Recycled Material Standard (RMS)

Prepared for EPA: Sustainable Materials Branch April 9, 2020

Laura M Thompson, PhD

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Today's agenda

1) **Introduce the RMS project**
   - Who
   - What
   - Why

2) **Claim Types**
   - Chain of custody claims
     - Average volume method
     - Credit systems
   - Certificate trading

3) **Next steps**
   - Completing the standard
   - Potential for collaboration

RMS

Recycled Material Standard

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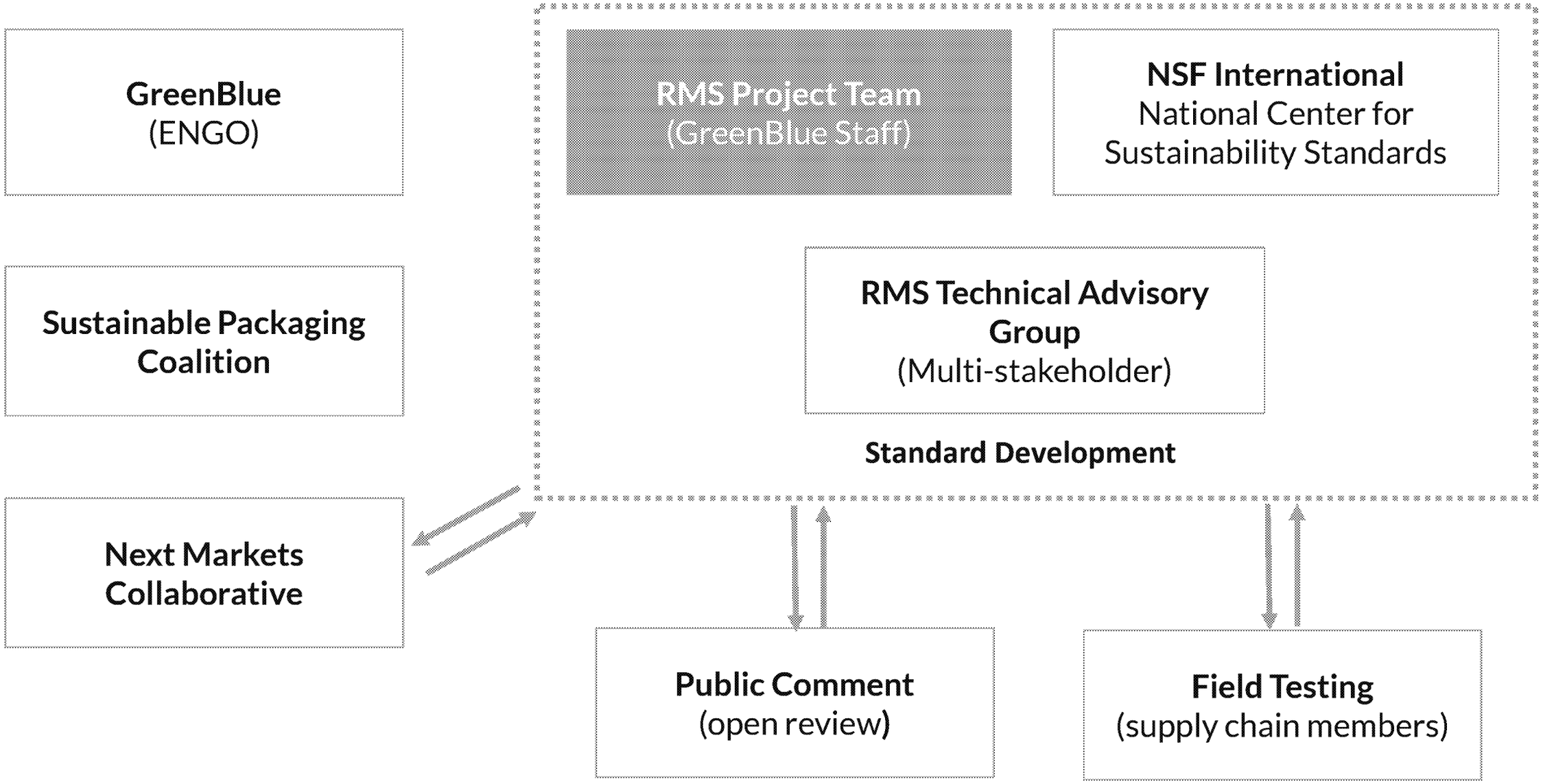
The RMS is a multi-stakeholder initiative



Project scope

The Recycled Material Standard (RMS) is being developed as:

A project of GreenBlue

Third party standard (independently audited)

Voluntary, market based tool to address challenges within recycling value chain

A framework for multiple materials; starting with plastics module

Will incorporate three types of tracking systems for claims

1. Chain of custody – average percentage
2. Chain of custody – credit method (mass balance allocation)
3. Certificate trading – Attributes of Recycling Certificates (ARCs)

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Our objective

Increase the use of recycled materials through standards development, education and building consensus among stakeholders.

We are building on existing standards

Reviewing multiple standards:

- Materials (paper, aluminum, textiles)
- Attributes (recycled materials, forest fiber, bio-materials)
- Commodities (REC's, offsets, RINs)

Seeking **alignment** with others where possible

Definitions are critical –

- written for each material category
- examples will be included

We will **include a post industrial** material definition

We are proposing new approaches and will conduct **consumer testing**

- mass balance allocations (credit claims)
- voluntary certificate trading system

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The RMS will support Global Commitments

The Global Commitment requires "***setting an ambitious goal for recycled content***"

And further seeks:

- Increased use of post consumer material (as defined by ISO 14021)
- Clear transparency and separate tracking of post industrial material
- Verification or certification
- Consistency with food contact, health and safety regulations

