Single Stream Collection and Processing

Building Effective Community and MRF Partnerships

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Basic Facts

Single stream collection is here to stay

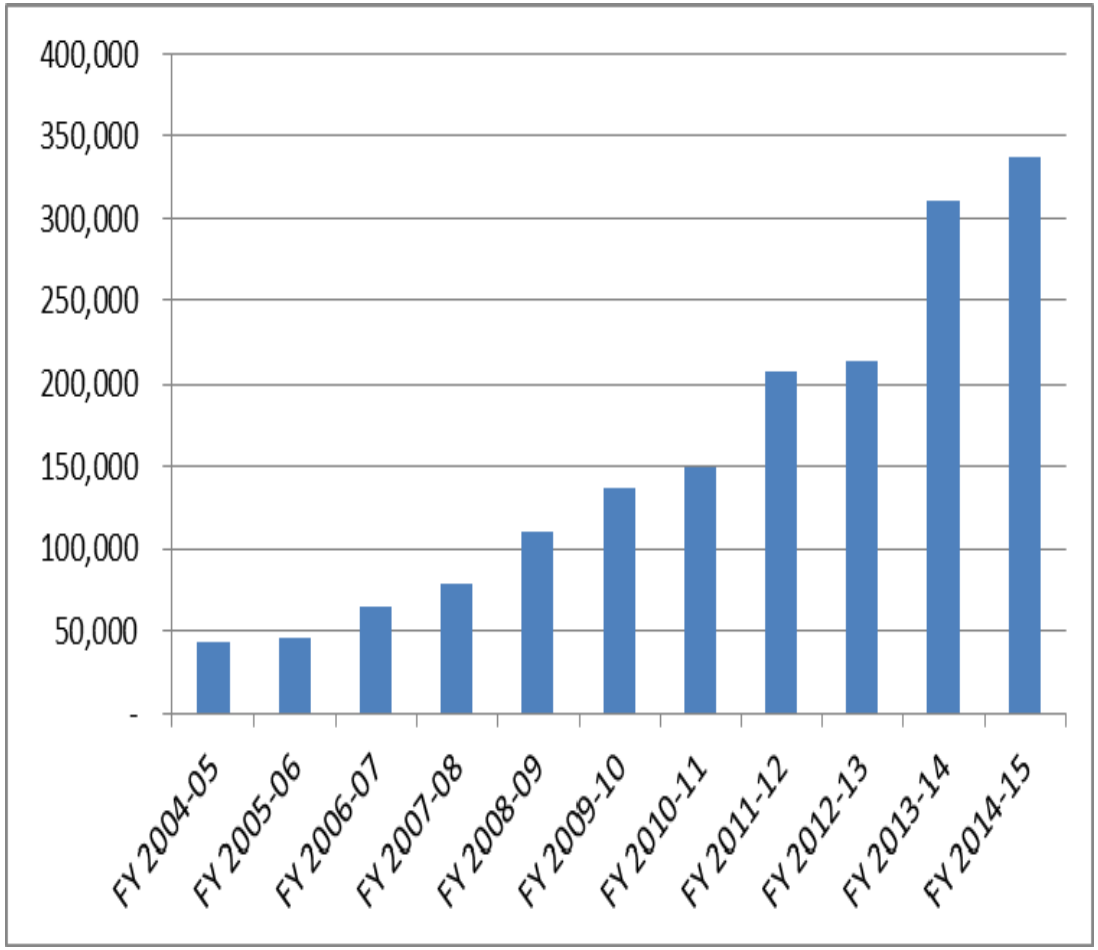
Single stream relies on effective MRF processing

Most MRFs in NC are private businesses

MRFs need to be profitable to survive and to provide critical services to community recycling programs

Trend Towards Commingling

Annual Tons Reported as “Commingled” by Local Governments



Why Single Stream?

