Southern California Conversion Technology Program

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Roadmap to a Sustainable Waste Management Future

3 Focus Areas: County Unincorporated Communities | Regional/Countywide | County Operations

Strategies:

Programs & Services

Measuring Results

Facilities & Infrastructure

Outreach & Education

Key Priorities:

Extended Producer Responsibility

Organics Management

Construction and Demolition Debris Management

Regional Debris Management

Outreach and Education

County Departmental Recycling

Diversion from Landfills in 2014

74%

Sustainable is Attainable

Drivers

Organic waste processing

Dwindling landfill space

GHG & short-lived climate pollutant emissions reduction

Increase renewable electricity & energy efficiency

What are Conversion Technologies?

Residual solid waste

Non-combustion thermal, chemical, & biological processes

Low-carbon fuels

Renewable energy

Other useful products

Solid Waste Is A Resource

A World with Conversion Technologies

Solid waste disposal

Reduce risk with public/private partnerships

Landfill

Reduce emissions

Reduce dependence on landfilling

Locally produce renewable energy, compost, and green fuels

Materials recovery facility (MRF)

Create green jobs

Integrated MRF with CTs

Increase recycling

Comparative Analysis

- Comparative Life Cycle Greenhouse Gas Emissions Analysis white paper quantifies the benefits of alternative waste conversion technologies compared to traditional landfilling

- Results from the white paper support the use of conversion technologies as part of an integrated waste management approach