Global Commitment Definitions

NEW PLASTICS ECONOMY Global Commitment

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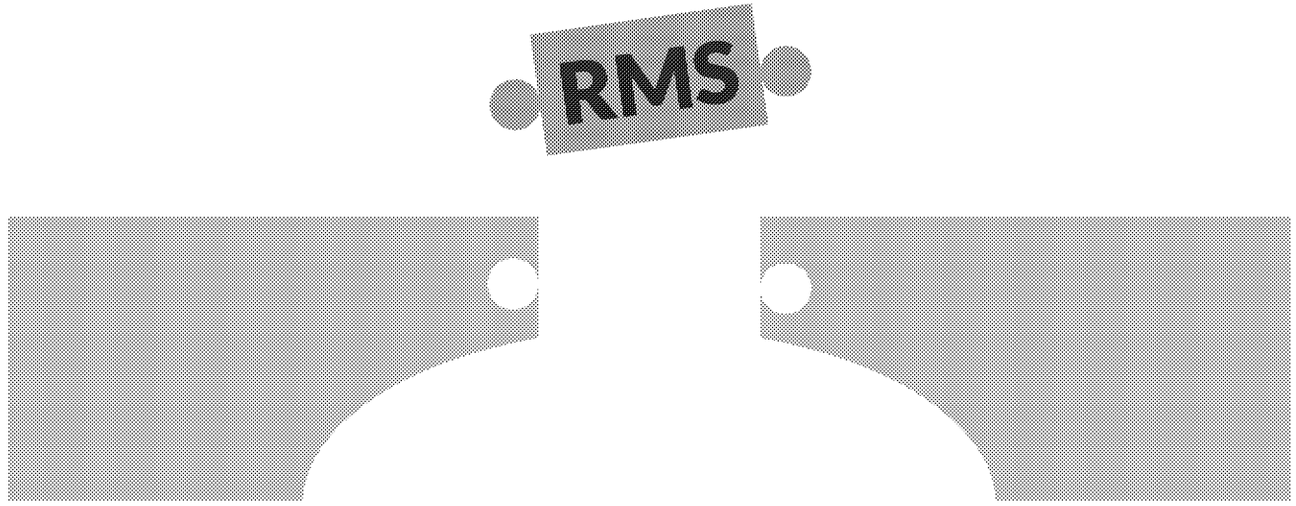
We need innovative solutions to help companies achieve their goals

- Capacity and availability of post consumer materials is limited
- Closed Loop Partners estimates only 6% of PCR plastics demand is being met
- Investments are needed across the supply chain and the ROI often does not look good
- We are proposing a voluntary market based solution that can bridge the gap between investment needs and corporate commitments



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We are embracing ISEAL Credibility Principles

1. Sustainability
2. Improvement
3. Relevance
4. Rigour
5. Engagement
6. Impartiality
7. Transparency
8. Accessibility
9. Truthfulness
10. Efficiency

#3 Relevance

Standards are fit for purpose. They address the most significant sustainability impacts of a products, process, business or service; only include requirements that contribute to their objectives; reflect best scientific understanding and relevant international norms; and are **adapted where necessary** to local conditions

ISEAL Credibility Principles

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The RMS is the only known standard to encompass three different types of recycled material claims

	1	2	3
Assurance Mechanism	Chain of Custody	Chain of Custody	Registered Certificates (ARCs)
Claim Type	Average Volume (*x% content*)	Mass Balance (*credits*)	*Equivalent Use*
Boundaries	Product batch level	Company level	Universal
Processor Type	Mechanical or Chemical	Mechanical or Chemical	Mechanical or Chemical
Minimum Claim	10%	100%	TBD

Increasing supply chain flexibility

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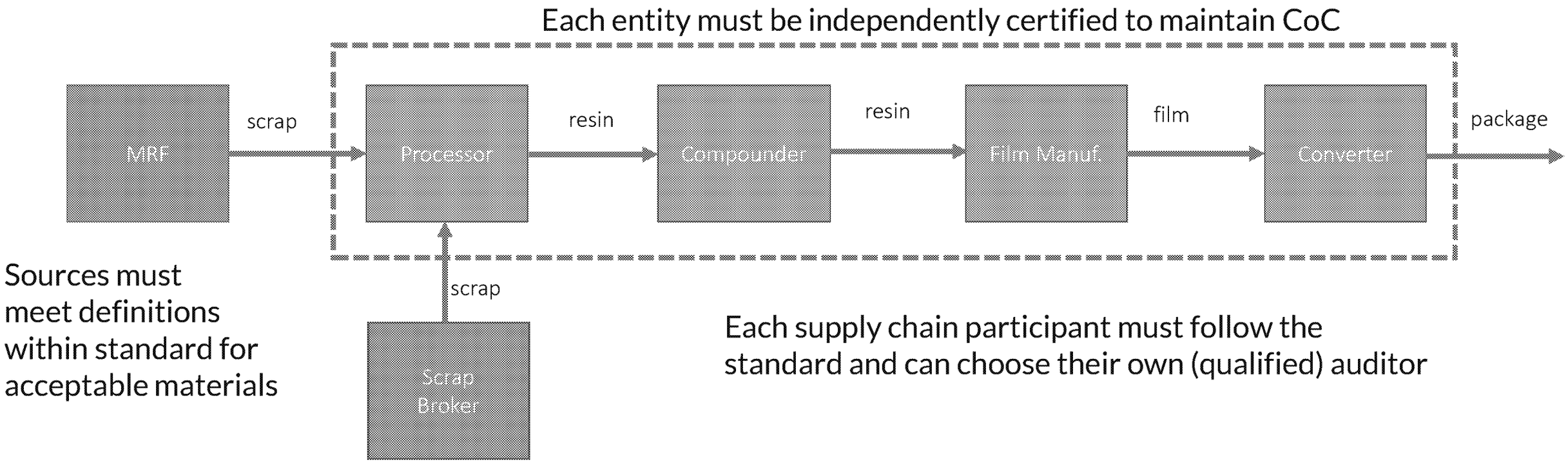
Chain of Custody (CoC) system example

For a chain of custody claim, there must be an **unbroken chain** of organizations, independently certified, covering every **change in legal ownership** – from the point of origin up to the point where a product is finished (and labeled if desired).



