

Biogas: Perspectives On Energy, Environmental Sustainability and Economic Development

Policy Tools for Stimulating the AD Market, Organics Recycling Capacity and Diversion from Landfills

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AN ORGANICS RECYCLING COMPANY

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What Can Policy Makers Do To Help?

- We have heard about the many benefits associated with organics recycling:
 - Renewable, baseload energy
 - Energy independence
 - JOBS and economic stimulation
 - Extending the life of landfills
 - GHG mitigation
 - Reducing our waste stream as we move towards a zero waste society
 - Further processing the organics into compost post energy extraction
- We know that compost use produces many significant society benefits:
 - Returning valuable nutrients back to our soils – enhancing soil fertility and food security
 - Reducing in the need for chemical fertilizers
 - Water conservation
 - Reducing the need for pesticides
- How can Congress help?
- **Promote access to organic waste so it can be fully leveraged for beneficial reuse**
- **No feedstock = no biogas or compost and none of the benefits**

Promoting Access To Organic Waste



- Fortunately, there is a robust toolkit available to policy makers to promote access to organic waste streams
- The tools can be broadly categorized as:
 - Carrots: Incentives
 - Sticks: Mandates
- Both approaches have been used extensively for long periods of time on a global basis
- Although the U.S. has not led in organics diversion, we have a unique opportunity to see which tools have worked well, which have not and why
- We can cherry pick the tools that are most likely to succeed in the U.S.
- We do not have to recreate the wheel
- The toolkit available to policy makers is well developed and field tested

The Impact of Public Policy: A Tale of Two Countries



Germany

- MSW Landfilled: <1%
- Achieved since 2005

Source: Europe Environmental Agency, EEA Report No. 7/2009, Diverting Waste From Landfill. ISSN 1725-9177



United States

- MSW Landfilled: 54%
- As of 2010

Source: EPA's 2010 MSW Characterization. 2010 Facts and Figures Fact Sheet, page 1

Change By Definition Is Disruptive

- When change threatens status quo economic interests, you can expect to hear significant, loud and well financed opposition to organic diversion from landfills
- Three common objections:
 - The Chicken and Egg argument: Until there is more organics recycling capacity, what's the point of landfill diversion policies – where is all of the organic waste suppose to go?
 - Let the free market decide where waste should go
 - Recycling organic waste is too complicated, especially at the residential level
- Don't be fooled by any of this
- The policy makers' toolkit provides an evolved set of tools – thoughtful approaches have been developed which address each of these objections and others used to argue against organics diversion
- When in doubt just remember, if Germany can do it so can we
- Every conceivable issue we might come across in the U.S. has come up in Europe (and elsewhere) and has been successfully addressed

Case Study: European Union's 1999 Landfill Directive



EEA Report | No 7/2009

Diverting waste from landfill
Effectiveness of waste management policies in the European Union

ISSN 1725-9177



European Environment Agency



- Launched in 1999 with the implementation of the landmark Landfill Directive
- Roadmap to progressively reduce organics going to landfills from 1999 to 2016
- The lead up to the Landfill Directive involved years of analysis, discussion and negotiations among European member states
- A 13 year history exists from which to adopt best practices and apply lessons learned
- 2009 Report is a comprehensive 10 Year Analysis of the Landfill Directive

<http://www.eea.europa.eu/publications/diverting-waste-from-landfill-effectiveness-of-waste-management-policies-in-the-european-union>

1999 Landfill Directive: Sample of Key Policy Tools

- Success based on two core factors:
 - Combination of long-term and intermediate goals
 - Flexibility provided the freedom for member states to experiment
- Policies aimed at households, waste companies and waste producers
- Source separation policies (incentive based and mandatory programs)
- Prohibition of organics from landfills – slow, gradual approach
- Landfill tax – higher cost of landfilling favors other options
- Landfill allowance trading schemes
- Policies enhancing the economic value of organics (e.g., renewable energy subsidies, soil fertility programs encouraging compost production)
- Packaging and packaging waste reduction policies
- “Full cost” collection tariffs to account for the full societal costs of waste recreation

