



# DC Current, Micro Grids as a Key Component of Sustainability



#### The Company and its culture

- Family Owned
- Trucking and Logistics
- Philanthropic
- Employee Focused

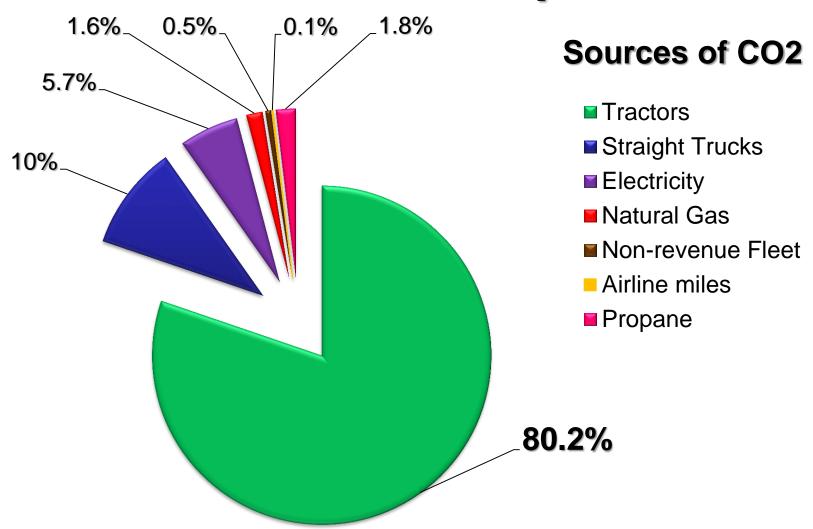


### Why are we focused on Sustainability?

- It is the right thing to do
- Save money
- Gain a competitive advantage
- Certain customers want to do business with like-minded businesses



#### **Carbon Output**





#### **Trucking**

- Fewer miles 80 million/year- optimize
- Fuels additives, alternative fuels
- Equipment mix, size and cubic capacity, weight, engines, emissions
- SSI (Speed, Shifting, Idle time)
- Aerodynamics skirting
- Substitute services water, rail



### Sustainability – Next Steps

**Diversify the Fleet** 



Put the right size shipment on the right size truck.