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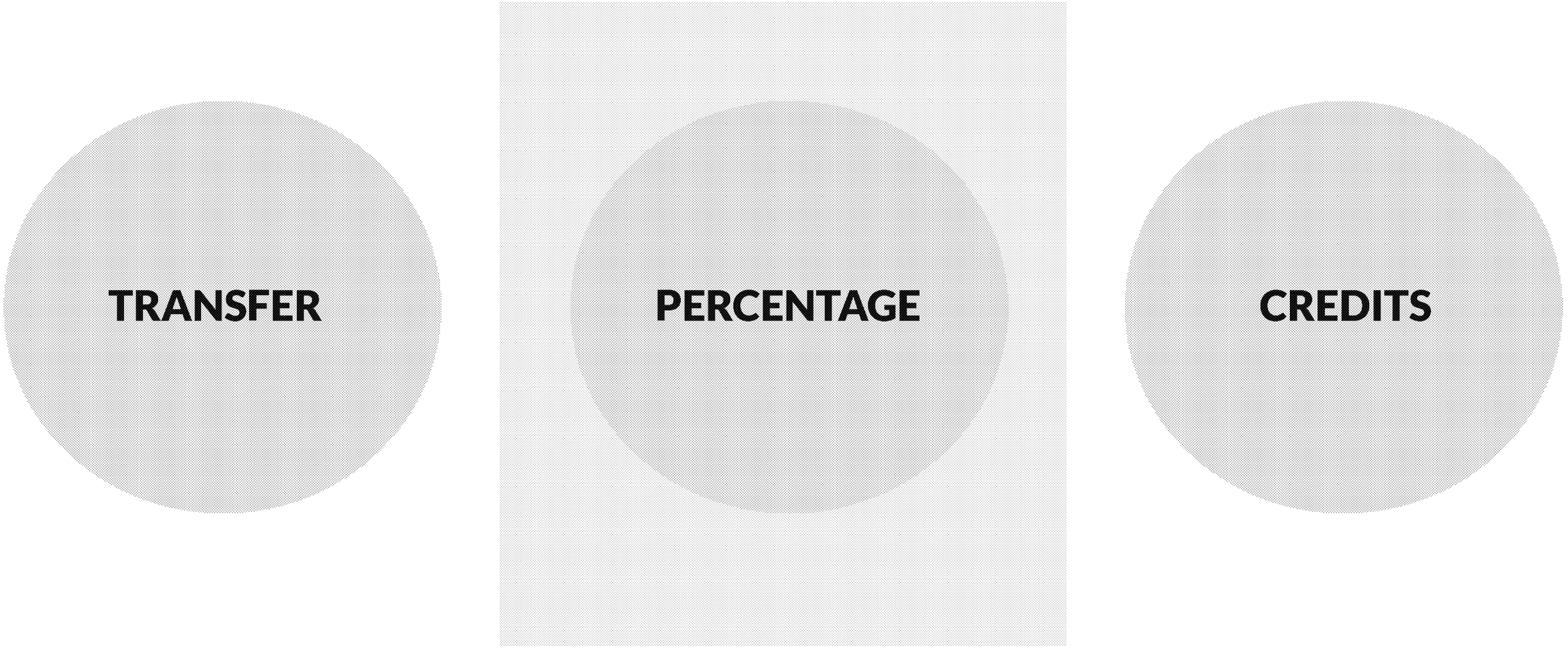
Control systems for chain of custody claims



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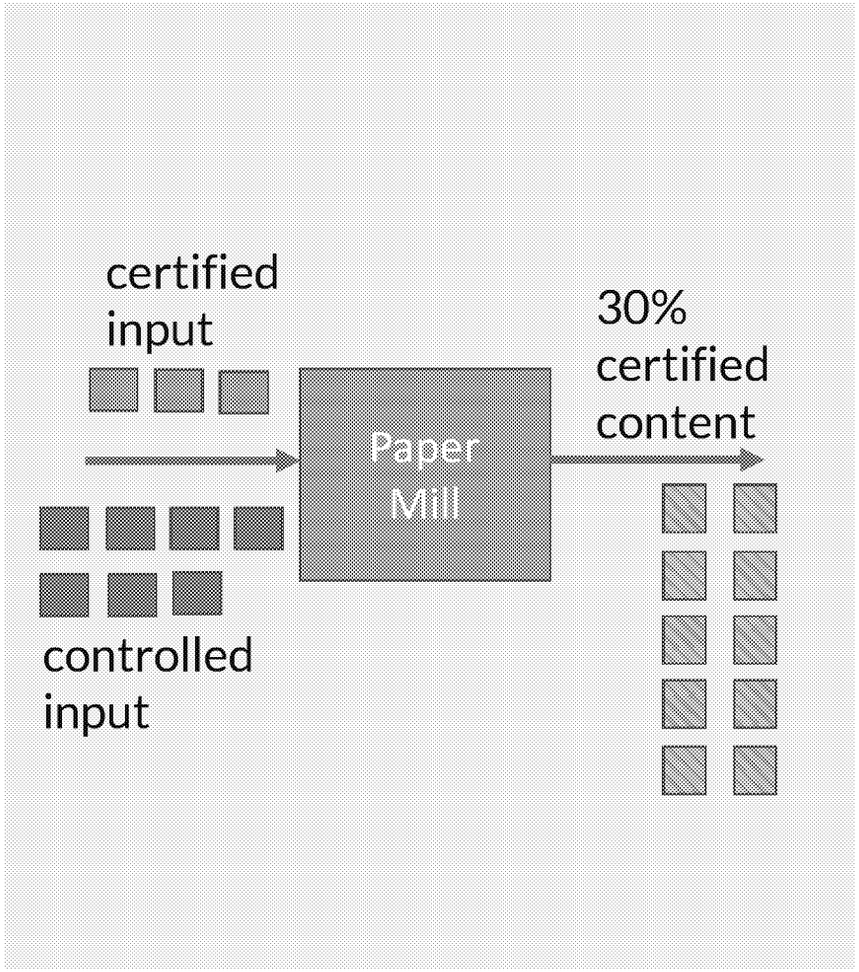
Percentage system claims

outputs are sold with a percentage claim representing the proportion of inputs over a specified period (e.g. 3 month rolling average)

can be applied across multiple sites within an organization (e.g. a paper company with more than one mill)

cannot be applied to simple trading transactions (e.g. merchants)