California's New Goal: 75% Recycling

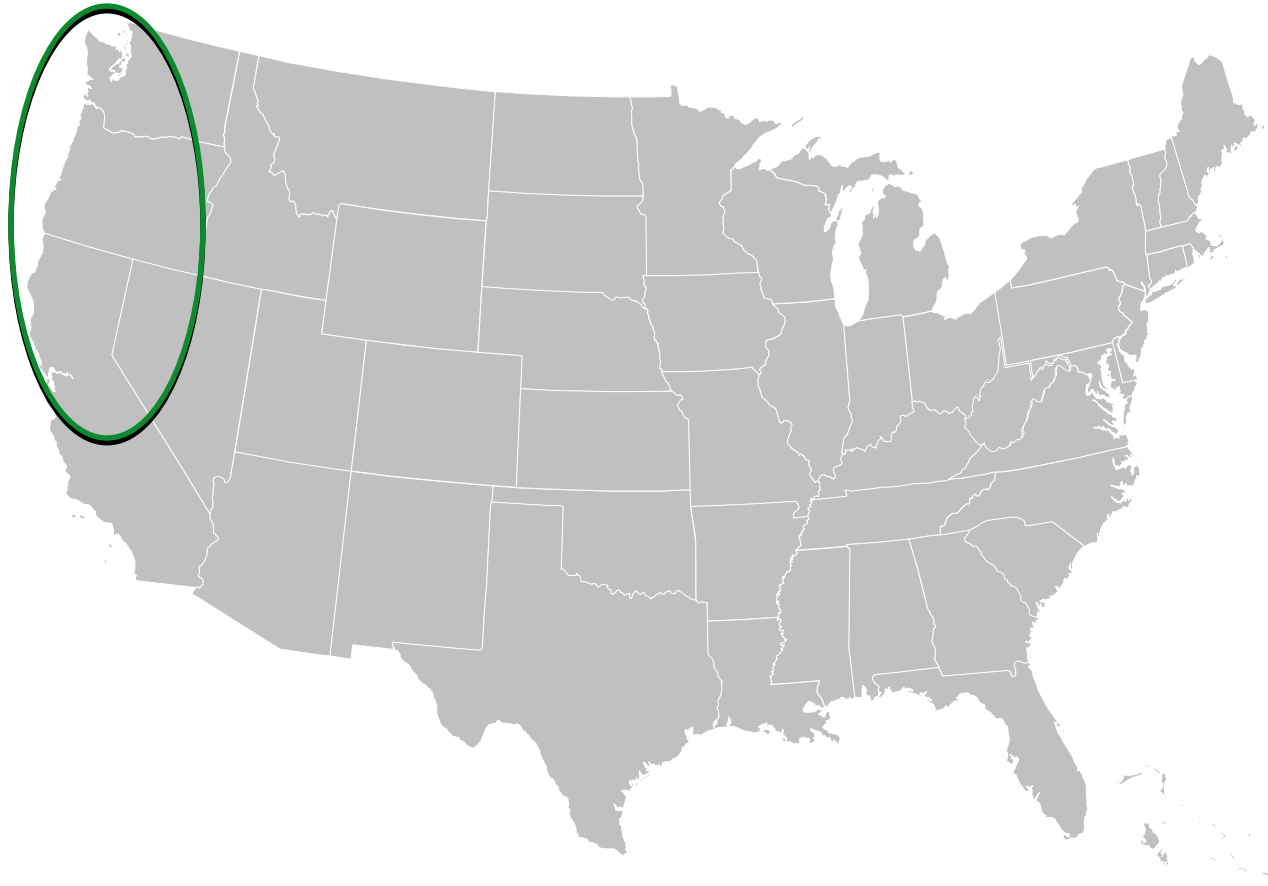


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- Phasing out landfilling organics
- Incentives for organics recycling facilities
- Funding for organics infrastructure
- Indirect incentives such as climate change offsets, low-carbon fuel pathways, etc.
- Regulatory changes that increase the likelihood that organic material will be beneficially reused

www.calrecycle.ca.gov/75Percent/Plan.pdf

Case Study: Residential Organics Collection



- Residential organics recycling is the norm in Europe but relatively novel in the U.S.
- San Francisco, Seattle, Portland have been collecting and recycling organic waste at the residential level for years
- Other cities have struggled for various reasons

Case Study: MA Clean Energy Results Program



- Increase energy production from AD to 50 MW by 2020
- Builds on proposed landfill ban for organics slated for 2014
- MA also revising regulations to streamline process for siting organics recycling facilities

- Launched in November 2011
- Includes a section dedicated to organic waste diversion and renewable energy
- Ensure that at least three AD / CHP projects are operating by 2014
- Divert 350k tons per year of organics from landfills and incinerators by 2020

Case Study: State Model Organics Diversion Act



- No federal public policy and a patchwork of state initiatives have led the American Biogas Council (ABC) to draft State Model Organics Diversion Act to provide a framework for states to adopt their own organics diversion policies
- Model rules set forth a framework to establish mandatory landfill diversion rules
- Ensuring language exists to address typical opposition by applying lessons learned and best practices from other successful programs
- Currently in draft form and undergoing comment and peer review by ABC members

Conclusion



- Organics diversion and recycling provides significant societal benefits
- Organics diversion is recognized in waste management hierarchies throughout the world including within the EPA's Solid Waste Management Hierarchy
- A robust toolkit available to policy makers to promote access to organic waste streams
- The U.S. is behind many parts of the world, but we can catch up by applying lessons learned and best practices from other successful programs
- We need Federal policy to support the patchwork of state and local programs



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