SUPERIOR RECYCLING, PURER COMMODITIES, A BETTER WORLD FOR ALL



We are gorilla recycle

Introducing A New Industry Standard

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Communities of < 5000 households in the USA need a sustainable solution to process and recycle material

Real world processes are needed to recover and repurpose **Post Consumer Resins & Paper** and keep it out of our environment

For <u>\$3.0 – 5.6 million</u>, Gorilla Recycle can provide a full circle, net zero carbon footprint G-Material **Recycle Facility (MRF) with or without Solar**

The potential market for new G-MRF's at only 20% successful sales rate, is over <u>\$2 billion</u> in these smaller/rural communities

Today, #3 - #7 plastics are landfilled or incinerated – There is a new domestic supply position for end market users of +5 million tons



Contents





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Vision, Mission & Opportunity Objectives Recycling 101 Solar Power Plant Education/Awareness Collection Processing End Markets Value Proposition Managing Risk Summary



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1. VISION, MISSION & OPPORTUNITY

Vision

Create Value from Contaminant Free Recycled Materials.

Opportunity

In smaller and rural communities of < 5000 households or about 40 million people, do not have access to local recycling infrastructure. This leads to millions of tons of valuable resources being wastefully disposed.

Mission

Provide an economically sustainable, full circle solution for the collection and processing of recovered waste materials in an environmentally conscious manner.





2. OBJECTIVES



Partnerships, Education, Sustainability



Partnerships driving action in small underserved communities without recycling programs through education and infrastructure







Inspire positive behavioral changes towards recycling across America's small/rural communities





Reinvigorate and empower communities with a state-of-the-art, net zero carbon footprint, Turn-Key, Solar Power Plant, Gorilla Material **Recycling Facility with majority of equipment from Sparta**





The Gorilla Tour Bus On A Campaign to Educate and Showcase our Global Partners!







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3. RECYCLING 101



Managing Contamination

Easy as 1.2.3





- The most important step in fighting contamination is getting the right materials in the bin...
- Then it's up to knowledgeable sorters and proper \mathbf{i} operation of equipment to ensure recovered materials are free from contamination meeting End Market bale specifications

Result: Consistently Clean Products to Market for Sustainable Revenue Generation \$

Ongoing, easy to understand educational campaign using 1. simple terms and images, aimed at "Recycling Right"

State of the art sorting equipment:

- **TOMRA** Autosort
- **Disc or Star Screens**
- Eddy Current lacksquare
- **Electro Magnet** lacksquare

Educational program for all sorting staff

3.









4. SOLAR POWER PLANT

Sustainable Solution



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- Provide sustainable service and revenue to communities where recycling isn't readily available
- G-MRF will produce cleaner, more useable materials for sale to end markets using Solar Power



Turnkey Solar Power

- We provide a fully integrated, turnkey solar power plants so you don't have to manage any aspect of development. Relying on our capabilities ensures the highest level of quality and reliability.
- We have a proven methodology.
- Our team has constructed or developed over 2.1 GW of solar projects, including > 200 projects of a similar or larger scope.
- We provide 2 solutions for onsite power generation.
- Design-Build: We construct; you pay-in-full at COD
- No CAPEX Solar: We construct; you purchase the power





Onsite Solar Power Generation - 101





Project Options: G-MRF - Onsite Solar Power

1. Design/Build Solar Solution

Design / Build solar involves a site survey, bill analysis, executing a construction contract to build a fixed-tilt, ground mount solar array to power G-MRF facility. Customer can pay-in-full at utility commissioning.

2. No CAPEX Solar Solution

300 In circumstances where the offset cost-of-1. Po power is > \$0.08/kWh, rather than add 2. PV \$400-\$600k to the cost of a G-MRF 3. DC construction contract, we can engage in a NO CAPEX 20-year Solar Power Purchase 4. Bal Agreement (**PPA**) with municipal customers 5. Des for PV power generated onsite. 6. Co

These agreements are preferred by government and/or non-profit entities due to the following advantages: No upfront CAPEX required to construct a 6-figure renewable energy project Municipalities cannot monetize the 26% Solar Investor Tax Credit; At Sol, we have financing sources which can

Design/Build Estimate: G-MRF Solar Array

	¢ 201 500 00
	\$ 18,500.00
	\$ 115,000.00
	\$ 35,000.00
6	\$ 45,000.00
800	\$ 120,000.00
24	\$ 61,000.00
PIECES	ESTIMATE
	PIECES 24 800 6





