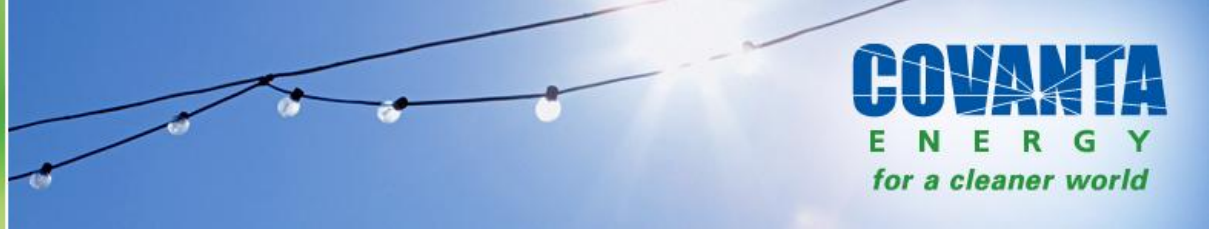




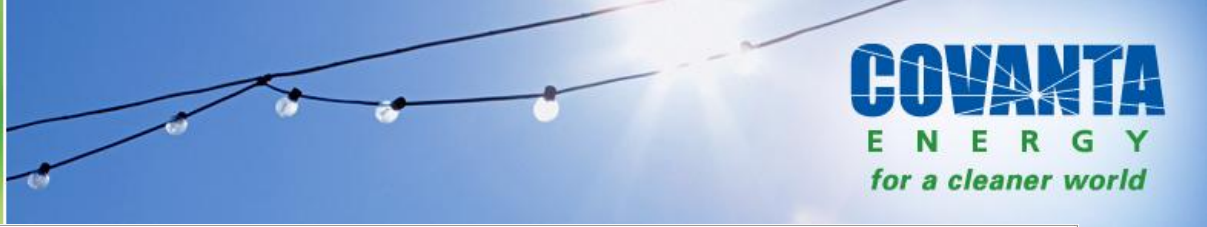
**Energy from Waste
In Connecticut
September 25, 2013**