Most common type of claim for recycled content

Sometimes referred to as volume percentage or a mass basis calculation

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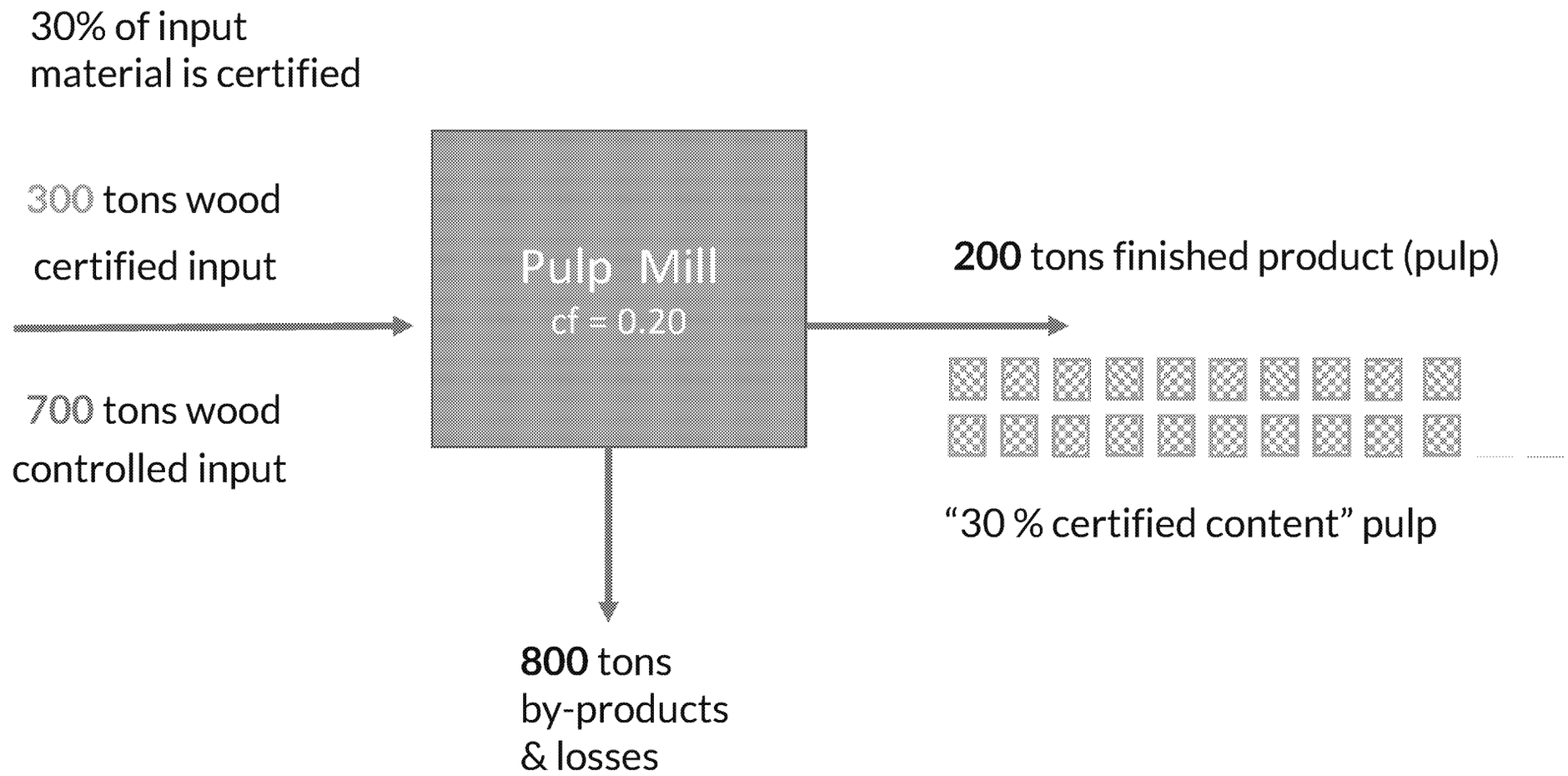
Percentage system example



cf = conversion factor

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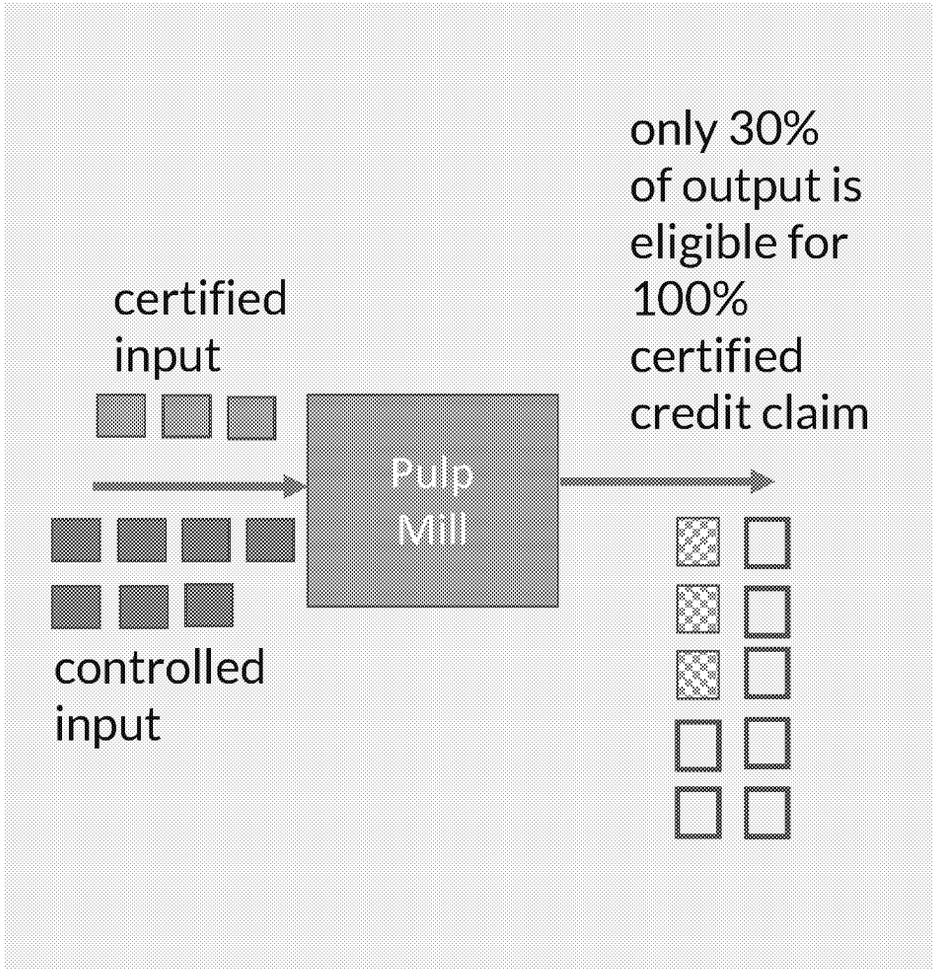
Credit systems for claims (mass balance allocation)

a proportion of the outputs are sold with a credit claim based on a product group **conversion factor**

credits are accumulated from input materials and then allocated to output products

the amount of certified output sold cannot exceed the input quantity

can be applied across multiple sites within an organization



this type of system is widely used for certified forest fiber and "emerging" for recycled content