Assets & Liabilities:

A 300kW solar power plant deployed with a G-MRF provides the following benefits:

- Generates up to 387,000 kWh of renewable energy per year
 - Provides up to 80% of the electricity required to operate a G-MRF with clean, renewable energy 0
 - Environmental benefits include the equivalent of removing 3,000 cars off the road 0
- Reduces monthly electricity costs to operate your G-MRF Facility; saving tens-of-thousands \$ over time
- Lock-in predictable, contracted electricity rates for the solar power generated onsite for 20 years

Purchase Solar Power Plant

Savings pay off cost of power plant in 6-7 years



Upfront CAPEX Required:

Before Solar

After Solar

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Design-Build vs No CAPEX Solar

NO CAPEX 20-Year Solar PPA

Lowers facility's monthly electricity Costs



Upfront CAPEX Required:

Before Solar



Preferred Solution: G-MRF - Onsite Solar Power

An ideal solution for capped landfills. Posts and electrical infrastructure don't penetrate the ground or membrane.

ENERGY DENSITY PER ACRE

kWh/YEAR CAPACITY ACRES 250kWp 316,000 kWh

300kWp Solar Array will require 1.25 acres.



Example: Cast-In-Place, ballasted solar is an ideal fixed-tilt solution for Brownfield Solar Arrays



Las Virgenes-Triunfo Joint Powers Authority – 1,000kWp

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5. EDUCATION / AWARENESS



Global Awareness

The Recycle Tour Bus On A Campaign to Educate, Improve Awareness And **Showcase our Global Partners!**



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"Recycle Right" -A National Awareness Campaign



THANK YOU FOR RECYCLING THESE:





Aluminum and Steel Cans empty and rinse





Cereal Boxes, Newspaper, Magazines and Mail, Flattened Cardboard & Paper Tubes



Kitchen, Laundry, Bath: **Bottles and Containers**

empty and replace cap







Recyclables (no garbage)



No Needles



or Chains







GreenCityUSA.org

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- Including Educational & Promotional tools
 - Available through accredited Non-Profits
 - Customizable to fit each program's needs
- **Determine the G-MRF Service Area**
 - Which communities utilize the MRF
 - What are the material specifications of the secondary markets





Automated Roll-Out Carts – Industry Standard



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Grants available from The Recycling Partnership for new collection streams

- **1.** Increases community participation
- **2.** Accommodates higher levels of material collection
- **3.** Integrates well with fully automated trucks (Gorilla Packer Truck)
- 4. Enhances customer service



6. COLLECTION



US patent: #9,555,964 -Gorilla Packer Truck



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- Our innovative collection vehicle is an industry first
- The patented design is an efficient, sideloader truck with an automated armature
- A one-person safe operation
- **MSRP \$169K** ullet



Gorilla Packer Truck – Value Add



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Gorilla Packer Truck – Value Add (Cont'd)



OPERATIONAL COST \$/HOUR





7. PROCESSING



Processing Considerations



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- G-MRF is Customized and Expandable
- Transportation and Related Costs Distance to MRF
- Underserved Communities
- **Distance to Secondary Markets** •
- **Education and Awareness of Proper Recycling**
- Multiple G-MRF Configuration HUB & SPOKE





Building Integrity





- Portable
- Flame Retardant Fabric
- Installation Included
- Expandable
- 25 Year Guarantee
- Cost Effective
- Key Work Areas Climatized
- Minimal Lighting Req'd

Custom Made and







G-MRF - Design

Years of Research



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- Collaboration and Final Design by Sparta
- Consultation with the Big 4 and others:
 - Republic Waste Services
 - Van Dyk
 - Green Machine
 - BHS
 - American Baler
 - CP Global
 - Machinex
 - Kiverco (partnership/alliance)
- Design initially evolved from existing operational large MRFs
- Collaboration with Wendell Perkins (MRF Ops) Leader/Designer) and Nick Doyle (Tomra Advisor)
- Further refinement with CEO of Stadler America - Matthew Everhart



G-MRF - Customizable



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G-MRF - A Better Model



- **Scalable** Design
- Process <u>Flexibility</u>
- **Balanced Allocation of** sorting resources -**Automation vs Manual** Labor
- **Leveraging** what is available in the industry - best of the best







G-MRF - A Better Model Cont'd



- Design customized to meet customer's needs
- Inside height required: 40'
- Climatized in critical areas only

- Balanced Manual and Auto Sorting for Minimum Contamination
- Fire Protection as Per Community Needs



