## Clean, Green Recycling at BGSU

**Date:** 11/18/15

**Amount Requested:** \$16,500

Author of Proposal: Joshua Chamberland

Primary Contact Information:

Joshua Chamberland

joshuac@bgsu.edu

# Identify the purpose of your proposal. Provide a detailed description of its activities and specific objectives:

In 1994, Bowling Green State University officially launched its very own solid-waste recycling program, becoming a leader and innovator in the field. Over the years however, conditions have changed, programs have been modified, and we now have single- stream/ co-mingled recycling provided by Waste Management Inc (WMI). This contracted service does have its limits; WMI only picks up large dumpsters full of recycling and does not service each individual building. This creates a gap between the every-day recycling bins used by the campus community and the large recycling "roll-off" containers that WMI picks up for processing. Campus Services, located within Campus Operations, is responsible for emptying recycling stations within individual buildings and transporting the contents to a single location on BGSU's main campus for pickup.

The current trucks used to transport recyclables at BGSU are horribly outdated (1999), inefficient, and dirty. Campus Services is currently considering the purchase of a new box truck as a replacement for one of the old vehicles. This proposal is to ensure that the new vehicle purchased is much more fuel efficient and reduces university carbon emissions/ other air pollutants by funding the cost difference between a standard truck and hybrid truck. The proposal also requests funding to cover the costs of educational "wrapping" for the vehicle.



Figure 1. Current recycling truck

#### What other offices may possibly be impacted by your proposal?:

- Campus Services; Recycling & Solid Waste
  - Andrea Depinet; Director of Campus Services
  - o Scott Euler; Manager of Grounds, Recycling, & Solid Waste

#### How will your project be managed and completed:

Campus Services is currently considering the purchase of a replacement truck because the current vehicle is rapidly declining. A Request for Proposal (RFP) has already been filed and completed through Purchasing and the lowest bid for a Hybrid Box Truck has been identified. Should this proposal be approved, Campus Services will be notified via award letter, appropriate funds will be transferred, and the vehicle will be purchased/ delivered. While delivery is pending, the Office of Campus Sustainability will reach out to Marketing & Communications to design educational "wrapping" to be installed on the truck in order to educate the campus community on low-emission vehicles. Upon delivery of the new truck, educational wrapping will be installed, the obsolete unit will be decommissioned and sold on govdeals.com, ultimately removing its carbon footprint from the university.

#### What's the "green" idea:

The purchase of a hybrid-diesel truck will make our university more sustainable in a number of ways:

- Current recycling trucks do not start reliably. Operating lift-gates and lights require the engine running. Leads to almost constant idling throughout the workday.
  - During winter months, it is not uncommon to see these trucks idle entire lunch break
- This hybrid model sees an increase of approximately 20-30% fuel efficiency over traditional model (Will most likely see more due to current idling practices). Ultimately reducing carbon emissions & other toxic air pollutants such as: particulates, carbon monoxide, etc. Assisting with implementation of Climate Action Plan.
- Employee & Community Education
  - University employees who utilize vehicle will experience transition to clean vehicle technology, clearing potential misconceptions
  - Educational wrapping will convey climate-leadership by university's operations to all students/staff on campus who see.

#### How much will it cost:

This proposal requests the Student Green Initiatives Fund cover the cost between a traditional Hino 195 and a Hino 195h as well as pledge funds for educational "wrapping" of the vehicle upon its delivery.

• \$14,000 (Difference between traditional truck & hybrid model); See attached quotes

Hybrid Cost: \$71,991Traditional Cost: \$57,991

Vehicle Wrapping (including installation)

 Up to \$2,500 \*\*Number was estimated by calling "Budget Wraps", the university's preferred vendor for vehicle wrapping and describing project; Aimed high to ensure not to go over budget\*\*

Total: \$16,500



Figure 2: Hino 195h (proposed purchase)

#### Can anyone else help pay for it:

Campus Operations will be contributing \$57,991 and an additional \$9,100 for customization; bringing the total cost to \$67,091

### How can we keep the project going:

Ensure staff utilizing vehicle are properly trained before use. Clear expectation of respect for vehicle conveyed to employees from supervisors; periodic inspection to ensure it is being maintained. No funds needed for future as Campus Operations and the extended warranty will cover maintenance costs.