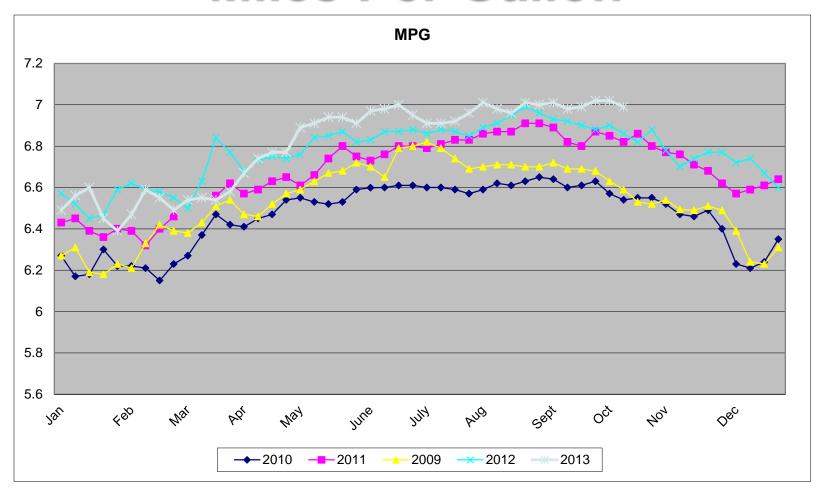








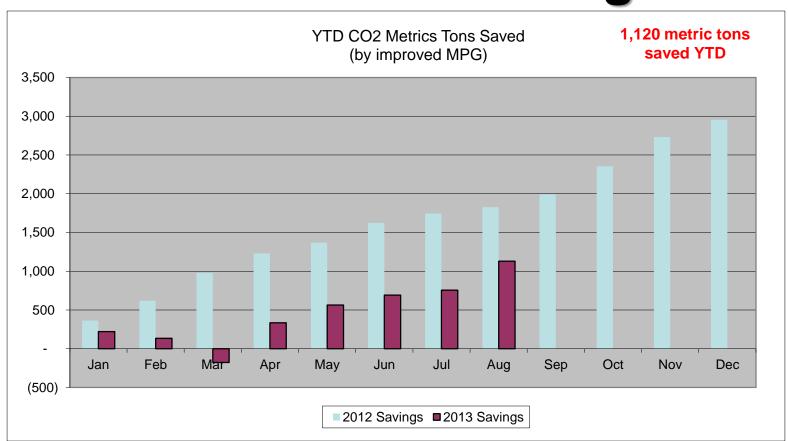
#### Miles Per Gallon



PITT OHIO's fuel efficiency has improved by 7% since 2010.



#### **2013 Carbon Savings**



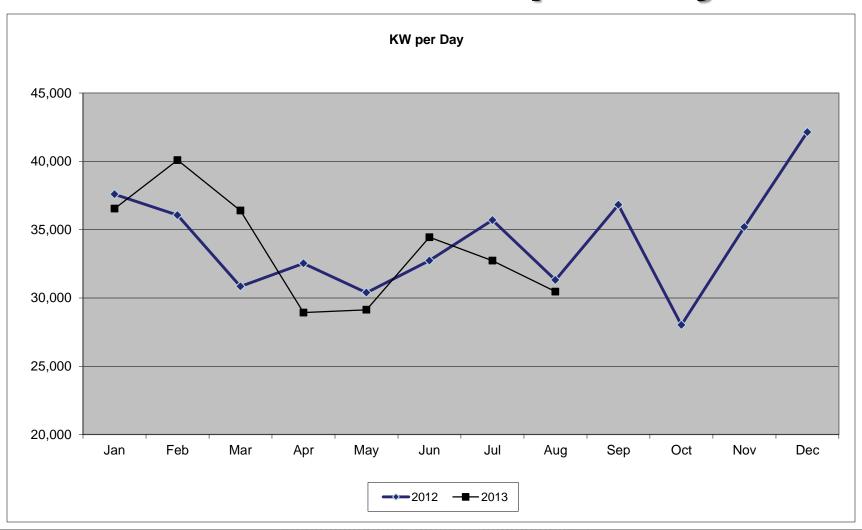
Savings = (Improvement in MPG \* Miles Driven) + Kilowatt Hours Saved



#### **Facilities**



#### Kilowatt Hours per Day





#### **Buildings/Facilities**

#### ANNUAL REDUCTION OF CO2 PRODUCTIONS (IN POUNDS):

ELECTRIC EFFICIENCY	Lighting	2,394,561
		502,920
		31,212
		60,030
	Appliances	25,020
		2,508
WATEREFFICIENCY		11,775
		37,700
		3,500
TOTAL CALCULATION		3,069,226 Pounds

3,069,226 Pounds



**ESTIMATED TOTAL** 

1,535 Tons !!



#### How do we produce?

- We had a "host" partner
- They built and manage the system
- We benefit from net zero facility





1-800-366-7488







#### **Solar Installation**

- 262/kw Ground Mounted Solar Generating Facility
- 1,092 Individual Sharp 240/Watt Solar Panels
- 25/Year Operation of this system will generate 6,5000,000/kwh of electricity
- One year of operation = reduction of 8,620/tons CO2 which is equal to saving 975,000/gallons of gasoline.





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## Can we improve on our solar project in Hamilton, NJ?



### **Harmar PA Facility**



Scheduled to open 2Q 2014

- Gold level LEEDs certified
- Bio-detention swales to maintain hydrology
- Focus on water retention with waterless urinals & low flow aerators
- Energy efficient LED light
- Geothermal heating & cooling



#### Pushing the Envelope

- Partnering with Pitt Swanson School of Engineering to Develop, Design, and Implement a pure Solar/DC current source for the company backup computer room.
- Monitor and verify energy savings at our new Harmar facility.
- Lab on site



### Where do we go from here with renewable energy resources?

- If we can monitor and verify savings the sky is the limit!
- If this works like we think we will most likely move toward all LED lighting (it runs off pure DC power).