COMPARATIVE ANALYSIS

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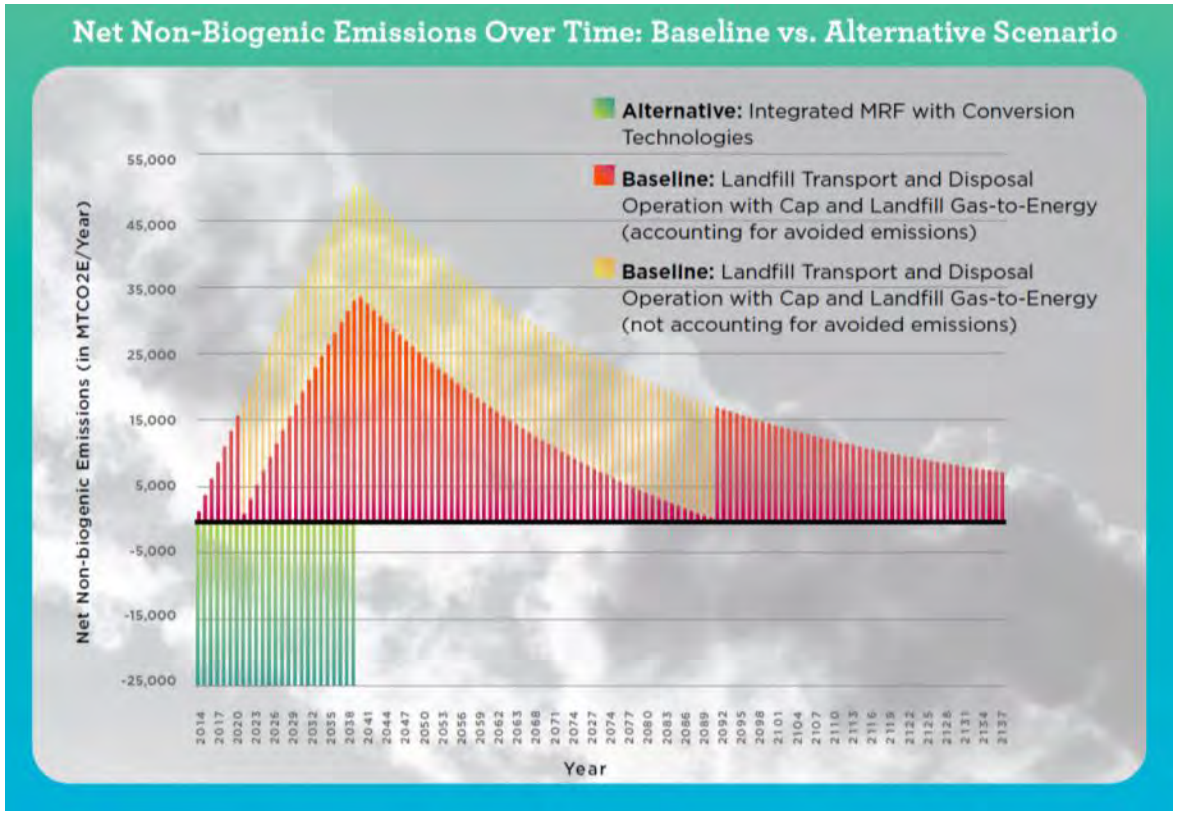
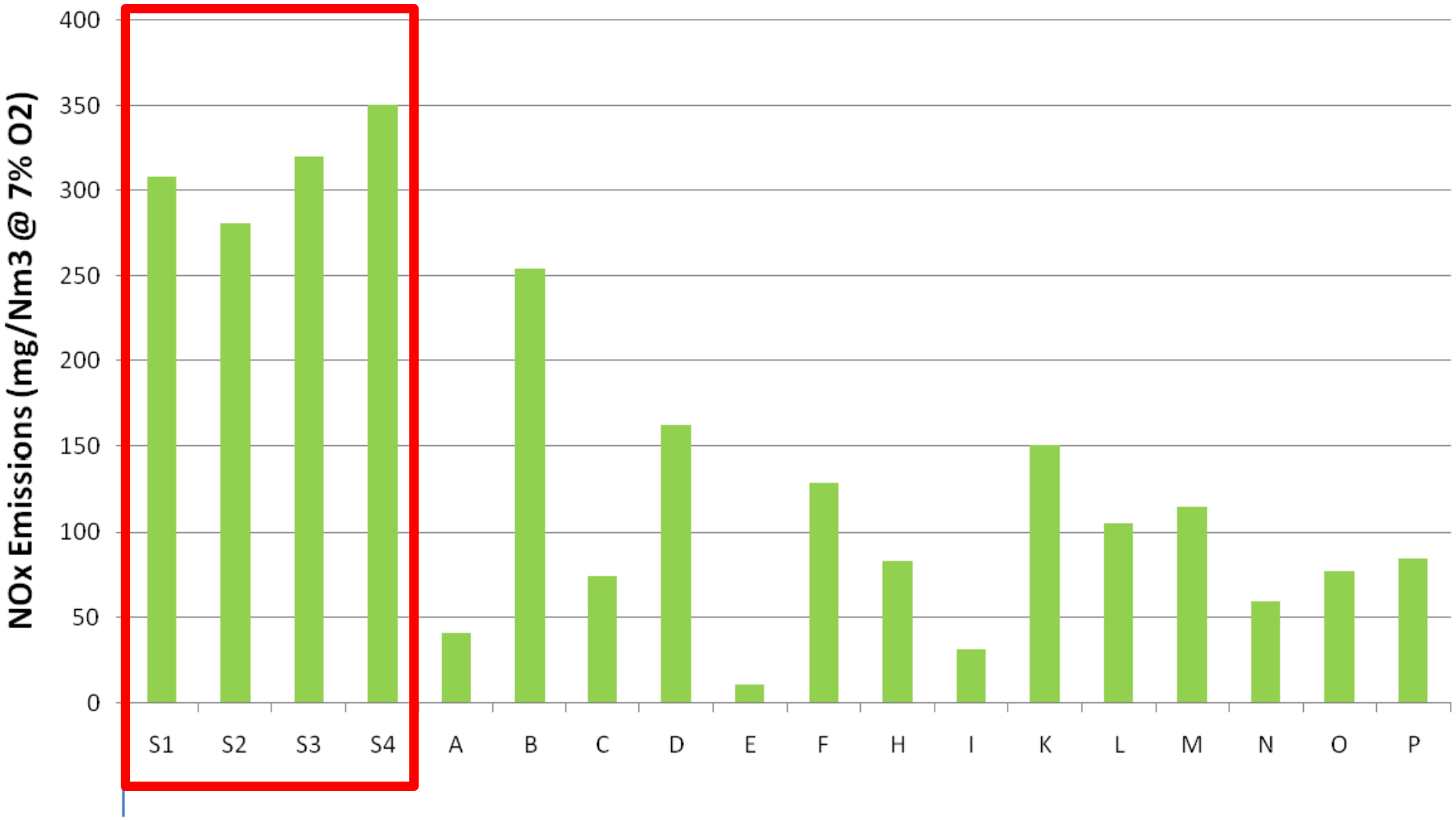
Comparative Analysis