G-MRF – Scope & Performance



* Depends on Op Costs, Initial Investment

SCOPE

- In-feed Material: Commercial and Residential single stream
- Capacity: 2.5 14 tph (expandable to 20 tph)
- Manual Sorters: 5 12, Managers, Mechanic
- Total Area Required: +2.5 acres
- G-MRF on reinforced concrete foundation & climate controlled
- Optional Solar Power Plant Diesel Gen Backup System/Electric Grid Backup
- G-MRF includes general contracting, commissioning and training

PERFORMANCE PROJECTIONS

- Rate of Recovery: 93%
- System Uptime: >90%
- Net \$/processed ton: \$16.50
- Estimated ROI: 2.5 8.0 years*





G-MRF Recovery @ 10 tph of recyclables

Recovered Material	% Recovered (based on 20% of target market communities)	
OCC	96%	
ONP/Mixed Paper	96%	
PET	92%	
HDPE	91%	
3-7 Mixed Plastics	96%	
Ferrous Metal	80%	
Non-Ferrous Metal	92%	
Total	93%	

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- +5 million tons of Mixed **Plastics**
- +22 million tons of recoverable materials
- <u>93% recovered</u> Material is outstanding compared to the national average of larger MRFs



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G-MRF - Summary

GORILLA MRF ADVANTAGES - <u>Customer Financial Modeling Available</u>

- Timeline estimated at 120-150 days from start of construction
- Construction planning, commissioning and general contracting all provided by Gorilla Recycle
- Concrete design of 5000+ psi to prevent deterioration and extended lifetime



- Manual sorting stations are heated and air conditioned •
- Fire prevention technology applications that meet community needs
- MRF design is easily expandable to accommodate increased tonnage up to 20 tons per hour





8. END MARKETS



Recycled Plastic in Asphalt – Dow Solution

Increasing plastic recycling rates is a hot topic

- Recycled plastic use in paving has bipartisan Congressional support
 - December 2019 Congressional Plastics Solutions Task Force launched
 - Senate Environmental and Public Works Committee draft language to fund research studies (Highway bill)
 - Save Our Seas 2.0 bill draft language to fund research studies
 - Realizing the Economic Opportunities and Value of Expanding Recycling (RECOVER) Act federal grants to states/municipalities to invest in recycling programs and infrastructure.
 - Recycling Enhancements to Collection and Yield through Consumer Learning and Education (RECYCLE) Act - grants to increase commercial/municipal recycling outreach and education

AI, NAPA, AASHTO, and others have kicked-off work groups or funding projects





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RP's in Asphalt - Dow Solution (Cont'd)



*Non-comprehensive list

- Texas \rightarrow TXDOT PG70-22

Use a compatibilizer (RET) to mitigate plastomer performance gaps

oil containers

:les; 4.5+k



Other Secondary Markets

Recovered Materials		
OCC		
ONP/Mixed Paper		
PET		
HDPE		
3-7 Mixed Plastics		
Ferrous Metal		
Non-Ferrous Metal		
Mixed Glass and Rejects		

Potential	End	Users
		•••••

Newport Trading, Blackbridge Investments, Clean Tech, Georgia Pacific LANDFILL



9. VALUE PROPOSITION

USA Census Study and Pipeline











Partners will have a considerable new **USA supply position with previously** landfilled material.

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Acutal data from the USA Census Bureau:

- Households of 5000 or less by state Total Communities = 4361
- Target Communities in densely populated areas = **3401** located in East/West Coasts, Mid USA, Texas
- Market Pipeline basis: 3401 x <u>20 %</u> x \$3.5 MM = <u>+\$2.3</u> Billion





G-MRF Sustainable Revenue

Recovered NON-Contaminated Materials	Potential End Users	\$/ton – Nat'l Avg Est
OCC	Newport Trading, Blackbridge Investments, Clean Tech, Georgia Pacific	\$40
ONP/Mixed Paper	Newport Trading, Blackbridge Investments, Clean Tech, Georgia Pacific	\$35-150
PET	Newport Trading, Blackbridge Investments, Clean Tech, Georgia Pacific	\$330
HDPE	Newport Trading, Blackbridge Investments, Clean Tech, Georgia Pacific	\$295-415
3-7 Mixed Plastics	Newport Trading, Blackbridge Investments, Clean Tech, Georgia Pacific	\$20
Ferrous Metal	Newport Trading, Blackbridge Investments, Clean Tech, Georgia Pacific	\$125
Non-Ferrous Metal	Newport Trading, Blackbridge Investments, Clean Tech, Georgia Pacific	\$800
Mixed Glass* and Rejects	LANDFILL	\$(45.00)
Monthly Gross Revenue @ 10 tons per hour		+/- \$147,000 GROSS