Energy From Waste in Connecticut

Good News

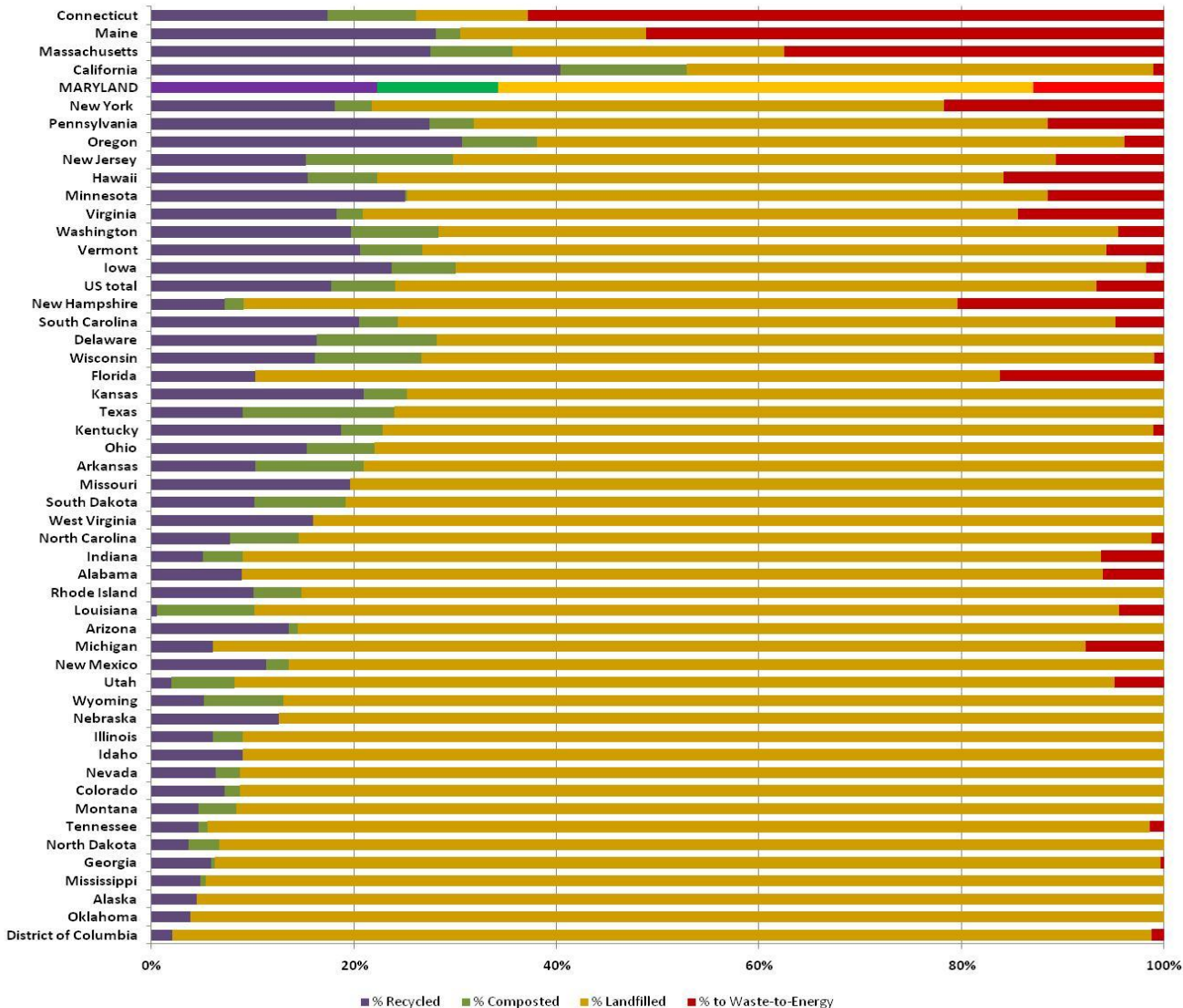
- CT number 1 in nation for sustainability - landfilling essentially eliminated
- EfW safely converts 2.3 million tons into clean, renewable energy
 - Enough to power 111,000 homes
- Recycle 58,000 tons of ferrous metals
 - State's largest post consumer metal recycler
- Good for the economy
 - 381 employees in the state, with over \$32 million in direct wages and benefits
 - Total statewide economic contribution of \$428 million annually
- Need for support of EfW already established
 - “Restructuring CT’s Renewable Portfolio Standard”
 - “Report of the Modernizing Recycling Working Group”
- Public Supports EfW
 - 89% polled support EfW
 - Two-thirds would pay more on electric bills to support EfW