#### Who will benefit from you proposal:

- Campus Students, Faculty, Staff
  - Increased air quality on campus; less pollutants around loading docks, roads, and within campus
  - Education on the availability/ feasibility of low-emissions trucks
- Campus Services
  - Much more efficient vehicle, should save on fuel/ maintenance costs
- University as a whole
  - o Decreased carbon footprint; assisting with Climate Action Plan
  - Fuel/ financial savings

#### How will you measure your project's success:

The Committee will ask Campus Services to track fuel consumption for this vehicle and their other recycling truck (2 total) over the first 6 months of use. Office of Campus Sustainability will then compare gallons of fuel used between new truck & old truck to determine relative fuel savings. Will also be able to track carbon emissions utilizing a carbon calculator. If the carbon emissions/ fuel use from the Hybrid truck are lower than the current truck, then the project will be deemed a success.

# Proposal







Flag City Truck & Equipment

151 Stanford Parkway Findlay, OH 45840 USA

MAIN 419 423 3131 FAX 419 424 5140 TOLL FREE 800 472 9597

flagcitytruck.com

**Date:** 05/18/2015

Bowling Green State University Hino 195 vs Hino 195 Hybrid

Truck Purchase:

2016 Hino 195 Hybrid w/ 14' Box

Truck Cost:

\$71,991

Truck Purchase:

2016 Hino 195 w/ 14' Box

Truck Cost:

\$57,991

Hybrid model is actually \$14,000 more. You will not gain this back with added fuel economy with the miles you run. Typically fuel savings in comparison is around 20-30% better compared to non-hybrid, however over the long haul it will not save you the money. If the University wants to do the "Green" truck then I would still go that way but it will not save any money in the long term.

\*\*5 Year / 200,000 Mile Warranty\*\*

Price does not include state or local taxes
Sincerely,

Brad Comstock
Fleet Sales

Cell: 419.722.0047 Office: 419.423.3131 www.flagcitytruck.com Customer: BGSU

Dealership: Flag City Truck & Equipment Quote ld: 83415

Quote Name: 195H 57627

Prepared By: Brad Comstock



### **Quotation Details**

Quote Information	
Quote Name	195H
Expiration Date	10/28/2015
Model	2016 Hino 195h
Transmission	Aisin A465 - 6 speed automatic transmission
Wheelbase	137.8

Wheel	base		137.8
Stand	lard Options		777
Qty	Order Code	Description	Price
1	ENGINE	Engine - HINO J05E-TP Turbo charged and intercooled, diesel 4 cycle, 4 cylinder, In-line water-cooled; Max Output 210hp @ 2500rpm; Max Torque 440lb.ft. @1500rpm; 5L displacement, EPA10 Emissions Certified.	\$0.00
1	OIL	Oil Capacity - 9.9 quarts	\$0.00
1	EXHBRAKE	Exhaust brake, electric-pneumatic with valve in exhaust pipe.	\$0.00
1	FUELFILTCOE	Fuel Filter - Pre Filter Heated Water Separator	\$0.00
1	ALT	12 volt 130 amp brushless alternator	\$0.00
1	BATTERY	Two 12 volt parallel connection, 1850 CCA.	\$0.00
1	STARTER	12 volt 4.80 kW Denso starter	\$0.00
1	HYBRID_SYSTEM	Ni-MH Battery 288V, Traction Motor (Max 36kW, 258ft-lb), Inverter (Max 64KVA), 1.9Kwh Output, Hybrid Adaptive Control System, Idle Stop, Eco Mode, Hybrid Indicator and Eco Lamp	\$0.00
1	RADIO	Radio - AM/FM with single CD	\$0.00
1	AIRCOND	Air conditioned	\$0.00
1	DISPLAY	Meter Cluster - Information display: Instant and trip fuel consumption, Diesel Particulate Reduction System performance/status, maintenance intervals, engine and vehicle diagnostics.	\$0.00
1	PWDL-COE	Power Windows and Door Locks	\$0.00
1	GAUGES	Gauges - Speedometer mph (km/h), odometer, fuel/DEF gauges, coolant temp gauge, engine tachometer	\$0.00
1	FTGRILLCOE	Grille - Chrome plated	\$0.00
1	HORNCOE	Horn - Electric Horn	\$0.00
1	HEAT/DEF	Heater/Defroster - 18,596 BTU/h	\$0.00
1	LAMPS	Lighting - Stop/tail lights, marker and identification lamps (roof), back-up lamps	\$0.00
1	MISC	Cab Features - Standard: Cruise control, tilt and telescopic steering. Overhead compartments, door pockets, cup holders, side mirrors (1 flat, 1 convex) on each side	\$0.00