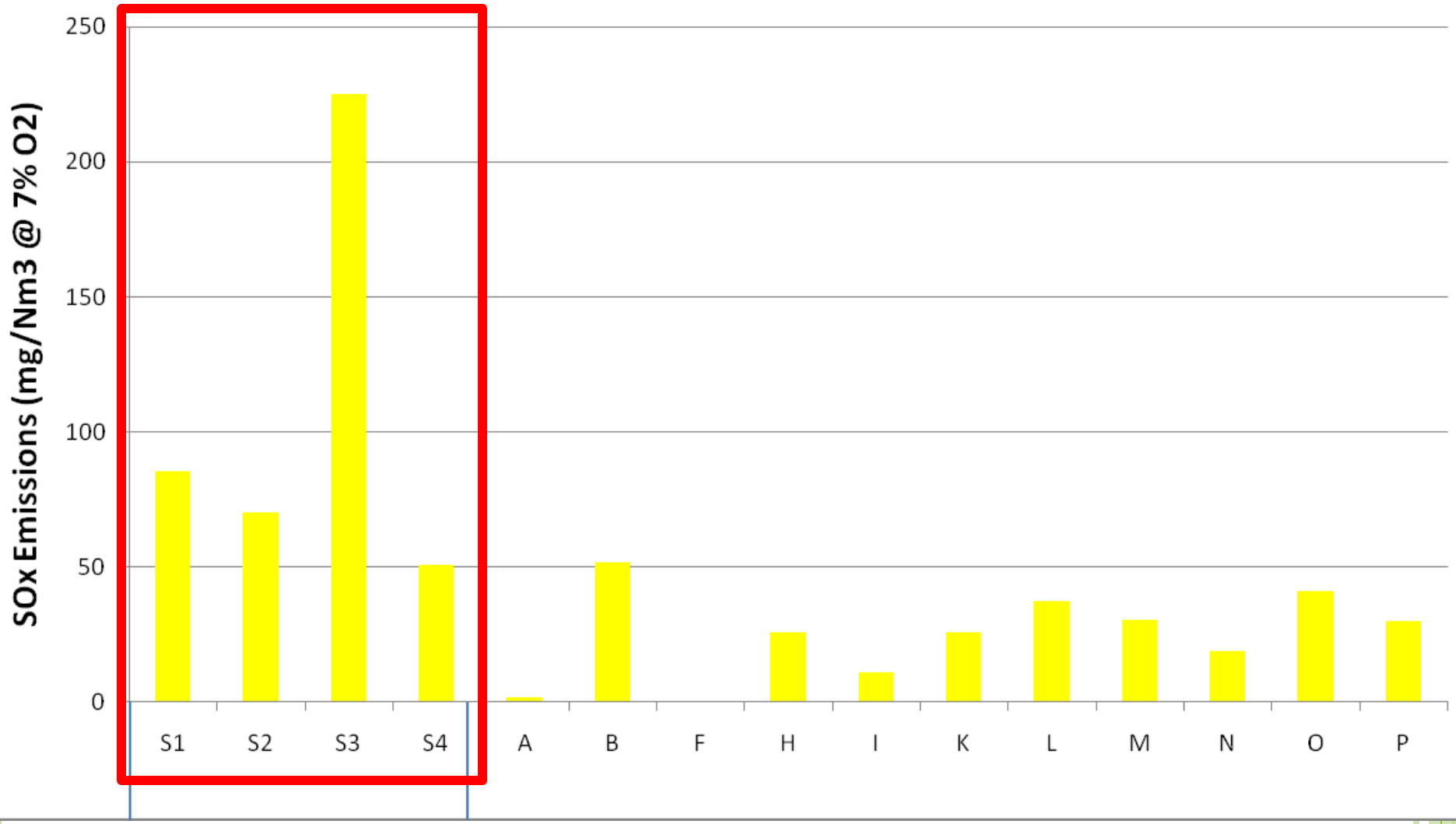
- The baseline scenario produces approximately net **1.64 million MTCO2e** over 125 years
- The alternative scenario produces approximately net **-0.66 million MTCO2e** over 125 years