Applying the Sustainability Ladder to the Fifty States

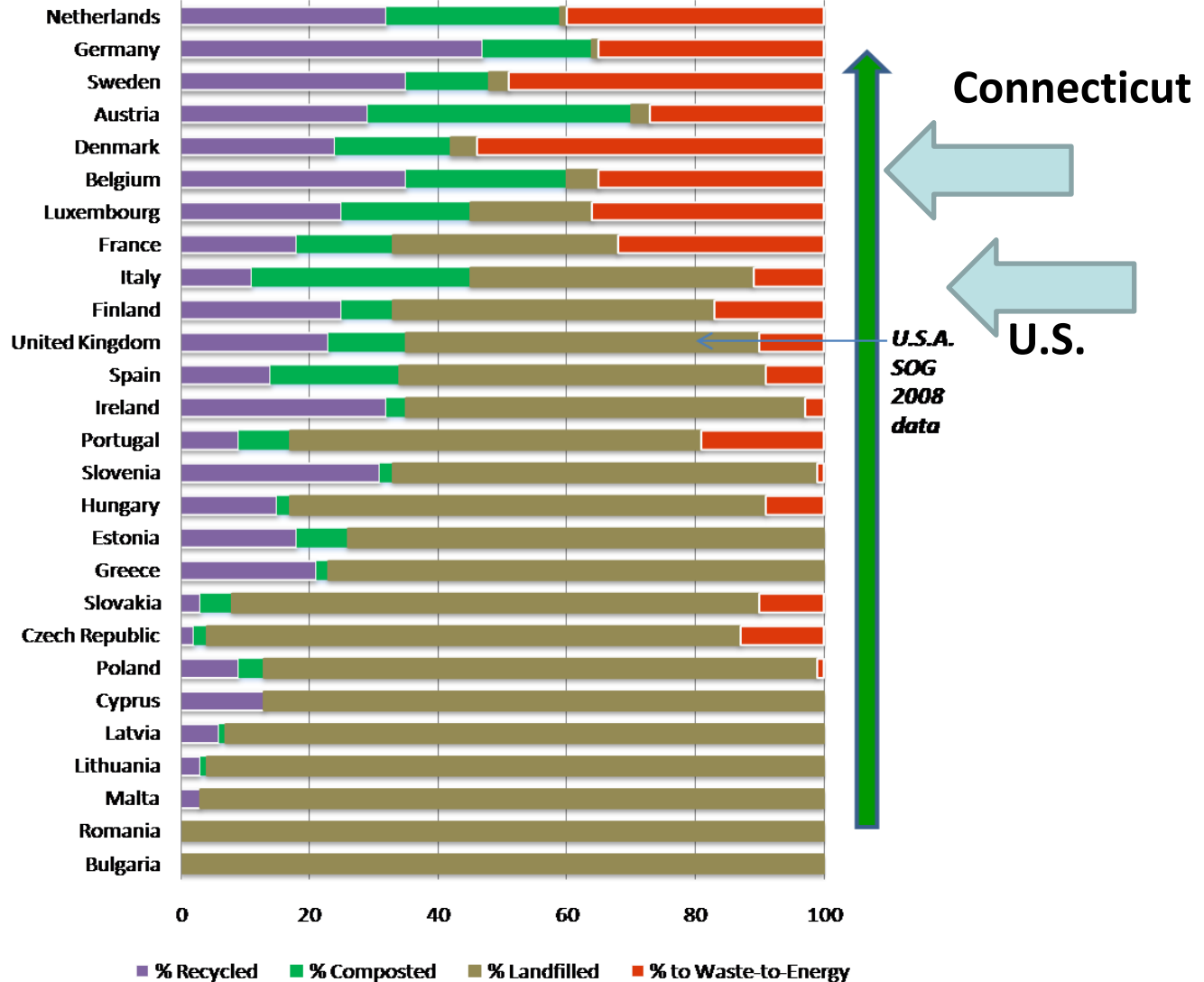
The Sustainable Solid Waste Management Ladder for the US

Earth Engineering Center, Columbia University (based on SOG 2008 data)



The Sustainable Waste Management Ladder

Earth Engineering Center, Columbia University (based on Eurostat 2008 data)