9/28/15

Customer: BGSU

Quote Name: 195H

Dealership: Flag City Truck & Equipment Quote Id: 83415

57627

Prepared By: Brad Comstock



tand	ard Options		
Qty	Order Code	Description	Price
1	INDICATORS	Warning Indicators - Oil pressure, brake fluid, battery charge, high beam, turn signal, parking brake, engine control system and ABS.	\$0.00
1	EMISS10	Surcharge - EPA10 Emissions.	\$4,500.00
1	OBD	On-Board Diagnostics	\$600.00
1	FREIGHT	Equalized Freight Charge	\$1,125.00
1	COOLSYS	Cooling Capacity - 5.90 gallon cooling system capacity	\$0.00
1	WARRANTY_05	Warranty - Basic Vehicle - 36 months unlimited mileage (exception batteries and expendables), Extended Engine and Vehicle - 60 months or 175,000 miles (includes injectors, fuel supply pump, turbo, transmission, and rear axle); Emissions - 60 months or 100,000 mile warranty;	\$0.00
1	HWATCH_05	Hino Watch Roadside Assistance - 3-year unlimited roadside assistance including lockout, *out of fuel/DEF, battery jumpstart, information, and warranty towing (2 year coverage). *Fluids are customer pay responsibility. Tire Service - assist customer in arranging for roadside tire service if requested	\$0.00
1	FUELTNK	Fuel Tank - 30 gallon rear center mount	\$0.00
1	GVWR	GVWR - Gross Vehicle Weight Rating - 19,500 lbs.	\$0.00
1	BMP	Bumper - painted, match to cab	\$0.00
1	BRAKES	Brakes - Hydraulic system with disc brakes, hydraulic assist with dual circut. Brakes: 13.72" diameter x 4.37" x 0.51" thickness.	\$0.00
1	FRAME	Frame straight section ladder type, 33" width, yield strength 56,900 PSI, resistance bending moment 706,800 in./lbs. (two side no reinforcement).	\$0.00
1	WHEELS	Wheels - Steel painted wheels 19.5X6K-127 6-stud disc.	\$0.00
1	FSTAB-COE	Front Stabilizer Bar	\$0.00
1	BKBUZZ	Backup Buzzer	\$0.00
1	TIRES	Front tires - Bridgestone 225/70R 19.5 Rib Pattern; Rear Tires - Bridgestone 225/70R 19.5 All Season.	\$0.00
1	SPRINGS	Front Spring: Tapered leaf springs with shock absorbers, 7,275lb. rating.  Rear Spring: Tapered leaf springs with shock absorbers and auxillary helper leaf spring, 13,669 lb. rating.	\$0.00
1	AXLESTD	Rear Axle Ratio - Standard 5.57 with Aisin A465 six speed automatic	\$0.00
remi	ium/Upgrade Options		
Qty	Order Code	Description	Price
	1 195h-1671	138" WB / 115.8" CA	\$0.00
1	1 AISA	Alsin A465 - 6 speed automatic transmission	\$0.00

9/28/15 2 Customer: BGSU

Quote Name: 195H

Dealership: Flag City Truck & Equipment Quote Id: 83415

57627

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Premiu	m/Upgrade Options	Committee of the Commit	
Qty	Order Code	Description	Price
1	CLDR	Cold Package - Remote Heated Mirrors, Block Heater, Fuel Heater	\$190,00
1	SEATC	Magnetic suspension driver seat with arm rest and charcoal fabric.	\$400,00
1	PDIP	PDI at Port (Hybrid)	\$0.00
1	FAG6830	Front Axle - Reversed Elliot "I" beam. Front axle capacity is 6,830lbs. (16MY running change to 7,275: Apr 15)	\$0.00
1	14' Supreme Dry Van		\$9,100.00
1	Doc Fees		\$250.00
1	No_SalesTax	No Sales Tax	\$0.00
Price			\$71,991.00
Sales Ta	ax		
Unit Qu	antity		1
Total Qu	oted Price		\$71,991.00

9/28/15 3



Kalida Truck Equipment, Inc. 17911 St. Rt. 224 West Kalida, OH 45853 Phone: 419-532-3919