Delivers tremendous efficiency in the most costly part of the recycling system: Collection

Can substantially reduce the need for new collection containers and trucks over time

Makes the recycling experience more convenient for any citizen or user of a recycling service

Is easy to implement in all collection situations:

- Curbside, drop-off, away from home, commercial

Challenges of Single Stream

More opportunity for contamination and material quality issues

Issues with low value materials such as glass, which also may cause other problems in MRF processing

Focuses attention on the MRF business model

Requires effective partnerships between communities and MRFs

What Affects the MRF Business Model

Volume

Commodity prices

Material mix

Material quality

Amount of residue

Ability to capitalize upgrades

A MRF cannot be a bank or insurance company

Current Leading Issues for MRFs

- "Evolving Ton" – constant changes in material stream
- Prices
  - Factors behind current prices include:
    - *Price of fossil fuels*
    - *China*
    - *Strong dollar*
    - *Domestic mixed paper capacity*
- Contamination
  - Reduces revenues, raises MRF operating and trash costs
- Glass
  - High cost to process - negative or no revenue
  - "Solutions" to sorting and cleaning glass are expensive

Changing Nature of the Mix in NC

Material	2007	2015
Newspaper	55.8%	20.8%
OCC	7.2%	17.6%
Mixed Paper	5.0%	21.3%
Fiber Subtotal:	68.0%	59.7%
Glass	20.5%	27.4%
Aluminum	1.5%	1.2%
Steel	3.0%	2.5%
PET	4.0%	4.8%
HDPE	3.0%	3.4%
3-7 Plastics	n/a	.6%
Rigid Plastics	n/a	0.4%
Containers Subtotal:	32.0%	40.3%

Terms to Know

Weighted Average Price (WAP)