Energy From Waste In Connecticut

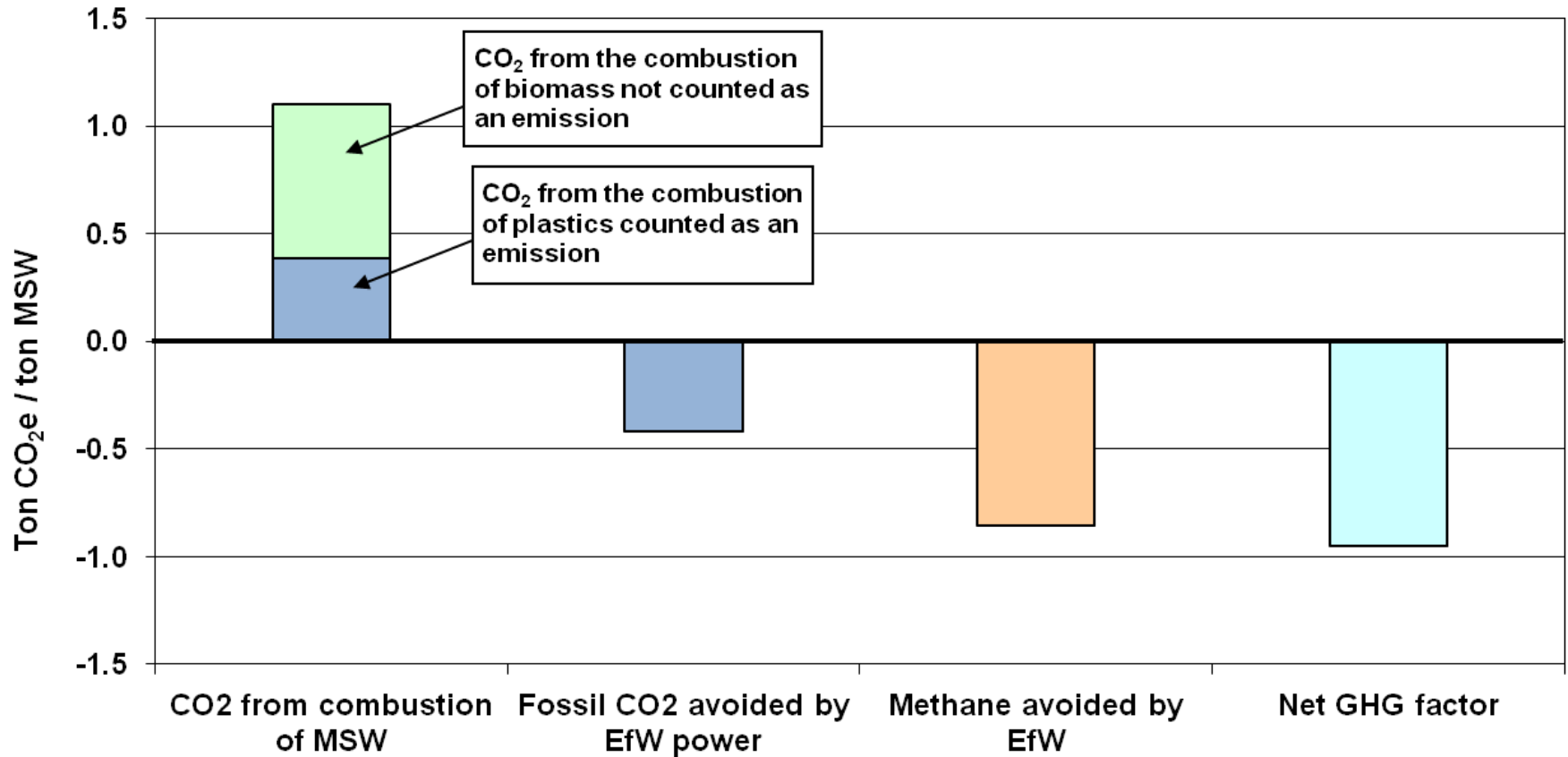
Challenges

- PURPA Contracts Expiring
 - Low electricity prices putting pressure on plants
- Low value of Class 2 RECs
- State policies still favoring landfills
 - RPS: Landfills – Class 1, EfW – Class 2
 - Solid Waste Fee: EfW pays \$1.50 per ton, landfills nothing
- Emerging regulations could require costly retrofits
 - MACT
- Evolving technology
 - Investment required to keep plants operating at peak efficiency
 - Significant capital investment for any new capacity
- EfW receives lowest subsidy of any electricity production
 - Even Coal subsidized well more than EfW
- Pushback from some in environmental community

