Connecticut Department of Energy and Environmental Protection

Connecticut Department of
ENERGY &
ENVIRONMENTAL
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21st Century Materials Management: More Cash, Less Trash

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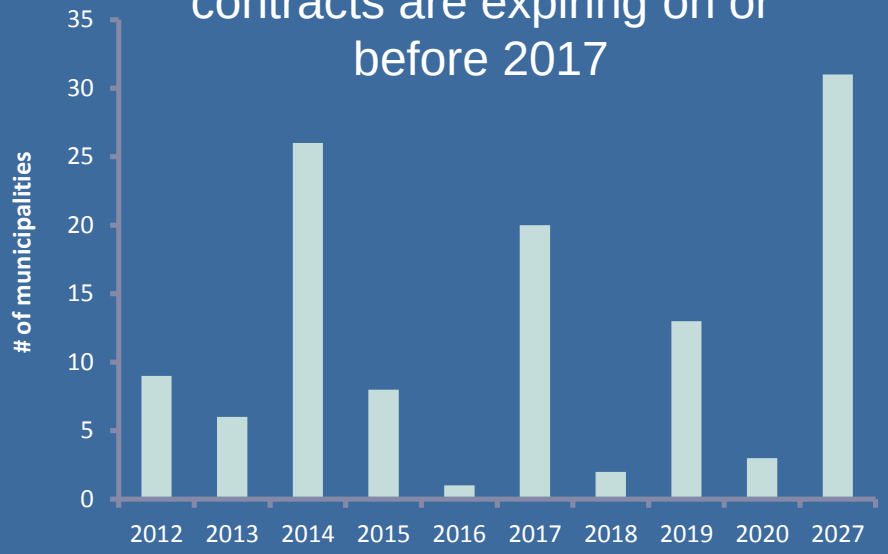
Macky McCleary, Deputy Commissioner, Environmental Quality

Solid Waste Advisory Committee

CT is Facing a Watershed Moment Requiring Us to Rethink the Way our Waste System Works*

- Potential increasing disposal costs for municipalities is undesirable
- Public facilities are transferring to private ownership
- Expiring power purchase agreements for resource recovery facilities between now and 2020
- Low and declining electricity rates undermine the economics of CT's extensive waste-to-energy infrastructure

Last of original long term contracts are expiring, many new contracts are expiring on or before 2017



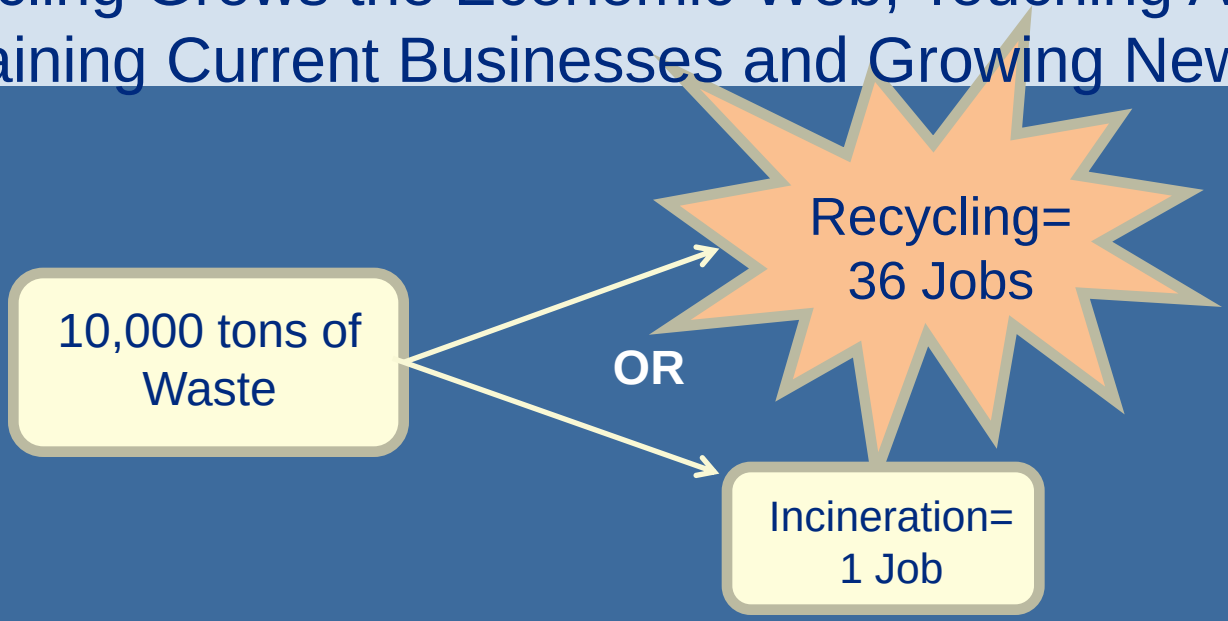
Includes municipal contracts with a solid waste company, a RRF, a RRF through a regional resource recovery authority, regional operating committee, etc.; data for 119 municipalities reflected

*Legislative Program Review & Investigations Committee, Municipal Solid Waste Services in CT, 2010

Changing the Way CT Values Trash Means Better Economic and Environmental Results

1. More recycling
2. Less pollution
3. Municipal savings
4. More jobs

Recycling Grows the Economic Web, Touching All Sectors, Sustaining Current Businesses and Growing New Ones.