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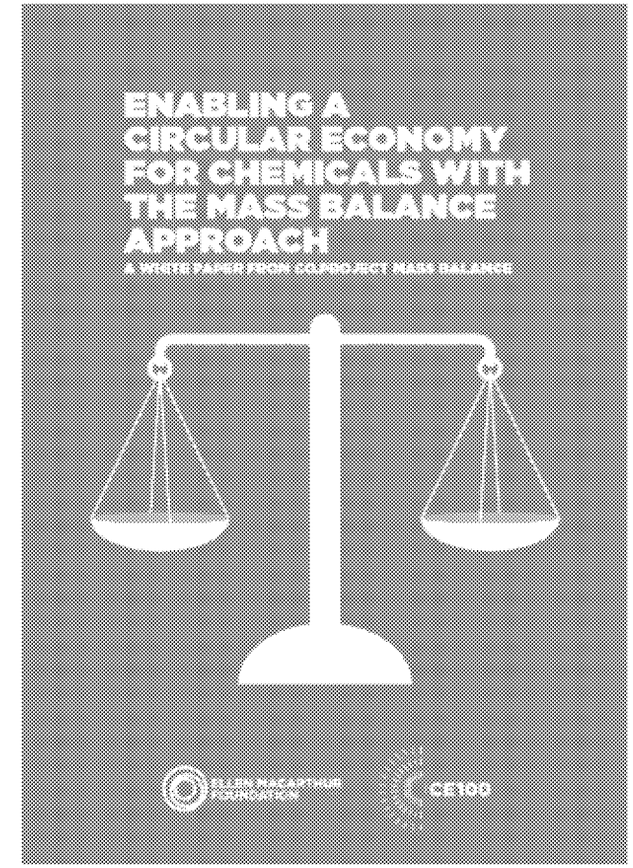
Leaders are asking for mass balance standards

"Having consistent third-party standards and a transparent certification process will ultimately help increase plastic recycling and scale adoption of advanced recycling technologies"

Craig Cookson, ACC

ACC Mass Balance Principles



Ellen Macarthur Foundation

"Being able to communicate this idea… 'yes, I know where those molecules come from, or I appreciated where the origins of that material comes from'… this is the real driving factor"

Helmut Brenner, Shell Chemicals

Resource Recycling, Feb 2020

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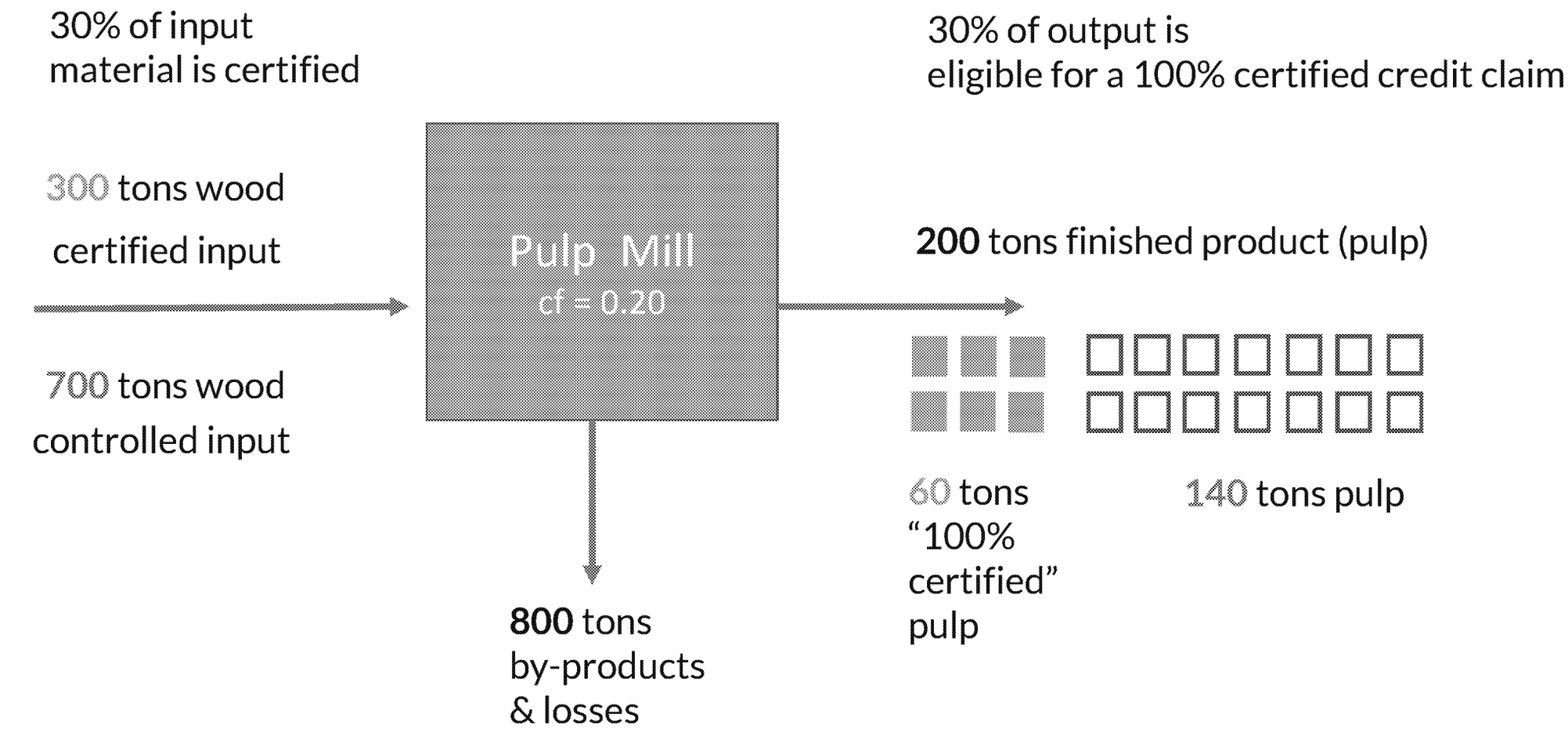
Credit system (mass balance allocation) example



cf = conversion factor

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SFI examples of labels and claims

Average percentage method

label specifies the average % content
"**At Least xx % Certified Forest Content**"

Volume credit method
(Mass balance allocation)

label does not claim a specific content level
"**Promoting Sustainable Forestry** "