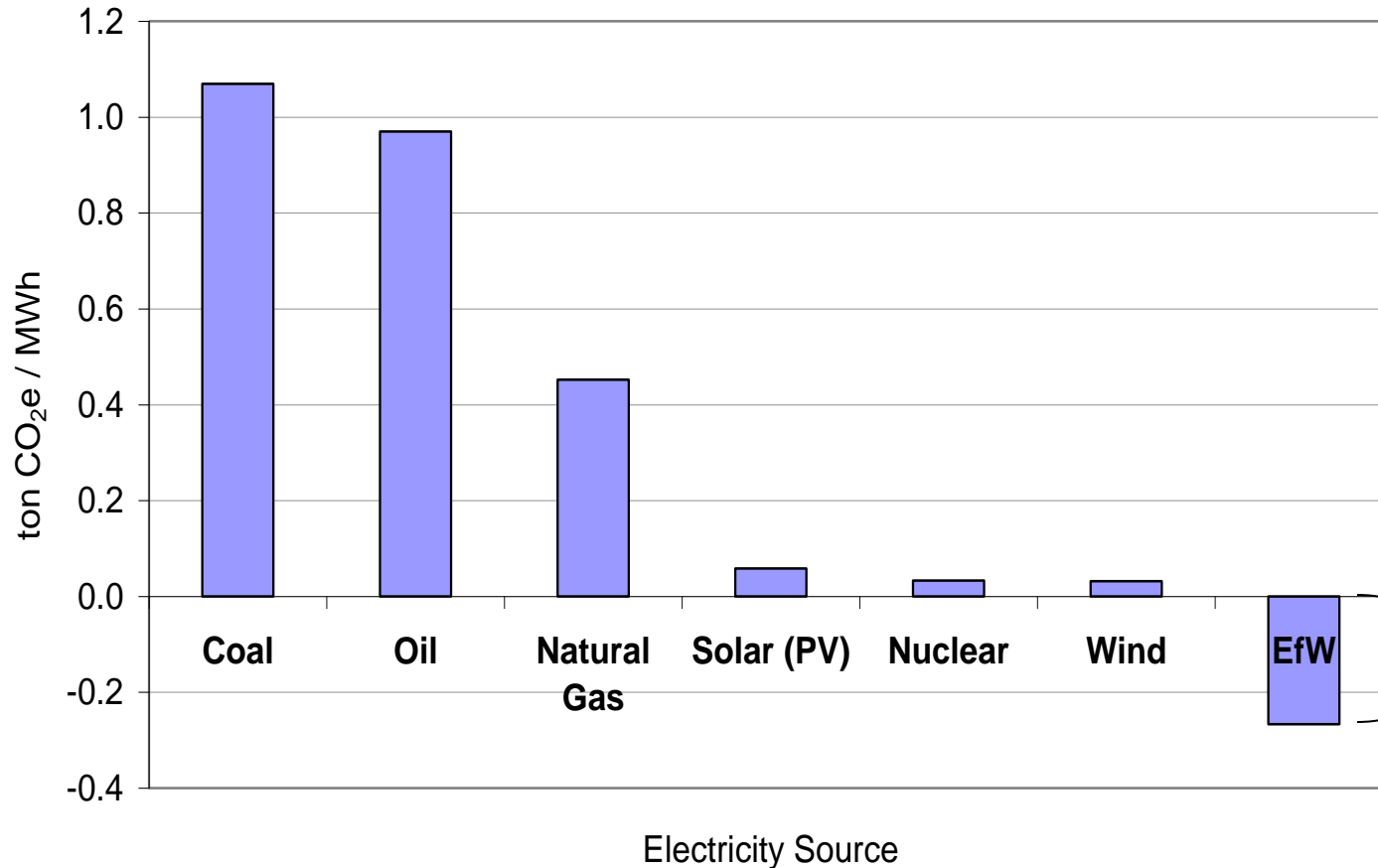
	Bid	Offer
Connecticut Class I		
2013	54.00	55.00
2014	52.75	53.50
Connecticut Class II		
2013	0.35	0.50
2014	0.50	0.75