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10. MANAGING RISK

Risk Assessment

RISKS

Education Marketing

- Staffing
- **Easily Communicated**
- **Educational Tools**
- **Community Acceptance**



Poor Management

- **Inefficient Operations**
- **Recovery Process**
- **Quality Control**



- **Price Variance**
- Lack of Markets
- **Seasonality**

End Markets



RISK MANAGEMENT

- **Scottee Newkirk to Lead**
- **Expert Partners/Staff**
- **Community Assessment Process**
- Leverage National Campaigns

- **Source From National Manufacturers**
- Simple & Most Current Processes
- **Operational Training** •
- **Supply Chain Excellence**
- **End Market Evaluations/Flexibility**
- Leverage Local OKC, Tulsa Mkts
- **Evolving End User Markets**





11. SUMMARY



Potential Customers

- 1. Stillwater, Oklahoma Population: 50,391, collecting but NO existing MRF, **PROPOSAL by Gorilla to City of Stillwater, Contact: Chris Knight**
- 2. Case Grande, Arizona Population: 57,343, NO existing MRF, collect, bale and ship 28 miles to Phoenix, site of Gorilla Pilot Plants, Contact: Wendell Perkins Gorilla Truck/MRF Expert
- 3. Portola Valley, California Population: 4,611 No existing MRF, partially serviced by area companies, Contact: Nick Doyle, Gorilla Recycle Advisor
- 4. Durango, Colorado Population: 18,985, NO existing MRF, curbside pickup for recyclables and ship 214 miles to Albuquerque, New Mexico, Contact: Levi Lloyd **Operations Manager**
- 5. Billings, Montana Population: 109,550, NO existing MRF, drop off locations in city, 4 year plan to add a MRF, Contact: Vestor Wilson Solid Waste Superintendent
- 6. Gunnison, Colorado and surrounding counties Population: 80,957, NO existing MRF, current feasibility study to develop recycling, Contacts: Ellen Ross Sustainable Director, Elyse Casselberry Economic Director, Michelle Haynes **Executive Director**





Other Potential Customers include 5 counties in West Virginia nominated per Mr. Steve Pilato and communities in Baltimore area nominated per Dr. Neil Seldman



Letter of Support



June 23, 2020

Frank Hernandez Gorilla Recycling, LLC 560 Pine Drive Windsor, Colorado 80550

To Whom It May Concern;

The Hefty EnergyBag[™] program is an initiative to collect hard to recycle plastics, divert them from landfills and convert the materials into higher valued usages according to the EPA waste management guidelines. The program continues to grow and a positive increase in recyclables for any community using Gorilla Recycling's innovative collection and MRF design.

As the brand owner it is our intent to continue to develop and expand the program and we look forward to Gorilla Recycling's innovation and support in serving this ambitious goal.

Regards,

Paul Benvenuti Sales Director, Hefty EnergyBagTM **Reynolds Consumer Products**



Future of Plastics

Frank/Dave/Scottee,

Great talking with you all a few days ago. I just wanted to reemphasize part of our conversation and around Dow's focus on development and use of recycled product. This is a large growth area for Dow and will continue to be for the foreseeable future. As brand owners demand increased use of recycled product in their final products, Dow will act to meet those needs directly or through partnerships. Dow's Sustainability goals include, by 2030 enabling 1 million metric tons of plastic to be collected, reused or recycled through its direct actions and partnerships. Additionally by 2035, Dow will close the loop by enabling 100% of Dow products sold into packaging applications to be reusable or recyclable. To support these goals, one key example is that Dow signed a partnership with Avangard in January 2020 to develop Dow's first PCR-based products in North America (<u>https://www.dow.com/en-us/news/dow-</u> avangard-innovative-advance-plastic-circularity.html). This is just one example and the beginning of a journey.