Fax: 419-532-2038 www.kalidatruck.com QUOTATION

Page 1 of 2

Customer: FLAG CITY TRUCK & EQUIPMENT

Contact: BRAD COMSTOCK - bradcomstock@flagcitymack.com

Address: 151 STANFORD PARKWAY

FINDLAY OH 45840

Quote Number: JM0000693 Quote Date: 9/4/2015

Quote valid until: 10/19/2015

Phone: 800-472-9597 Fax: 419-424-5140 Salesperson: jmagrum

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
1	SUPREME 14' SIGNATURE ALUMINUM VAN BODY SVA14085096	\$6,000.00	\$6,000.0
	DIMENSIONS:		
	14' INTERIOR LENGTH		
	85" INTERIOR HEIGHT		
	96" EXTERIOR WIDTH		
	FLOOR:		
	FLAT FLOOR		
	3" I-BEAM X-MEMBER ON 12" CENTERS		
	4" I-BEAM LONGSILLS		
	PRE-COATED UNDERSTRUCTURE		
	NO FORKLIFT REINFORCEMENT		
	2 x 6 DENSE PINE SHIPLAPPED		
	LINING:		
	3/8" PLYWOOD LINING FULL SIDES		
	SCUFF:		
	NO SCUFF		
	CARGO CONTROL		
	NO CARGO CONTROL		
	INTERIOR LIGHTS:		
	1 DOME LIGHT W/ REAR SWITCH HOT WIRED		
	FRONT END:		
	NO INTERIOR FRONT WIRE COVERS		
	1/2" CORE FRP FRONT WALL		
	COMPOSITE CORNER WIND DEFLECTOR		
	ALUM. EXTRUDED FRONT CORNERS		
	WIND DEFL RAD .063 MILL ALUM		
	SIDEWALLS:		
	.040 PRE-PAINTED WHITE N0006HN		
	SIDE WALL Z-POSTS ON 16" CENTERS		
	ROOF:		
	.032 ALUM ROOF SKIN		
	ANTI SNAG ROOF BOWS ON 24" CENTER		
	EXTERIOR LIGHTS:		
	LED FMVSS 108 EXTERIOR LIGHTS W/SEALED WIRING HARNESS		
	EXISTING TAILLIGHTS MOUNTED		
	REAR END:		
	STAND REAR END DOOR OPENING	i ili gyallilli	
	1 1 1 1 =		
	GALVANNEALED REAR DOOR FRAME		
	THRESHOLD PLATE 1/8 T.P. 24"		
	STD 10G ONE PIECE V-GROOVED THRESHOLD		
	BUMPER:		
	ICC 3/16" FMD 4" CHANNEL POOCHED WELD ON DESIGN		
	REAR DOOR:		
	WHITING OVERHEAD DOOR		
	WHITING PREMIUM SPEC OVERHEAD DOOR W/1-1/2" TRACK BRACKETS		



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Phone: 419-532-3919 Fax: 419-532-2038

www.kalidatruck.com

**QUOTATION** 

Total Due: \$9,100.00

Page 2 of 2

		Sales Tax:	\$0.00
		Quote Total:	
	**INSTALLED ON A 2016 HINO 195 CAB OVER**		e/=
	LIGHT KIT		
	HEAVY DUTY DOCK BUMPERS		
	INSTALLED		
	PAINTED BLACK		
	SEALED SIDE MOUNTED TOGGLE SWITCH RECOMMENDED FLOOR TO GROUND MEASUREMENT BETWEEN 37" TO 54"		
	AND CLOSING THE PLATFORM		
	HEAVY DUTY SUPPORTS TORSION SPRING TO ASSIST THE OPERATOR IN OPENING		
	INTEGRATED 150 AMP FUSE IN POWER CABLE		
	FACTORY INSTALL POWER UNIT		
	MAINTENANCE FREE BUSHINGS ON ALL PIVOT POINTS REPLACEABLE PINS		
	POWER UP, GRAVITY DOWN		
	1,600 LB. LIFTING CAPACITY		
	84" X 36" REINFORCED STEEL DIAMOND PLATE PLATFORM PLUS A 6" TAPERED RAMP (APPROACH)		
1	THIEMAN MODEL M16-ET 84" X 36" +6" STOW-A-WAY LIFTGATE	\$3,100.00	\$3,100.0
	**INSTALLED 2016 HINO 195**		
	2 GRAB HANDLES - REAR ALUM 12"		
	MS LOCK ON OVERHEAD DOOR		
	OH REAR DOOR 88" X 79" CLEAR		

The following options may be added:

40/11/11/1	DESCRIPTION		PRICE EACH	AMOUNT

Customer must fill out the information below before the order can be processed...

Accepted by:

Date:

P.O. number:

Salesperson:

A 2PA CHARCE VILL BE APPLIED TO ALL DEPLIE CARD CHARCE

- A 2% CHARGE WILL BE APPLIED TO ALL DEBIT/CREDIT CARD CHARGES OVER \$2,000.00
- Quoted price does not include any applicable taxes.
- Terms are Due Upon Receipt unless prior credit arrangements are made at the time of order.
- Due to the extremely volatile steel prices, our quoted price may change at any time. Call our office for an up to date price.