the presence of dangerous substances of environmental interest

Resolución 0371 de 2009	<i>Medicamentos Vencidos</i>
Resolución 0372 de 2009	<i>Baterías Plomo ácido</i>
Resolución 1297 de 2010	<i>Pilas y Acumuladores</i>
Resolución 1511 de 2010	<i>Bombillas</i>
Resolución 1512 de 2010	<i>Computadores y Periférico.</i>
Resolución 1675 de 2013	<i>Plaguicidas</i>
Resolución 1326 de 2017	<i>Llantas usadas</i>
Resolución 0316 de 2018	<i>Aceites de cocina usados</i>
Resolución 1407 de 2018	<i>Envases y empaques</i>



Regulatory development for the ESM of WEEE



System for collection and environmental management of EOL RAC equipment



How does RED VERDE operate?

1

APPLICATION REGISTRATION



3174050510

colecciones@redverde.co
www.redverde.co

2

DELIVERY OF THE EQUIPMENT



Delivery on
point



Collection
alternative is
provided

* The associated cost depends on the generator, project and city. We also have other delivery mechanisms in out-of-coverage areas.

TRACEABILITY AND ARTICULATION



- ✓ Certificates - environmental management
- ✓ Certificates - replacement
- ✓ Support to other actors - platform
- ✓ Audits and reports
- ✓ Communication and education
- ✓ Investigation and development
- ✓ Cleaner alternatives

3

INTEGRATED MANAGEMENT OF WEE**



Identification
and weighing

Critical material
extraction

Storage

Re-use, treatment and
/ or final disposal

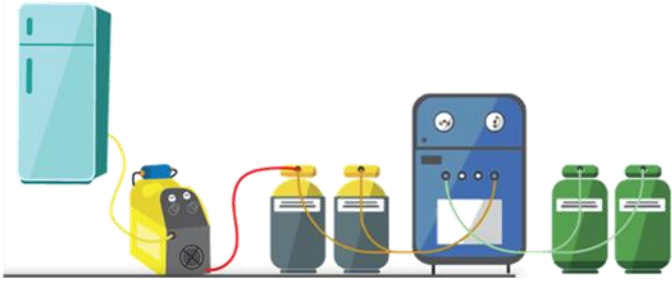
Disassembly and
separation of
dangerous and
usable fractions

RED VERDE

Posconsumo de electrodomésticos

How is the management of EOL RAC equipment?

Extracción de Materiales Críticos
Regeneramos, recuperamos y reciclamos los gases que dañan la capa de ozono



Desensamble y separación de fracciones aprovechables y peligrosas



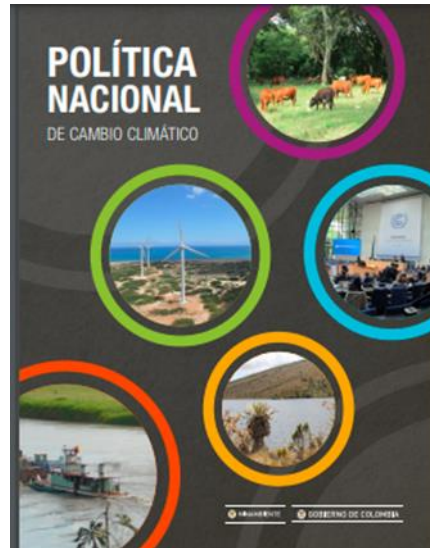
Other national policies and strategies

National Program for the Rational and Efficient Use of Energy and Unconventional Energy Sources (PROURE)



2010

National Climate Change Policy Low carbon and climate resilient development



2017

National Circular Economy Strategy (ENEC)



2019

Synergies for the environmentally sound management of EOL ODS / HFCs

Entrégala y Ahorra campaign

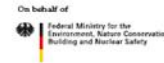


NAMA for the domestic refrigeration
sector in Colombia



- Interinstitutional working group.
- VAT reduction from 19% to 5%.
- Compliance with requirements (4).
- Energy Efficiency, ESM of EOL domestic refrigerators.

NAMA Facility



**CLOSING THE LOOP:
ENVIRONMENTALLY SOUND MANAGEMENT OF END-OF-
LIFE ODS AND HFC**



El ambiente
es de todos

Minambiente



UNIDAD TÉCNICA OZONO
Colombia



This webinar is being organized within the
framework of a project funded by US EPA



Thanks for your attention

Nidia Pabón
National Ozone Office - UTO
nmpabon@minambiente.gov.co
Ministry of Environment and Sustainable Development, Colombia