

# The New Role of Section 45 and Carbon Credit Monetization in the Development and Financing of Landfill Gas Projects



 *May 3 - 6, 2009*  
**Solid Waste & Recycling Conference**  
*with Trade Show*

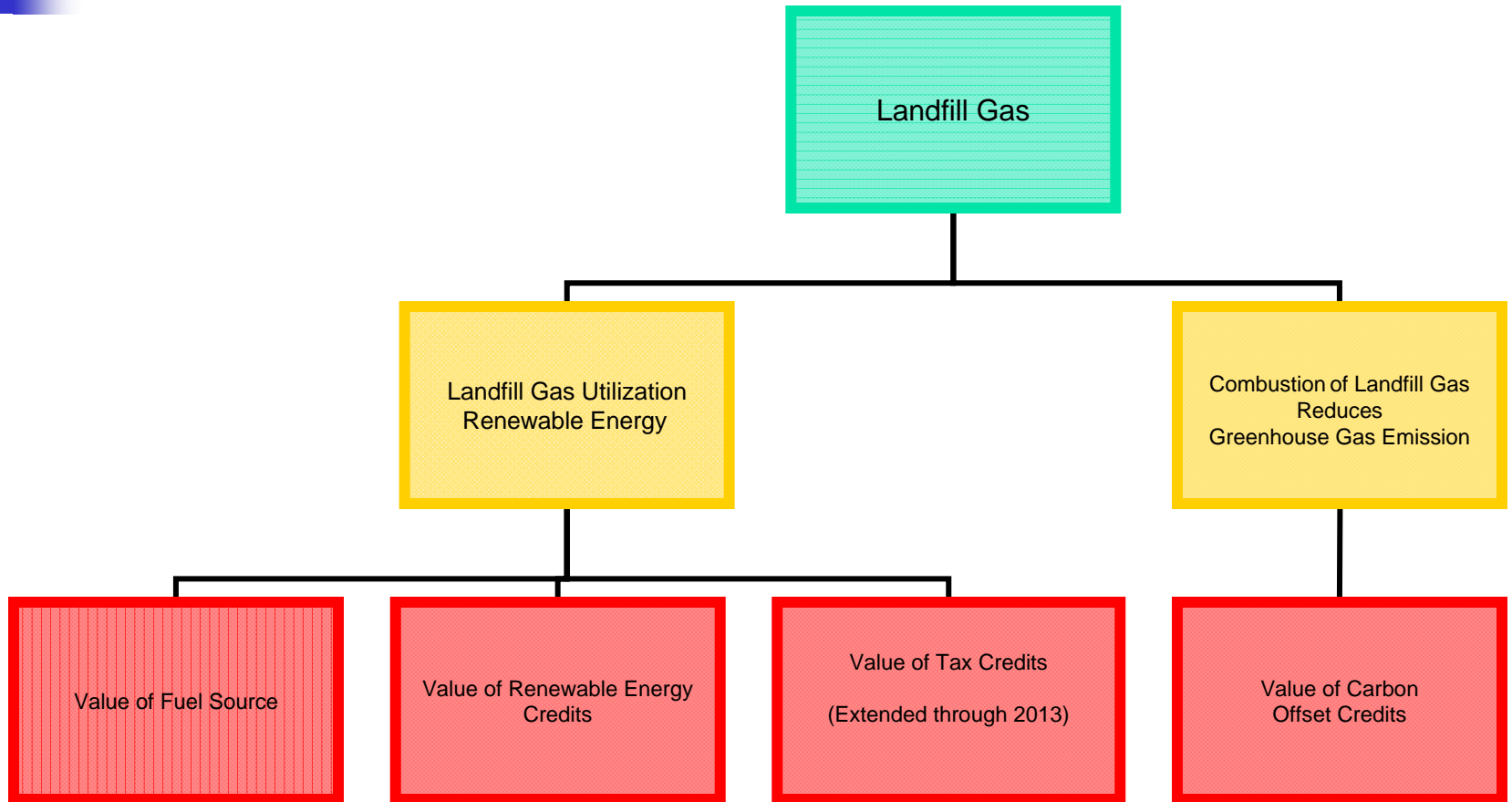


# Brief Overview of R.S. Lynch & Company, Inc, and TheCarbonAuction.Com

---

- R.S. Lynch & Company, Inc. Provides Environmental Planning, Financing and Administrative Services with Emphasis in the Solid Waste, Landfill Gas and Renewable Energy Fields and has Been Ranked Among the Top Ten Solid Waste Advisory Firms, Nationwide, by Securities Data, Inc.
- Has Emerged as One of the Nation's Leading Advisors in Assisting Both Publicly and Privately Owned Landfills to Maximize Their Landfill Gas Carbon Offset and Section 45 Credits Through the Proper Documentation, Verification and Credit Monetization Programs
- R.S. Lynch & Company is the only firm in the Industry that offers services exclusively for carbon credit owners/sellers.
- Initiated **TheCarbonAuction.Com** which brings a new level of integrity, transparency and efficiency to the trading of voluntary carbon credits in the U.S. TCA offers sellers of Voluntary Carbon Units, RGGI offsets, RECs, Renewable Energy Tax Credit and other environmental attributes a cost effective, demonstrably fair, open, efficient, competitive and accountable mechanism for maximizing net sales proceeds.