or

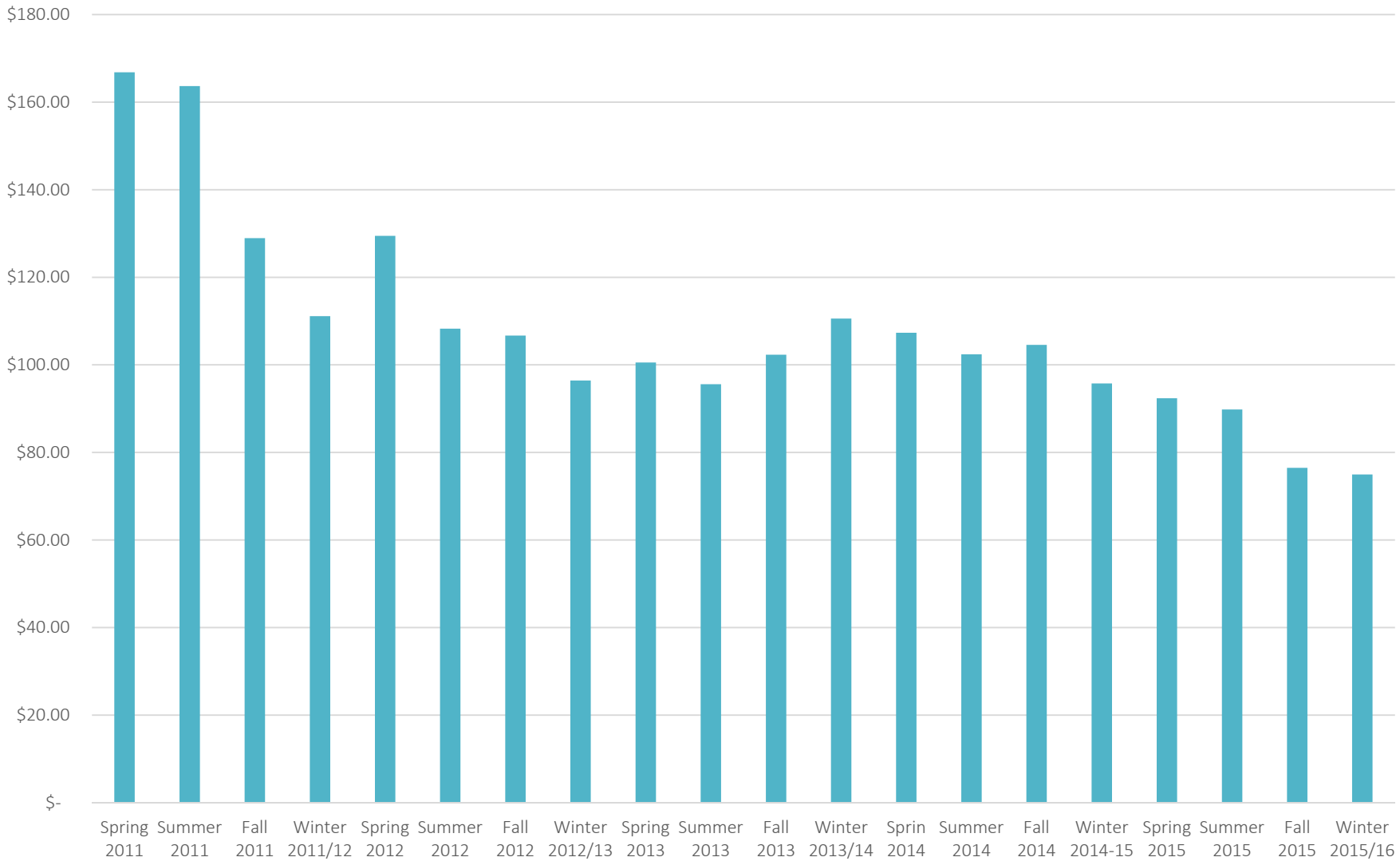
Blended Value

Each term describes the same thing: the combined price of a commingled ton