



## ***Policies Affecting AD-to-Wheels Development***

Energy Vision & Pace Energy and Climate Center  
October 4, 2012

**Wayne H. Davis**  
Vice President  
Harvest Power, Inc.

## RNG vs. Electricity for Energy Conversion

*A combination of local market conditions and federal and state incentives drive the choice between converting biogas to RNG for vehicle fuel vs. producing electricity*

Characteristic	RNG	Electricity
<b>Key Market Dynamic</b>	Competing against low fossil NG prices <b>&amp; high petroleum prices</b>	Competing against low fossil NG prices
<b>Energy off-take</b>	<b>Best:</b> on-site fueling of fleet vehicles <b>Possible:</b> pipeline sale & transfer to nearby fueling	<b>Best:</b> co-locate with net-metering user <b>Possible:</b> long-term contract with utility
<b>Federal Incentives</b>	RINs: market value up to \$7-\$8 per MMBtu*	Investment Tax Credit: 30% of capital cost (private ownership)
<b>State Incentives</b>	Very few	Vary by state: <ul style="list-style-type: none"> <li>• RECs</li> <li>• Net Metering &amp; Virtual NM</li> <li>• Special procurement rules</li> <li>• Standard offers &amp; tariffs</li> </ul>

\*Biogas from source-separated organics not yet RIN-eligible, but EPA expected to amend rule soon.

# Promoting AD – Policy & Economic Considerations

## *Factors Influencing Developers and Investors to Pursue Large-Scale AD Development in a Particular Jurisdiction*

Policy Factors	Economic Factors
<p><b>Permitting Pathway</b></p> <ul style="list-style-type: none"> <li>• <b>Predictability:</b> is it clear <i>how</i> to proceed and <i>what</i> information will be required?</li> <li>• <b>Speed</b></li> <li>• <b>Cost and complication:</b> how many different agencies?</li> </ul> <p><b>Organics Policies</b></p> <ul style="list-style-type: none"> <li>• <b>Diversion:</b> encouraged or required (note: commercial &amp; institutional more important than residential)</li> <li>• <b>Operating Rules:</b> are standards re: contamination, odor-control, <i>etc.</i> up-to-date and realistic?</li> </ul>	<p><b>Feedstock</b></p> <ul style="list-style-type: none"> <li>• <b>Availability</b></li> <li>• <b>Price</b></li> </ul> <p><b>Energy Offtake</b></p> <ul style="list-style-type: none"> <li>• <b>Price</b></li> <li>• <b>Inter-connection:</b> availability, cost, and timing?</li> <li>• <b>Contracting:</b> ease of contracting with off-taker?</li> </ul> <p><b>Product Markets</b></p> <ul style="list-style-type: none"> <li>• Is there an established market for the solid or liquid residuals?</li> <li>• Pricing?</li> </ul>

## Permitting Innovations

### Massachusetts

- Streamlining and clarifying the permitting pathway for organics
- New regs expected to be published by year end
- Resources: <http://www.mass.gov/dep/public/committee/adtf.htm>
- “Permit by Rule” for smaller digesters
- “Permit by Application” for larger digesters

### Washington State

- Also streamlining and clarifying
- Draft new regs just published following extensive stakeholder input
- Chapter 173-350 WAC - *Solid Waste Handling Standards*
- <http://www.ecy.wa.gov/programs/swfa/rules/rule350.html>

### California

- “Program Environmental Impact Review” – standardized template speeds review
- <http://www.calrecycle.ca.gov/SWFacilities/Compostables/AnaerobicDig/default.htm>



## Diversion Innovations

### Connecticut

- PA 11-217
- Mandatory diversion of SSO after two facilities permitted in state
- Applies to large (104 tons/yr) commercial and institutional generators located within 20 miles of a permitted facility

### Massachusetts

- Intends to divert large (1 ton/week) commercial and institutional generators
- Regulations expected in force 2014.
- <http://www.mass.gov/dep/public/committee/swacorg.htm>

### Vermont

- Act No. 148 (H.485) – 2012.
- Variant of Connecticut approach: combines 20 mile radius with gradually lowering thresholds from 104 tpy in 2014 down to zero by 2020.
- Requires haulers to offer SSO collection by 2017.

## Energy Innovations

### California

- AB 118 creates \$100M/year annual grant program to fund research and demonstration projects for alternative transportation fuels
- AB 1900 (2012) requires State PUC to set standards for pipeline injection of biomethane.

### Florida

### Pennsylvania

## Opportunities to Get Involved

- Support Energy Vision
- Join the American Biogas Council and participate in its committees and workgroups
- Participate in the US EPA Biodigesters and Biogas Working Group

Contact Judy Lieberman

Office of Planning, Analysis and Accountability, OCFO

USEPA

202-564-8638 (p)

[Lieberman.Judy@epamail.epa.gov](mailto:Lieberman.Judy@epamail.epa.gov)

*There's a better path for organics —  
help us get there.*



**Wayne Davis, VP - Government Affairs**

Harvest Power, Inc.


221 Crescent Street, Suite 402

Waltham, MA 02453

781-314-9504

[wdavis@harvestpower.com](mailto:wdavis@harvestpower.com)

 Follow us @harvestpower

 Be our friend

 Watch our channel