SFI Labels and Claims

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ISCC examples of labels and claims

for segregated supply chains

Label does not specify a specific content
"**Certified recycled material**" is assumed to be 100%

for mass balance claims

Label does not claim a specific content level
"**MIX supporting certified recycled material**"
(assumed to consume 100% equivalent)

ISCC Logos and Claims

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Labels and Claims – RMS Prototypes

Average percentage method

RMS

Certified Chain of Custody
30% Recycled Plastic
www.spc.org/rms
RMS - 00001

label specifies the average % content

"**30% Recycled Plastic**"

Volume credit method (mass balance allocation)

Recycled Material Standard

Certified Chain of Custody
Promoting Recycled Material
and Responsible Sourcing
www.spc.org/rms
RMS - 00001

label does not claim a specific content level
"**Promoting Recycled Material and Responsible Sourcing**"

Please note: *These claims/labels have not yet been tested with consumers*

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Renewable Energy Certificates (RECs)

One megawatt
of energy produced by a renewable source as certified by a third party agency against a standard

RECs
are sometimes referred to as the **environmental attribute** bundle associated with renewable electricity generation

Certification assures the energy

is from new projects -
as defined by the standard

is verified -
to validate claims

has not been double counted –
renewable energy is only attributed to the entity that buys the REC

There are two markets

Voluntary RECs –
Purchased to support renewable energy generation; allows for a claim against a company objective or goal

Compliance RECs –
purchased by utilities for compliance with Renewable Portfolio Standards (RPS)

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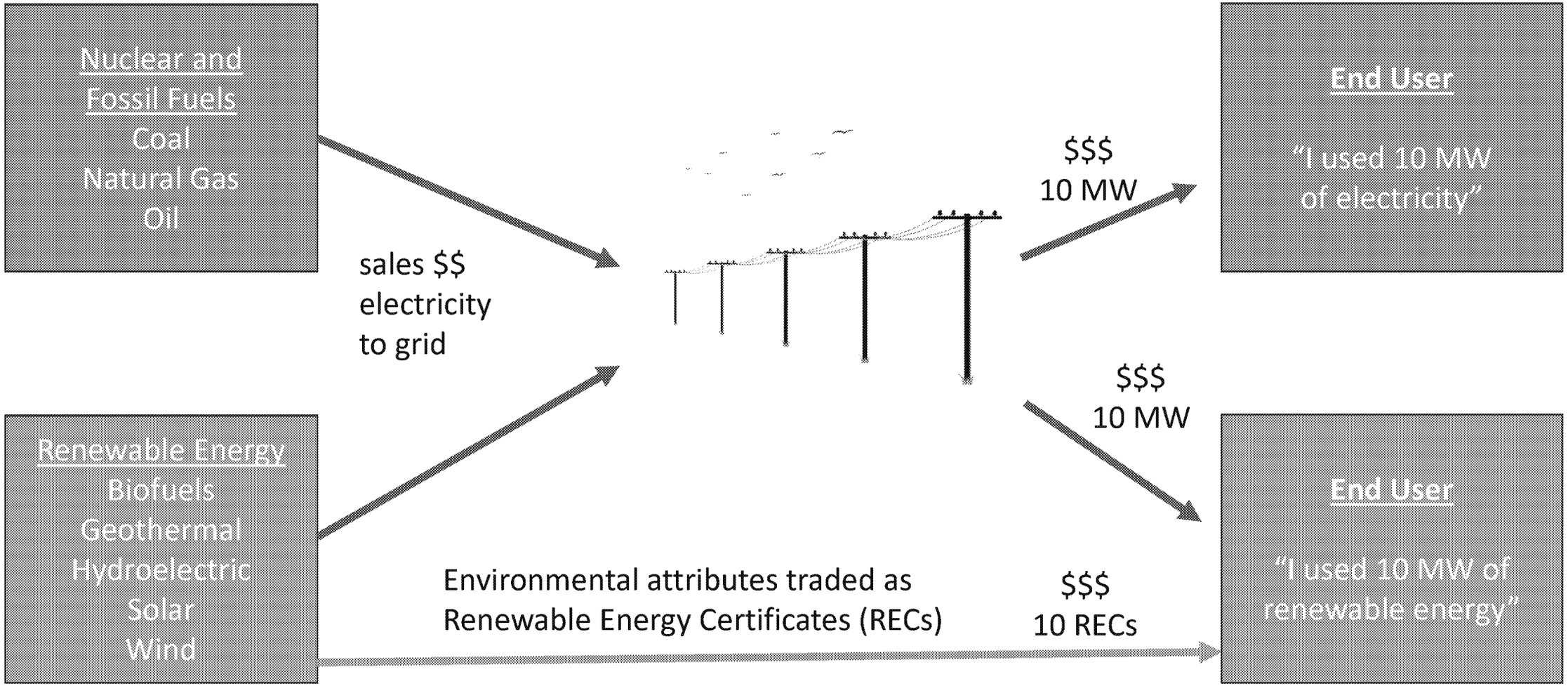

End user pays a premium to claim the environmental attribute

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Many entities are participating in voluntary purchasing of renewable energy (buying RECs)

Company	Annual Usage of Green Power (MW)	GP % of Total Usage
Google	5,921,711	107%
Microsoft	5,334,585	100%
Wells Fargo	1,983,773	106%
City of Houston, TX	1,072,149	92%
Walmart	1,037,331	5%
Procter & Gamble	794,184	27%
Mars, Inc	693,592	72%
Colgate-Palmolive	220,000	96%
Georgetown University	159,499	133%
City of Boston, MA	50,733	35%

"Georgetown purchases more than 150 million kilowatt-hours (kWh) of renewable energy certificates (RECs) annually, equal to more than 100 percent of its electricity use on its main, medical, east, and law campuses".