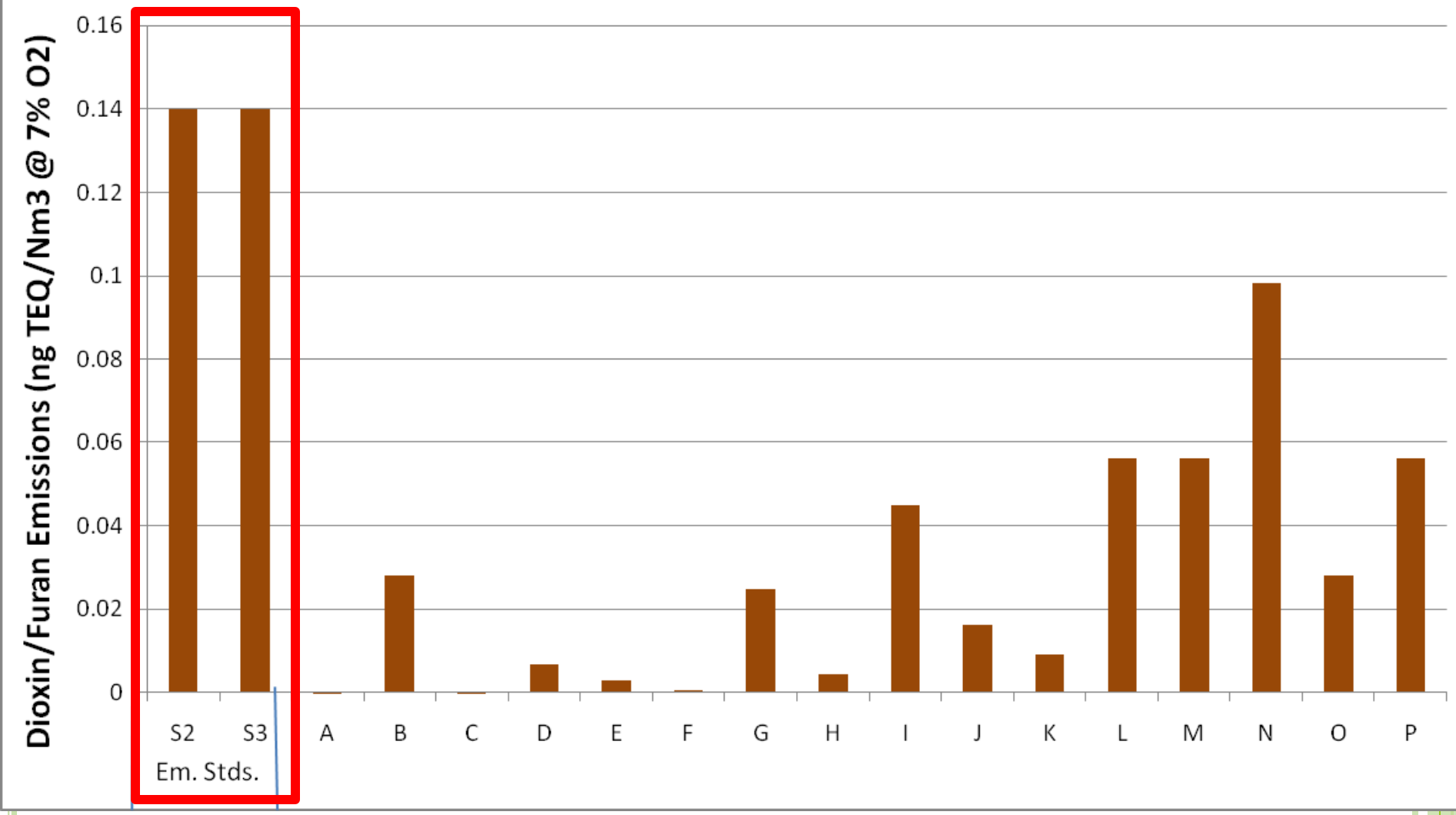
Comparison of Nitrogen Oxides (NOx) Emissions from Thermal Conversion Technologies