# Sources of Landfill Gas Value





# Three Landfill Gas Case Studies

---

- City of Albany, NY
  - Large, Growing Landfill with Well Established Landfill Gas to Energy Project
- Catoosa County, GA
  - Small, Closed Landfill with Open Flare Since 2003 and Future Small Landfill Gas to Energy Project
- Small Northeast Landfill (“SN Landfill”)
  - Small, Growing Landfill with New Open Flare and Future Landfill Gas to Energy Project



# Renewable Energy Production Tax Credits (Section 45)

---

- American Recovery and Reinvestment Act: 2/09
  - In Service Date: 12/31/13
  - Two New Options
    - ITC in Lieu of PTC
      - 30% of Facility Cost
      - Reduces Tax Basis by 50% of ITC (Bonus + Regular Depreciation)
      - Recapture if Sold within 5 Years
    - Federal Tax-Free Grant
      - Must Provide “Reasonable Participation” in Equity Appreciation

<b>LFSTE FACILITY - PTC</b>		<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Year 9</b>	<b>Year 10</b>	<b>Totals</b>
<b>FACILITY</b>	Genset Capacity (MW)	4.8										
	Guaranteed Availability	87%										
	Annual Mwh	36,582										
	Parasitic Load (Mwh)	1,800										
	Net Annual Mwh	34,782										
	Assumed Heat Rate (Btu/Kwh)	10,500										
	Mmbtu's Used	365,208	365,208	365,208	365,208	365,208	365,208	365,208	365,208	365,208	365,208	3,652,085
	Annual Mwh	34,782	34,782	34,782	34,782	34,782	34,782	34,782	34,782	34,782	34,782	347,818
<b>CAPITAL COST</b>	Total Project	\$8,000,000	\$1,667per KW									
	PTC/ITC Eeligible	\$6,400,000										
<b>TAX CREDITS</b>	PTC	\$347,818	\$347,818	\$347,818	\$347,818	\$347,818	\$347,818	\$347,818	\$347,818	\$347,818	\$347,818	\$347,818
	ITC	\$0										
<b>DEPRECIATION</b>	Bonus											
	Other	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000						
<b>MARGINAL TAX RATE</b>		35%										
<b>A.T. VALUE OF DEPRECIATION</b>		\$560,000	\$560,000	\$560,000	\$560,000	\$560,000						
<b>A.T. VALUE OF CREDITS + DEPREC.</b>		\$907,818	\$907,818	\$907,818	\$907,818	\$907,818	\$347,818	\$347,818	\$347,818	\$347,818	\$347,818	
<b>10 YR. NPV @ 5%</b>		\$5,110,262										
<b>10 YR. NPV @ 15%</b>		\$3,622,823										





# Renewable Energy Production Tax Credits (Section 45)

---

- Feature of Federal Tax Law
- Extended To 12/31/13

- Potential Values:

	<u>Est. MWH/Year</u>	<u>Est. PTC Value/Year</u>
City of Albany-	33,638	\$336,384
Catoosa County-	8,760	\$87,600
SN Landfill-	3,710	\$37,100



# Renewable Energy Credits

---

- Value Determined by State RPS Requirement
- Usually Sold With Energy
- NE ISO @ \$45/MWH
- Potential Values:

	<u>Est. MWH/Year</u>	<u>Est. REC Value/Year</u>
City of Albany-	33,638	\$1,514,000
Catoosa County* -	8,760	\$44,000
SN Landfill-	3,719	\$167,000

\*\$5.00 unbundled, No Renewable Portfolio Standard in Georgia



# Sources of Landfill Gas Project Value Summary

---

	<u>Albany</u>	<u>Catoosa</u>	<u>SN Landfill</u>
<b>Carbon Credits</b>			
Minimum Annual Revenue	\$226,000	\$122,000	\$100,000
10 Year NPV (5%)	\$1,745,000	\$942,000	\$734,000
<b>RECs</b>			
Estimated Annual Revenue	\$1,514,000	\$44,000	\$167,000
10 Year NPV (5%)	\$11,691,000	\$340,000	\$1,290,000
<b>PTCs</b>			
Estimated Annual Revenue	\$336,000	\$88,000	\$37,100
10 Year NPV (5%)	\$2,595,000	\$680,000	\$286,000
<b>Total Estimated NPV:</b>	<b>\$16,031,000</b>	<b>\$1,962,000</b>	<b>\$2,300,000</b>



# U. S. "Auctions" to Date

---

- RGGI
  - Over 12 Million Tons sold at \$3.06/Ton
  - Uniform Price / Sealed-Bid Auction
- Recent VCS/CCARs Auction
  - Uniform Price / Sealed-Bid Auction
  - Reverse Auction (one CC buyer/many sellers), "brutally efficient at driving the \$/Ton lower"
- TheCarbonAuction.Com
  - Maximizes value to sellers
  - Differentiated Price
  - Visible Bids
  - Forward Auction (many CC buyers/one seller)



# Uniform Price Auction Process

---

	<b>Price</b>	<b>Quantity</b>	<b>Value</b>	<b>Cumulative Demand</b>
Bidder E	\$5.00	20,000	\$100,000.00	20,000
Bidder A	\$4.50	10,000	\$45,000.00	30,000
Bidder B	\$4.10	10,000	\$41,000.00	40,000
Bidder D	\$4.05	20,000	\$81,000.00	60,000
Bidder E	\$4.00	10,000	\$40,000.00	70,000
Bidder A	\$3.95	10,000	\$39,500.00	80,000
Bidder C	\$3.85	10,000	\$38,500.00	90,000
Bidder E	\$3.75	10,000	\$37,500.00	100,000



## Our Recommendations on How Solid Waste Managers Should Proceed

---

- Perform Preliminary Landfill Gas Credit Analysis and Valuation
- Develop/Negotiate LFGE facility with these Values in Mind
- Begin Process to Monetize Carbon Credits Immediately
  - Preliminary Analysis and Valuation
  - Project Report
  - Third Party Verification Report
  - Sale



TheCarbonAuction.Com  
58 Coddington Lane  
Millbrook, NY 12545

(845) 677-4526  
rslco@earthlink.net