EfW is a Net Reducer of GHG



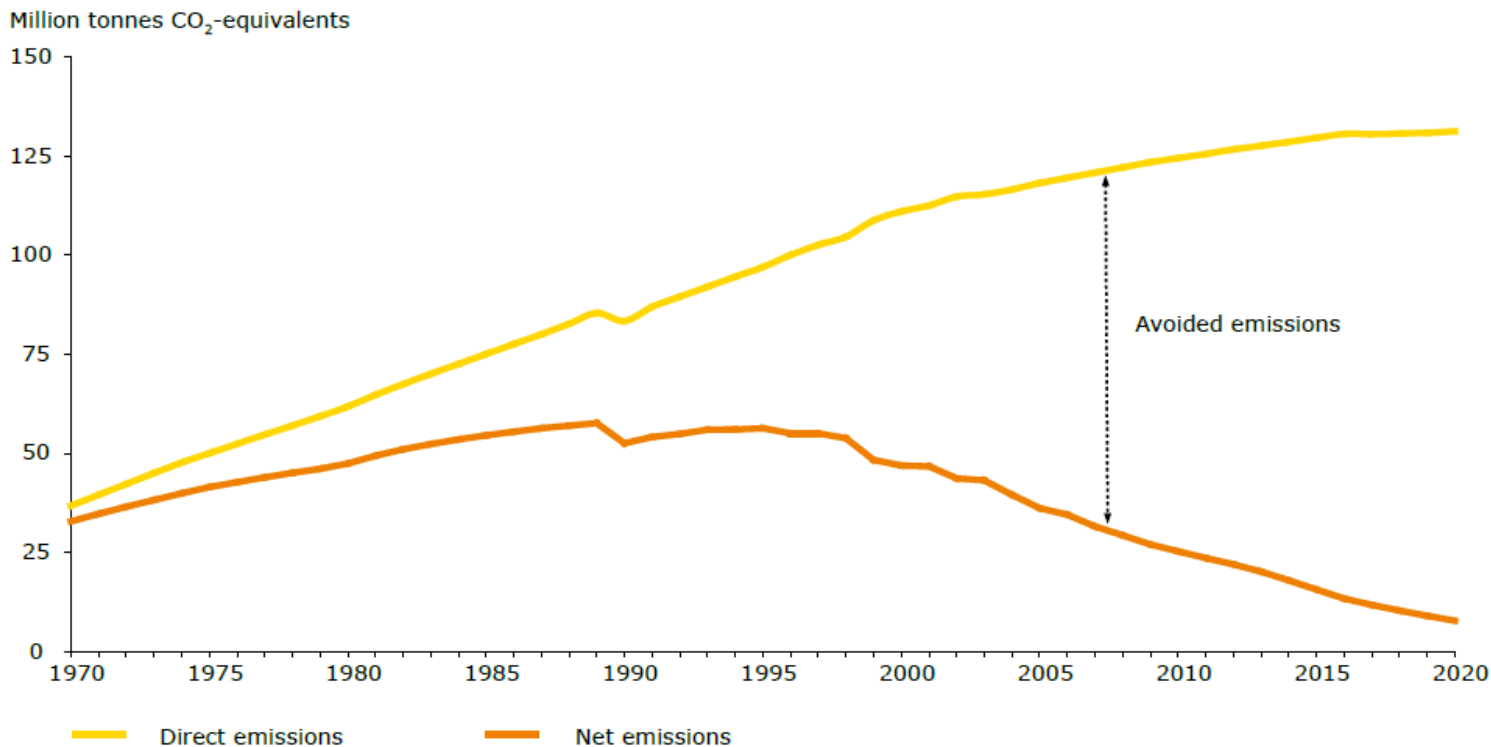
Electricity Sources: GHG Comparison



EfW reduces GHG emissions when including avoided CH₄ from landfills

Sources: WARM v10, U.S. EPA (2006), Hondo, Hiroki, 2005, Life cycle GHG emission analysis of power generation systems: Japanese case