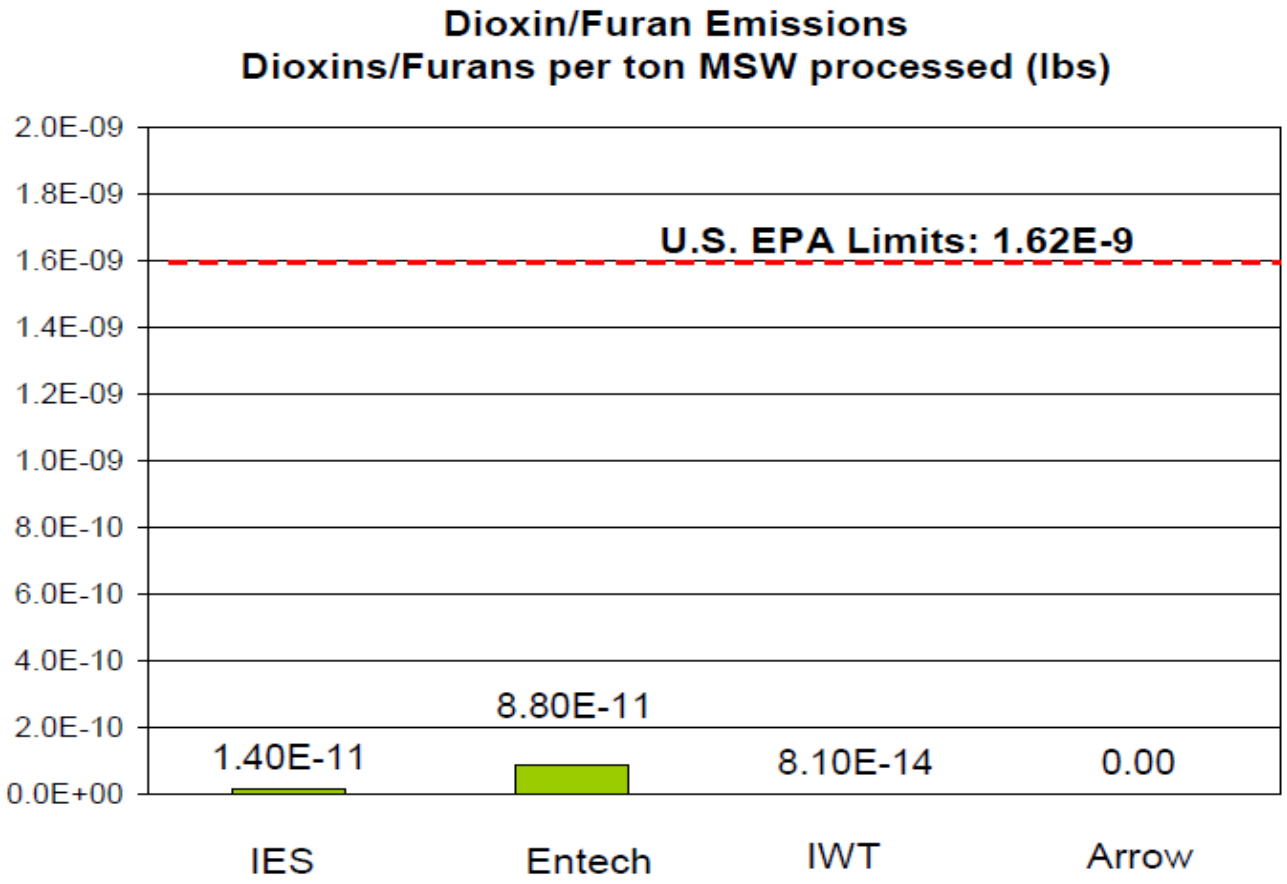
Comparison of Sulfur Dioxide Emissions (SOx) from Thermal Conversion Technologies