- 4,800 CT jobs in reuse and recycling contribute **$275 million in payroll**
- Recycling keeps more than 865,400 tons of valuable commodities in CT's stream of commerce
- We are burning at least **$10 million** in economic value each year
- If our communities achieved a 40% recycling rate, our estimated collective avoided disposal costs would be about **$35 million** annually.

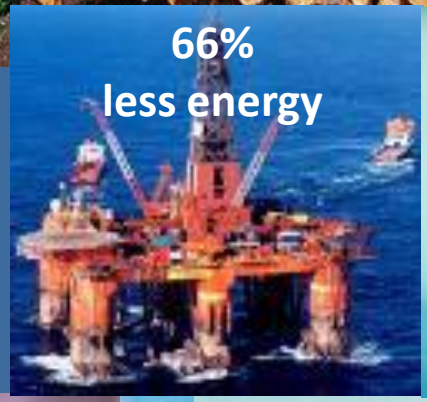
Source Reduction and Recycling Leads to Better Environmental Outcomes- Cleaner Air and Water

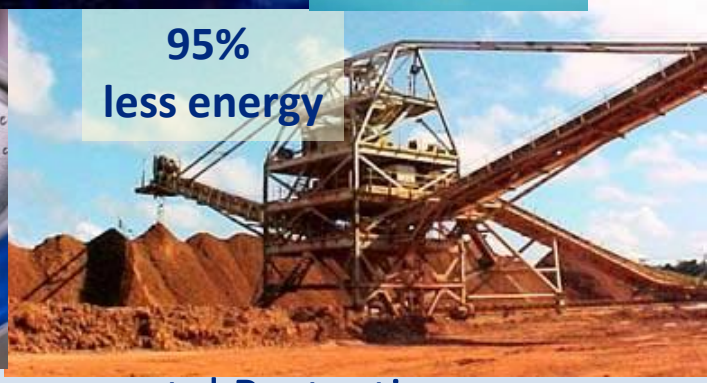
- **Decreases Greenhouse Gas Emissions-** 398,900 metric tons of carbon equivalents avoided, equal to 51% of all industrial carbon emissions generated from fossil fuel combustion and 3% of greenhouse gas emissions in CT
- **Decreases All Other Air Pollutants**- Although emissions at our waste to energy facilities are well regulated, it will never be as clean to burn trash as it is to recycle
- **Reduces need for Virgin Materials** such as 6,900 tons of limestone, 45,300 tons of iron ore, 25,400 tons of coal, 16,100 tons of sand, 5,100 tons of soda ash, and 2,000 tons of feldspar
- **Creates by-product that enhances the environment** rather than degrades (e.g., composting and anaerobic digestion)
- **Reduces creation of ash** and associated need for special ash landfills

Windrow turning of leaf compost in Manchester.

Source Reduction and Recycling Saves Energy

- Significant energy savings from using recycled materials instead of raw for aluminum (95%), steel (61%), plastic (66%), newspaper (44%), and glass (31%)
- CT recycling saves the energy equivalent of 62.5 million gallons of gasoline, representing the amount of energy required to power 75,900 homes annually





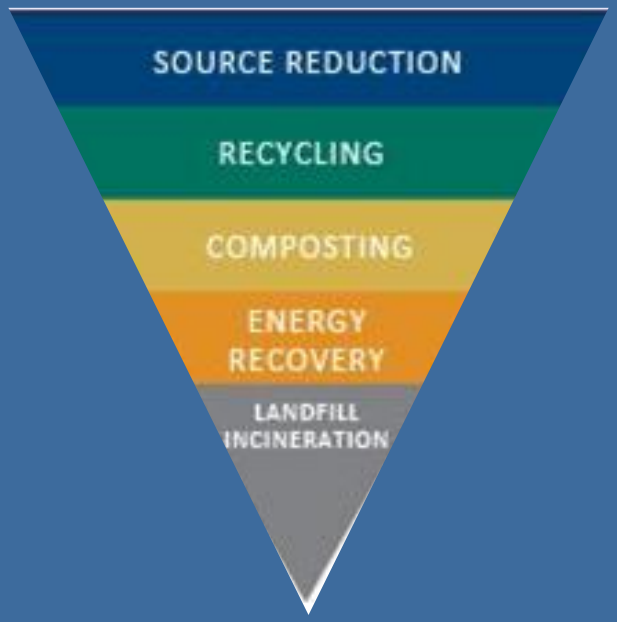
Sources: Northeast Recycling Council (NERC)