Trends and projections of GHG emissions from municipal waste in the EU

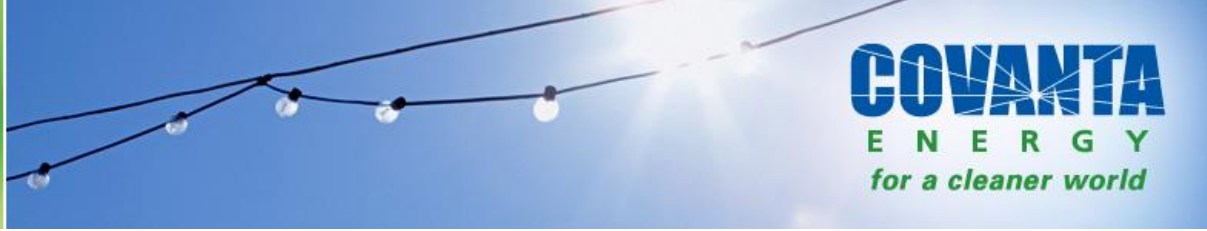


Source: ETC/RWM.

European Environment Agency



EEA Briefing, "Better management of municipal waste will reduce greenhouse gas emissions"



President Obama's Climate Action Plan

- Memorandum directing EPA to complete carbon pollution standards for both new and existing power plants

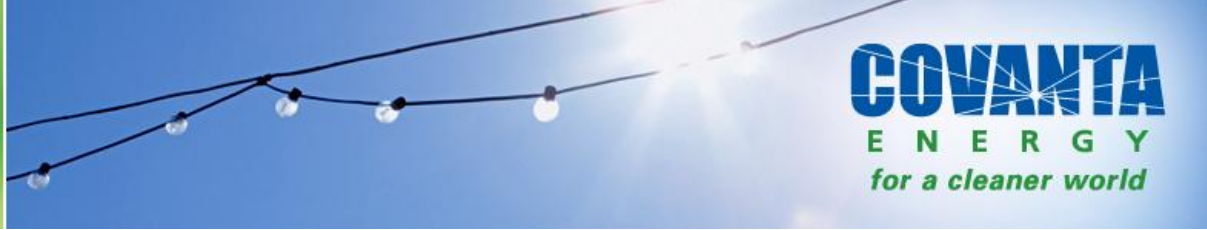
“To ensure continued progress in reducing harmful carbon pollution, I direct you to use your authority under sections 111(b) and 111(d) of the Clean Air Act to issue standards, regulations, or guidelines, as appropriate, that address carbon pollution from modified, reconstructed, and existing power plants and build on State efforts to move toward a cleaner power sector.”

- Developing an Interagency Methane Strategy that will develop a comprehensive, interagency methane strategy

- *“The group will focus on assessing current emissions data, addressing data gaps, identifying technologies and best practices for reducing emissions, and identifying existing authorities and incentive-based opportunities to reduce methane emissions.”*

EPA Rulemaking To Reduce GHG Emissions

- United States now has the opportunity to address carbon pollution from the power sector, which produces nearly 40% of such pollution
- The Clean Air Act requires the EPA to address pollution from existing sources through Section 111(d)
- States should know they have an economically attractive tool to comply with the rules: WTE as a baseload power source
- Two facilities in Florida are producing carbon offset credits for the voluntary market



Connecticut EFW Energy Policy Options

Options for Discussion

- **OPTION 1:** Set “Renewable” Feed in Tariff specifically for EFW electricity generation
 - Perhaps cleanest approach
 - Set tariff as a percentage of retail electricity rate in CT
 - Precedence – model after approach/rational taken in British Columbia
- **OPTION 2:** Increase value of Tier 2 REC’s for EFW electricity generation in the context of GHG mitigation characteristics
 - Use US EPA economic value of GHG reduction as financial adjustment benchmark
 - GHG mitigation value would be added to value of Tier 2 REC’s
- **OPTION 3:** Bi-lateral Contracting – Private Users
 - Uncertainty of potential industrial counterparty
 - Utility “buy in” required
 - Regulatory Implementation complexities