Comparison of Dioxin/Furan Emissions from Thermal Conversion Processes*



Environmental Studies



Environmental Studies

Comparison Of Key Differences Between Typical Incinerator Emissions And The CoronaLux System In CA

	Typical Incinerator	Results From The CoronaLux	California Limits
Carbon monoxide (lb/year)	146 or 6X	21.4	
NO_x *(reported as NO)* *(lb/year)*	1,185 – 4,253 or 33X	35.9	
Dioxins *Ex:* 1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin (lb/year)	Not Available They Do Not Report	0.000000012199 (1.2 E-8) **(~ 1/20th Of CA Limit)**	0.0000002122 (21.2 E-8)
Furans Ex: 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (lb/year)	Not Available They Do Not Report	0.0000000007259 (7.2 E-10) **(~ 1/300th Of CA Limit)**	0.0000002226 (2226 E-10)
Hydrocarbons (VOC's) (lb/year)	22 – 117 or 1X	< 2.08	

Milestones

- Public Works pursues the development of CTs to reduce our dependence on landfill disposal, as well as for the numerous environmental benefits

- The following milestones have been identified to measure progress:

Timeframe	Milestone	Capacity (tons/day)
Today	CSD AD co-digestion	65
2015	Perris AD facility	230
2020	In-County CT capacity (projection)	200
2025	In-County CT capacity (projection)	500
2035	In-County CT capacity (projection)	3,000

Joint Water Pollution Control Plant

40 tpd food waste co-digestion project at WWTP

Pilot Food Waste Collection

Residential and commercial food waste collection in selected County unincorporated areas

Organics Separation Pilot

Anaergia tested waste from County unincorporated areas with a small-scale press at Puente Hills Materials Recovery Facility.

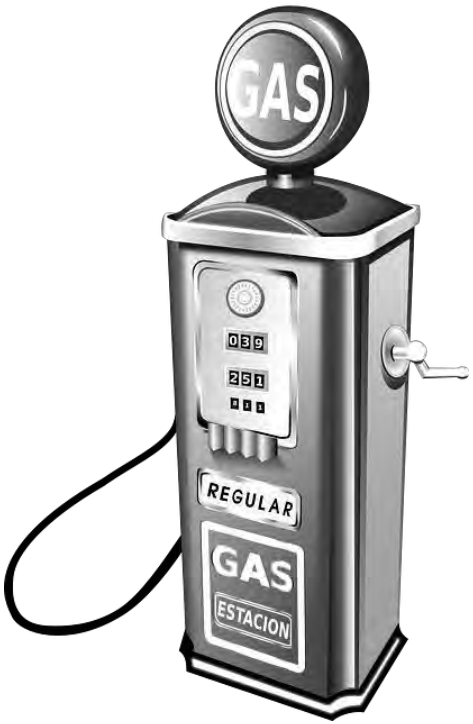
The material separation technology recovers organics from the waste stream by separating the dry inorganic fraction of the waste from the wet organic fraction.

Pitchess Detention Center

- LA County Sheriff Department with assistance from DPW is analyzing the implementation of an AD system
- DPW is finalizing RFQP for the concept project with an option to bid with either public and private ownership options

Other Projects

CR&R anaerobic digestion project in Perris, CA



Southern California Conversion Technology Conference

Challenges

- Lack of financial incentives
- No clear and efficient permitting process
- Misconceptions regarding emissions/environmental impact of CTs
- Undetermined method for efficient and reasonable waste collection and processing
- Legislative barriers
- Gas collection credits for landfills but not CTs
- Difficulties in financing without dedicated waste stream

Our Solutions

- Assist with grants and permitting for new CT infrastructure
- Conduct stakeholder engagement and collaborate with private industry
- Develop and support new CT legislation
- Establish pilot projects at County facilities
- Encourage jurisdictions to collaborate to streamline permitting process
- Encourage jurisdictions to leverage their purchasing power to create demand for recycled materials
- Identify sustainable funding sources and incentives

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For more information, visit
www.CleanLA.com

www.SoCalConversion.org