One of the drivers for increased use of recycled plastic in this space is the Ellen MacArthur Foundation. This foundation is focused on driving a circular economy with brand owners. Members who are part of the Ellen Macarthur Foundation are companies like, SC Johnson, IKEA, Google, Unilever, BlackRock, etc. These companies have signed an agreement to help develop and support a circular economy with specific goals driven around creating a new life for plastic waste. According to Ellen MacArthur Foundation, today only 14% of plastic packaging globally is collected for recycling after use. You can find more details here: https://www.ellenmacarthurfoundation.org/



Future of Plastics (Cont'd)

Lastly, as I mentioned, the initial drive was from the packaging space but this has now been expanding to more industrial sectors such as construction. In the attached report (from ODI - <u>https://www.odi.org/publications/17361-phasing-out-plastics-construction-sector</u>) you will find details describing the growing use of plastics in construction but at the same time indicating concern over the high usage of plastic and trying to find ways to reduce the use of virgin plastic. One of the key things that can and will likely change this industry is the use of recycled plastic product.

The movement towards recycled plastic is just starting and the demand for it is quickly growing. We have a long way to go to meet our goal of closing the loop and enabling 100% of Dow products sold into packaging applications to be reusable or recyclable by the year 2035. Therefore, we at Dow are supportive of Gorilla Recycling's initiatives around creating and delivering a circular economy.

Thanks for your discussion and support in this space. Please let me know of any questions or additional thoughts.

Best regards,

Níshant Karamchandaní

Marketing Manager – Infrastructure Packaging & Specialty Plastics The Dow Chemical Company 1254 Enclave Parkway Houston, TX 77077 Tel: 281-966-4144 Mobile: 989-488-8951



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Meet The Team



FRANK HERNANDEZ **GORILLA RECYCLE CEO**

Frank has over 35 years of experience in the petrochemical industry with The Dow **Chemical Company and consulting** companies. Experience includes areas of manufacturing, sales, supply chain management and business strategy development. The challenge will be to lead the Gorilla Recycle team to a successful startup and insure stability and growth with sound investments and partnerships.



Scottee is the designer of the light-weight patented recyclable refuse collection vehicle that will be manufactured and sold by Gorilla **Recycle. He's a US Marine Corp veteran with** significant experience as a promotor, engineer and product designer. His diverse background and strong entrepreneurial skill set has led to the success of several startup companies. Scottee will be the "Bus Driver" for GORILLA, on tour promoting our G-MRF and collector products at industry events while targeting smaller communities for recycling clinics.

SCOTTEE NEWKIRK GORILLA RECYCLE FOUNDER



DAVE FINNMAN GORILLA RECYCLE CFO

Dave is a graduate from University of Northern Colorado, Business-Finance College. His corporate career extends over 30 years in the tax departments of 3 major corporations. Mr. Finnman also oversaw the tax compliance requirements by his staff. This included filing annual property tax returns in a myriad of jurisdictions throughout the U.S., and paying the resultant property tax bills.



Meet The Team



NICK DOYLE COMMERCIAL ADVISOR

Bucknell University, Lewisburg, PA 2010 Bachelor of Arts, Human Geography International Relations Innovative business development and system Integration professional with an emphasis on Post Consumer Recycled (PCR) resources. Design and implement unique market development strategies to target new and existing verticals. Ability to convert operational inefficiencies into profit driven solutions. Dedicated to advancement of the circular economy.



CHRISTINE MILLER COMMERCIAL ADVISOR

Over a decade of experience in identifying and solving rural municipal waste stream issues. Supervising curbside recycling collection and processing for over 50 rural Wisconsin communities. She also has experience working closely with secondary buyers to ensure the customers utilizing the local MRF are "Recycling Right" through fun and inspiring educational campaigns. Fox Valley Technical College, Appleton, WI, with a degree in Natural Resources, and a current Board member of the Associated Recyclers of Wisconsin.



MEET THE TEAM



LUKE BINGHAM GORILLA RECYCLE COO

Luke's 30 year career in CAD, GIS, Solid Modeling and programming has spanned the areas of surveying, commercial development and industrial design. His desire for efficiency and effectiveness combine to create a model for excellence. He will be charged with building our G-Mrf's and plasticized roadway projects and ongoing administration of the facilities.



WENDELL PERKINS GORILLA RECYCLE LEAD ENGINEER

Wendell is the Gorilla Packer Truck Engineer, Research and Product Development Coordinator. Experience includes 39 years in various positions with major refuse vehicle companies as a design and manufacturing engineer. He holds several patents throughout his career. Wendell will be the lead engineer for Gorilla Packer Trucks and Gorilla Material Recycle Facilities.







Frank Hernandez - CEO frankohernandez@hotmail.com 713.446.6530 Scottee Newkirk - Founder rsnewkirk@gmail.com 480.299.0608

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