The GPP lists 406 **long-term contracts** (over 5 years)

EPA Green Power Partner Rankings

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Regarding voluntary renewable energy purchasing

Purchasing actions vary and create different impacts

- short term, long term
- existing projects, projects in development
- owned and operated, purchased from third parties

All purchases contribute to overall demand growth

EPA's Green Power Partnership

- helped establish benchmarks for a wide range of consumers
- recognizes leadership across a wider range of credible supply options

The RMS will help create and validate credible options for recycled materials &

EPA could play an important role in recognizing consumers in this space

Attributes of Recycled Content (ARCs)

1000 kgs
of recycled material produced from postconsumer sources as certified by a third party agency against a standard

ARCs
would be referred to as the **environmental attributes** associated with processing post-consumer materials

Certification assures the material

is from new projects -
as defined by the standard

is verified -
to validate claims

has not been double counted –
recycled attribute is only attributed to the entity that buys the ARC

There could be two markets

Voluntary ARCs –
Purchased to support processing of recycled material generation; allowing for a claim against a company objective or goal

Compliance ARCs –
purchased by companies for compliance with Extended Producer Responsibility (EPR) programs

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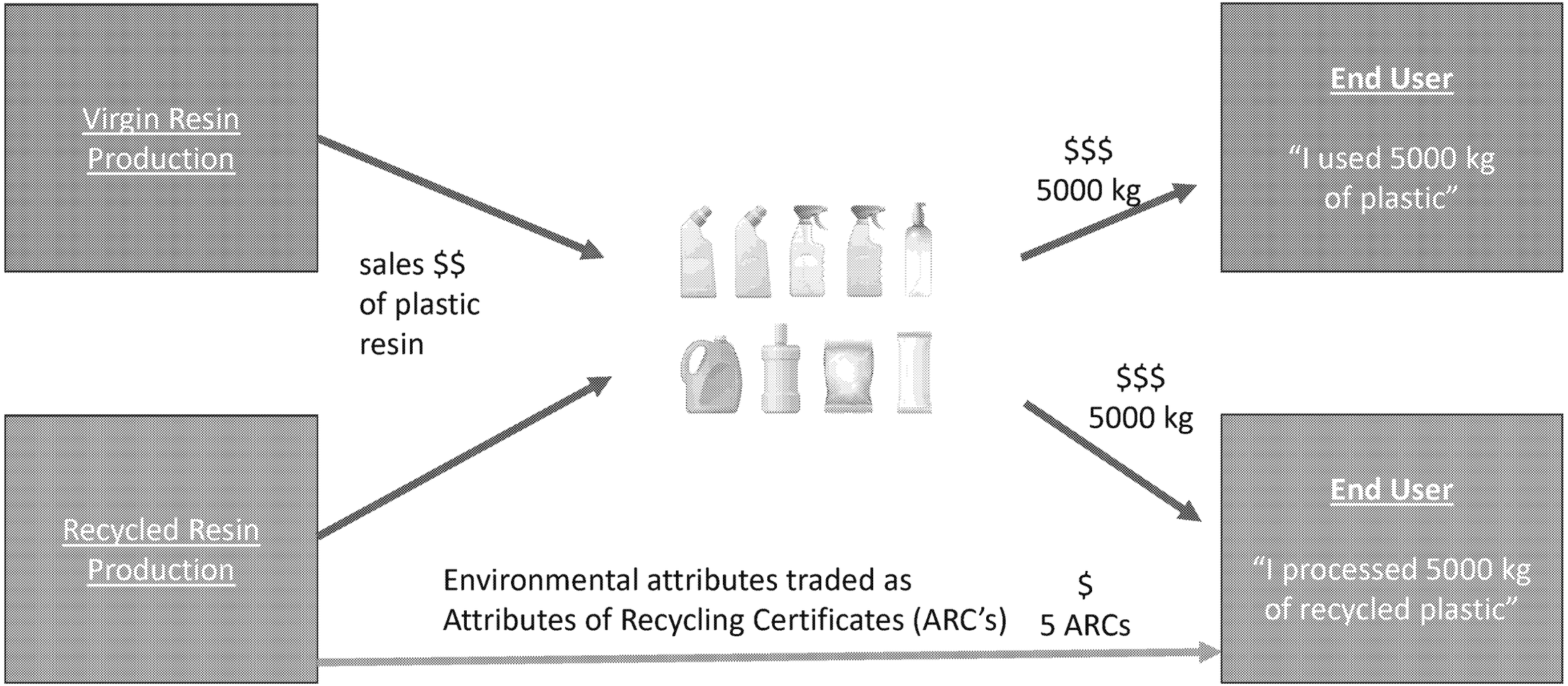

End user pays a premium to claim the environmental attribute

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Participants in a REC trading system

Auditors

Registries

Tracking System

Certification Scheme Owner

CRS

CRS is responsible for Green-e standard

Renewable Energy Generator

Utilities
Other generators

REC Marketers

3 Degrees Inc
Sterling Planet
Many more…

Renewable Energy Purchaser

Any participant

Brands
Converters
Municipalities
Schools

CRS Programs

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Participants in an ARC trading system