of recyclables processed and marketed by a MRF

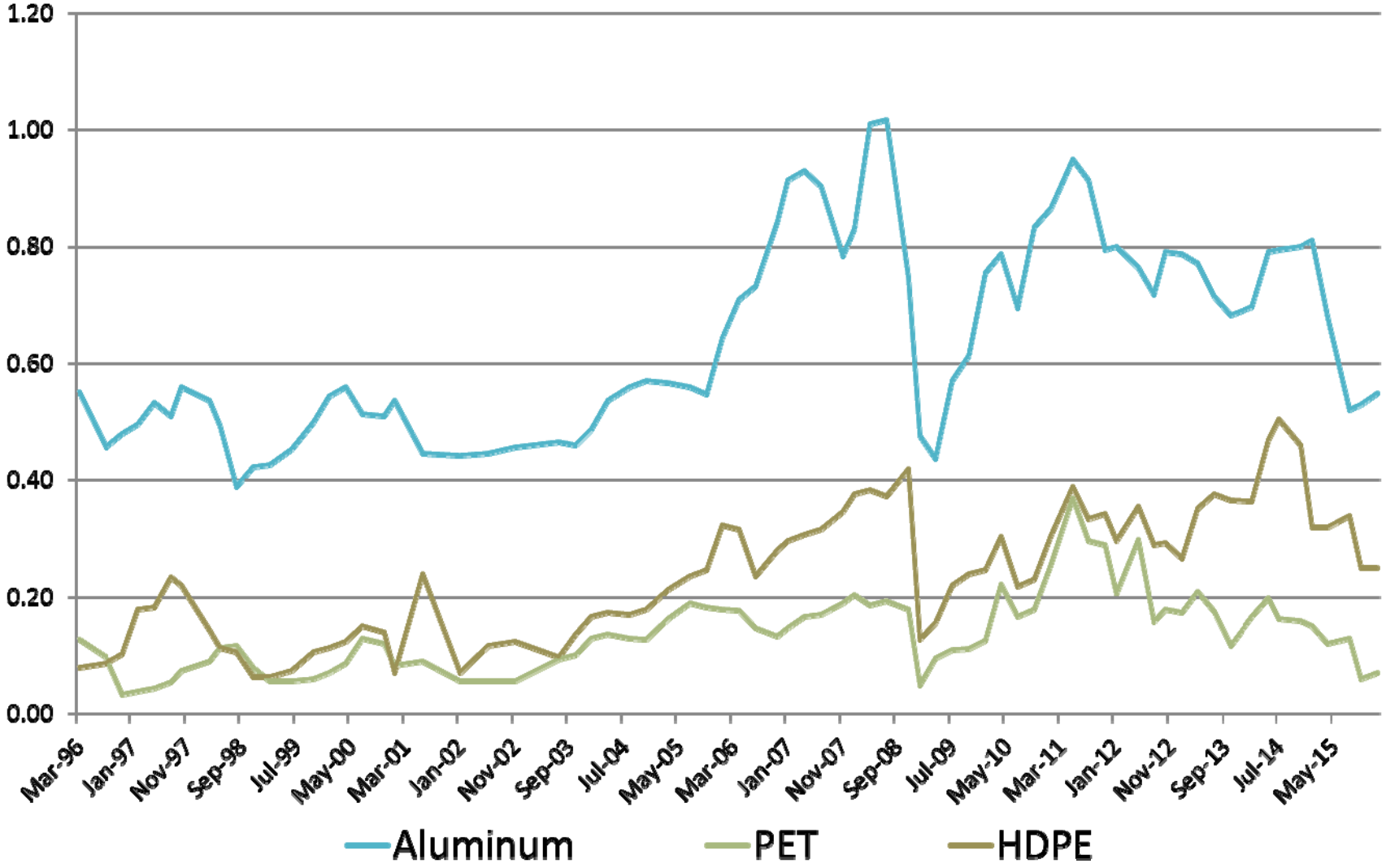
Example of Material Profile and Average Value