Environmental Paper Network

Connecticut Department of Energy and Environmental Protection

State Materials Management Priority is to Increase Recycling and Diversion through Innovation and Market-Based Strategies

- Innovation- PA 14-94
- Market-Based Strategies
  - Extended Producer Responsibility (EPR)
  - Beneficial Use Determinations (BUDs)
  - Pay as You Throw (PAYT; Unit Based Pricing)



Public Act 14-94 is One of the Tools to Unlock the Value in our Waste Stream

Reshape CRRA

- Reshaping CRRA into a lean organization focused on promoting innovation in materials management.

Spark Innovation

- Repurposing Connecticut's largest, oldest, and least efficient waste-to-energy plant in Hartford to become a site for a modern materials management facility to recover more value from trash.

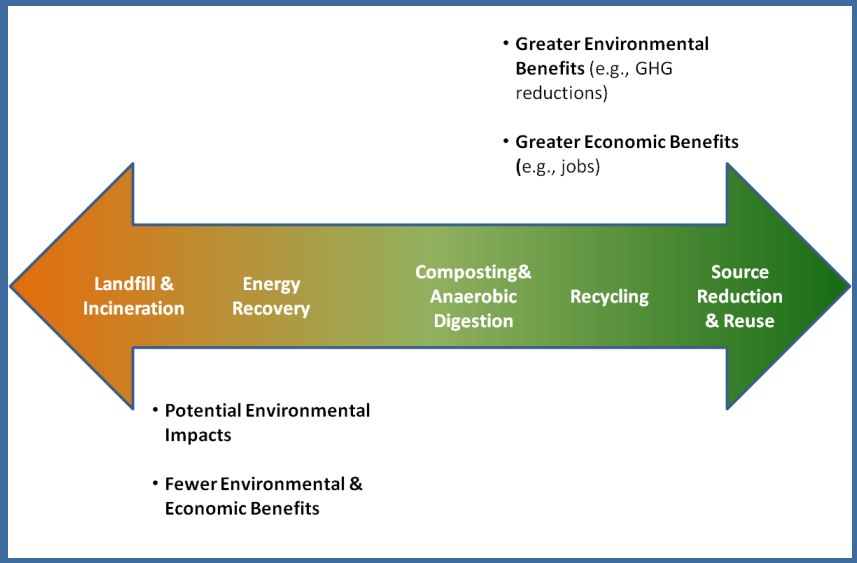
Recycle CT

- Forming a statewide research and education foundation to promote recycling.

Recycling Rate= 60% by 2024

Innovation- PA 14-94 will Reshape CRRA and Incentivize Innovation

- Creates the Materials Innovation and Recycling Authority (MIRA) to succeed CRRA with a new focus on innovation
- Calls on the state to revise the Solid Waste Management Plan (SWMP) to promote modernization, increase recycling, reuse, and diversion (2016)
- Puts out RFP in partnership with CRRA/MIRA member municipalities seeking technologies to enhance diversion of waste at the Hartford MidConn site (2017)



With increased source reduction, reuse, and recycling comes greater environmental and economic benefits

PA 14-94 will Lean Materials Management in CT

- Streamlines permitting for waste facilities by allowing up to 75 tons per day of mattresses and other recyclable items designated by the DEEP Commissioner without having to submit an application for permit modification.
- Caps MIRA/CRRA staff level at 45 (down from 70)

PA 14-94 Incentivizes Diversion Initiatives and Clean Energy

- Creates a mechanism for future **state grants to municipalities** to
  - fund voluntary recycling, diversion and reuse initiatives
  - Voluntarily join a power purchasing pool

PA 14-94 will Clearly Invest Recycling and Diversion Education, which will Help to Achieve 60% Diversion Goal

- Removes implied authority for statewide recycling education from CRRA
- Creates a new public-private initiative, **Recycle CT**, to fund statewide programs for recycling research and education

PA 14-94 will Provide Stability in the Waste Market During the Transition to Innovative Materials Management

- Requires that the interests of municipalities be considered in selecting new technologies for MidConn
- Cost control will be a key element of the selection criteria developed by DEEP
- Creates a mechanism for the state to purchase electricity sourced from Waste-to-Energy, providing the potential of a stable source of revenue for operators

Questions?

Macky McCleary, Deputy
Commissioner Environmental Quality

Macky.McCleary@ct.gov

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