Auditors

Registries

Tracking System

Certification Scheme Owner

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Recycled Material Processor

Resin producers
Pulp mills
Smelters
Glass manufacturers

ARC Marketers

Independent trading entities

ARC Purchaser

Any participant

Brands
Converters
Municipalities
Schools

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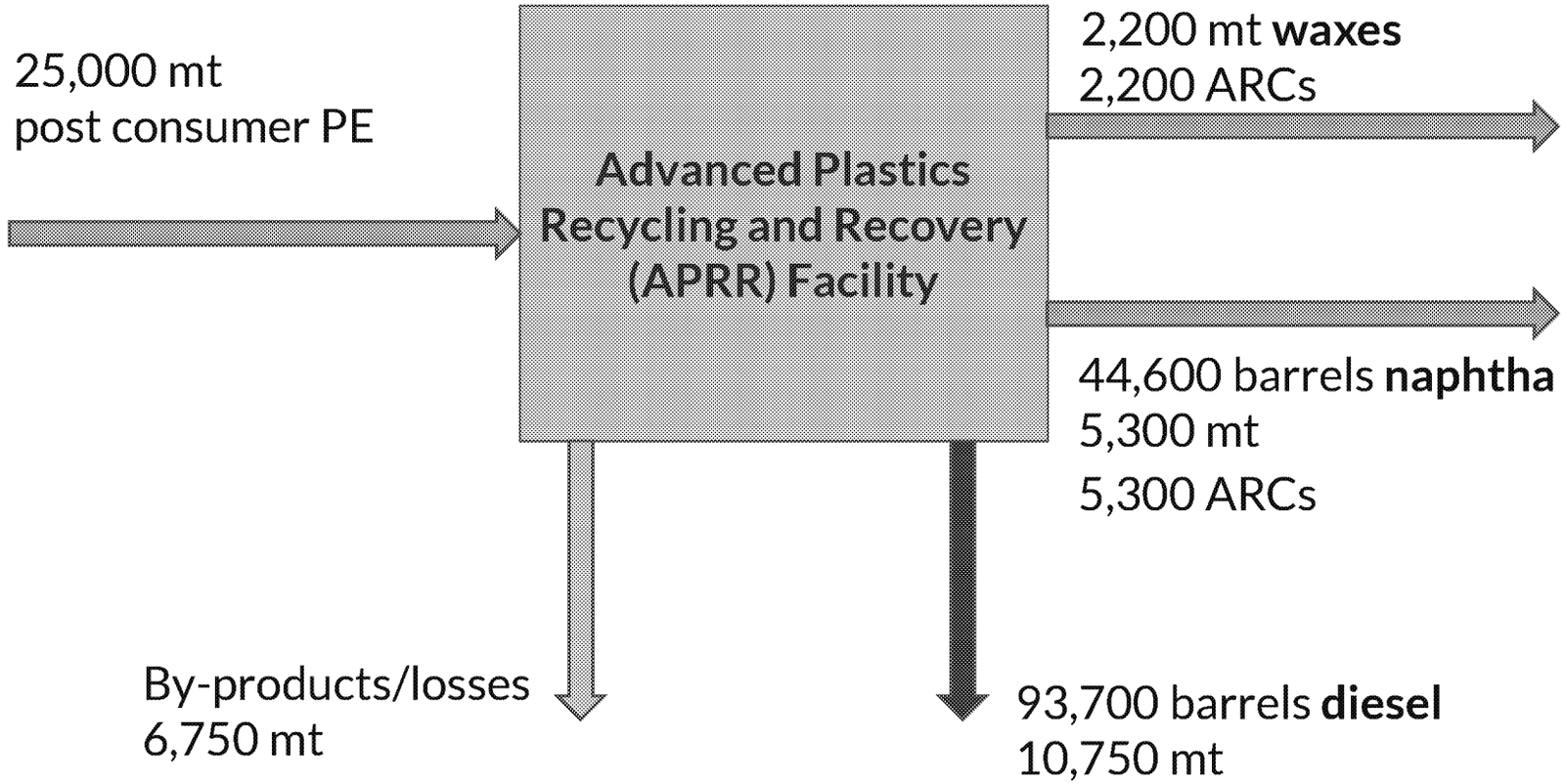
Chemical Recycling

A hypothetical model developed by ACC – three product groups



Materials used as fuel do not generate ARCs

Each product group has a conversion factor (c.f.) which accounts for yield losses

Note:
conversion factors derived from assumptions not provided by ACC

ACC Economic Impact Study

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Recognition is important

"We believe that helping brands be recognized for their use of recycled content will drive an important demand pull that will boost the entire industry.

Once we align behind a common message, then we will be able to effectively communicate why using recycled content is a crucial step in developing a circular economy"

Eadaoin Quinn, EFS Plastic

Resource Recycling, Setting the Standard

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Could you imagine an EPA Recycled Material Partnership?

Recognizing Leaders

Company	Annual Usage of Recycled Materials (lbs)	ARCs as % of Total Plastic Usage
Nestle	5,921,711	57%
Procter & Gamble	5,334,585	50%
PepsiCo	1,983,773	46%
Unilever	1,072,149	42%
Mars	1,037,331	35%

Note: This is a prototype only – numbers are illustrative only

Encouraging investment

An RMP could list **long-term contracts** (over 5 years)

"Mars purchases more than a million lbs of recycled material certificates (ARCs) annually, equal to 35 percent of its plastic use in packaging".

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Many features from EPA's GPP could be replicated

Success metrics for recognition & transparency

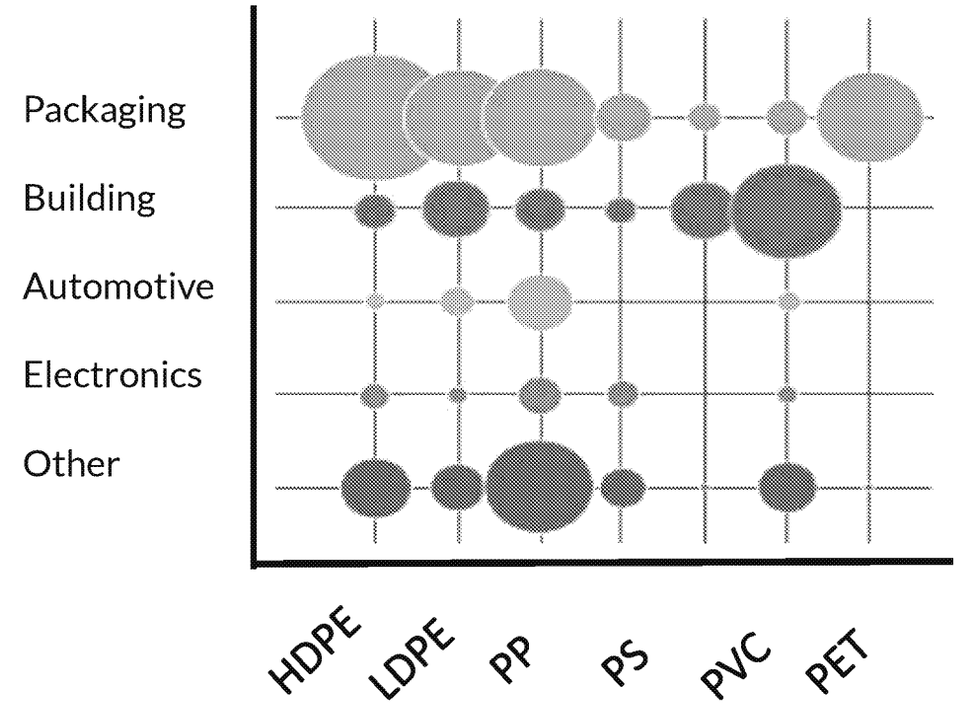
Affiliated Programs and Organizations

Partner categories (of all types)

Educational Opportunities
- Environmental Benefits
- Markets
- FAQ's and Glossary

Partner Resources

Recycled Material Use by Segment and Type



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Timeline for completing the standard

- Exploration began Sept of 2018
- First advisory group meeting was held Sept 2019

- Complete draft of standard - Sept 2020
- Field test with supply chain members – Oct-Nov 2020
- Public review– Nov 2020- Jan 2021
- Finalize standard – Apr 2021

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Let's connect!

Laura.Thompson@greenblue.org