Material	**% of 1 MRF ton**	Price/ton	Value
Fiber Materials			
ONP	20.8%	$ 68.30	$ 14.21
Mixed Paper	21.3%	$ 50.00	$ 10.65
OCC	17.6%	$ 96.33	$ 16.95
Fiber Sub-total	59.7%		$ 41.81
Container Materials			
Glass	27.4%	$ (6.67)	$ (1.83)
Aluminum Cans	1.2%	$ 1,100.00	$ 12.76
Steel Cans	2.5%	$ 43.00	$ 1.08
PET	4.8%	$ 150.00	$ 7.20
HDPE (colored prices)	3.4%	$ 400.00	$ 13.60
Mixed Plastics	0.8%	$ 30.00	$ 0.24
Cartons/aseptics	0.2%	$ 50.00	$ 0.10
Container Sub-total	40.3%		$ 33.15
		TOTAL	$ 74.96
		MRF Operating Costs	$ 70.00
		Residue Costs	$ 7.20
		Net Cost/Revenue	$ (2.24)

Value of a Commingled Ton



Taking the Long View: 20 Years of Container Prices



Challenges Communities and MRFs Must Face Together

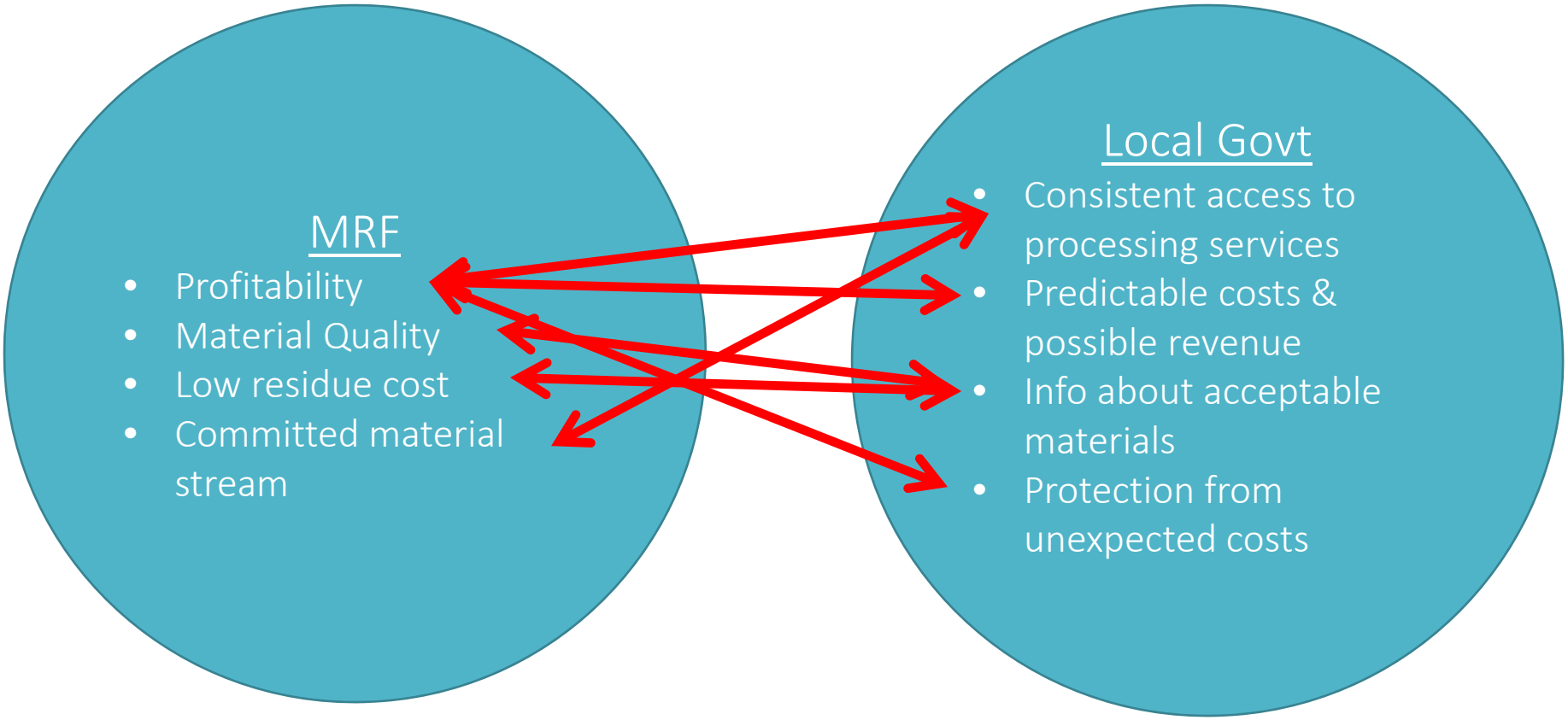
Short Term:

- Current low market values
- Unsustainable revenue deals
- Residue and materials quality

Long-term:

- MRF contracts that protect and reward both parties
- Mechanisms for clear communication and collaboration

Complementary Goals



The Best MRF/Community Contracts:

Allow both parties to live and thrive through range of market conditions

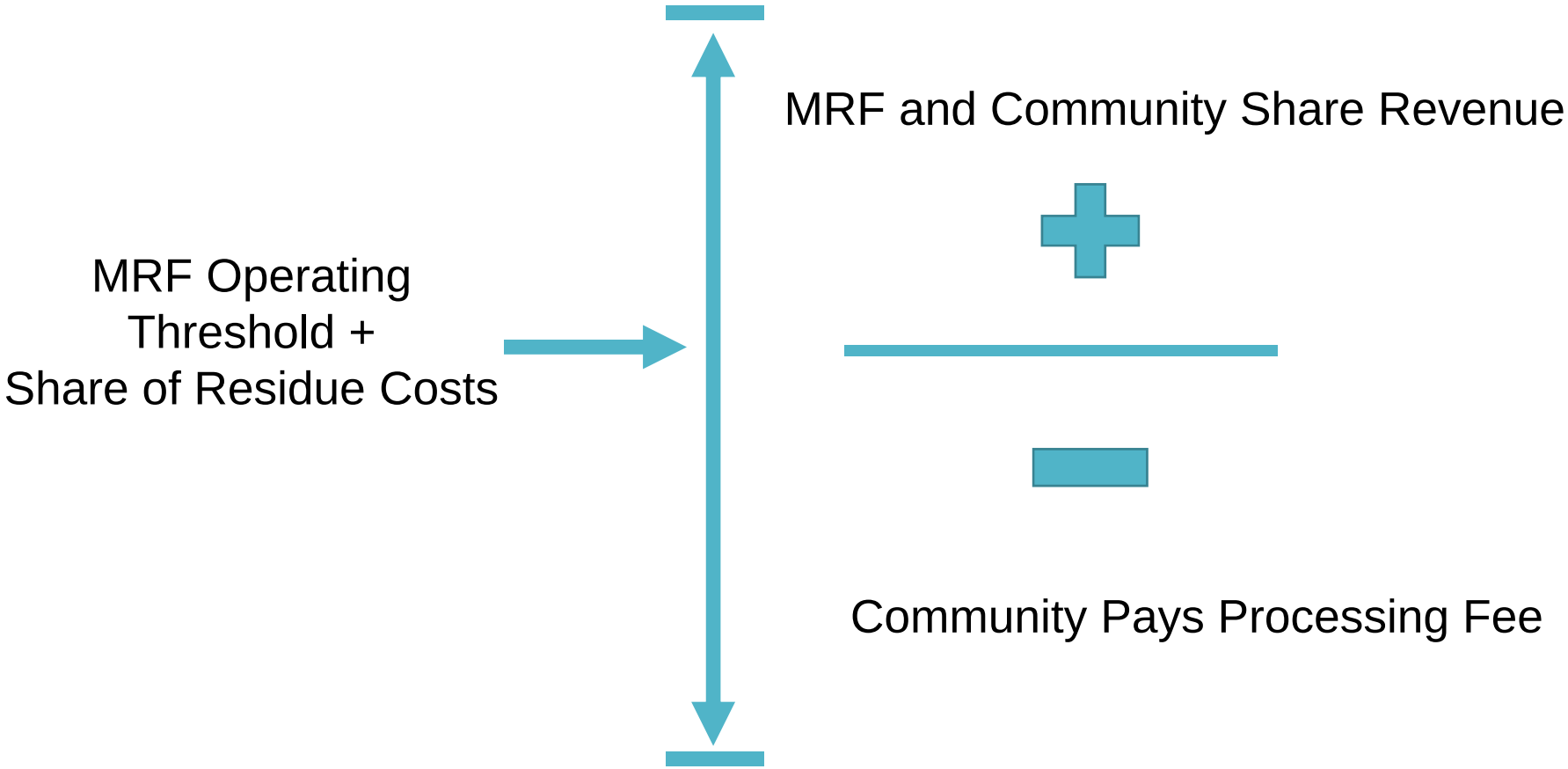
Instill a sense of shared risk and shared reward

Create framework for healthy communication

Framework For A Fair Deal

Contract Element	Rationale
"Floor" price per ton – may be negative in current markets	Establishes a budgetable cost for communities, with a clear differential over disposal. Protects MRF's baseline viability
Shared revenue when prices are good	Allows MRF to profit but shares the up-side with communities (e.g. split revenues over $70 average value threshold)
Long-term contract with renewals	Allows MRFs to invest in upgrades and guarantees community programs access to processing capacity
Clear residue thresholds with shared disposal costs	Holds MRFs accountable to efficient processing but incentivizes community to address quality – e.g., for a threshold residue rate of 10%: < 10%: MRF pays > 10%: community covers excess

A “Float” around a Fixed Price



What Else Should Be in a Contract?

Formal periodic check-in on material values

Periodic material audits to:

- measure residue rates
- establish material profile for calculating value of commingled ton
- monitor changes in material stream

Mechanisms for adding materials when market conditions and the MRF can support sortation

Freight on Board:
Solid Waste Versus Recycling

Garbage

-$40/ton at destination

Recycling

$0 to -$25/ton at destination

What to Do (and Not Do) When Prices Rebound?

Do NOT bake recycling revenues into your core budget

Do NOT let revenues feed the General Fund

Use revenues to:

- Pay down debt
- Accelerate capital purchases
- Expand/improve programs
- Maximize future disposal cost avoidance

In the Meantime…Get Busy on **Material Quality**!

MRFs and communities need to be on the same page about what exactly is recyclable – should be spelled out in the contract

Recycling Websites, literature, signage (*every piece of public information*) should accurately reflect what is recyclable at the MRF

Work hard on excluding:

- Plastic bags
- Shredded paper
- Unrecyclable plastic
- General trash

And…, consider the possibility of separating glass at drop-off

(more on this later in the afternoon glass session)

Thank You!

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RECYCLEMORE