

OPEN MEETING AGENDA ITEM



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REFER TO FILE NO. 1902

Arizona Corporation Commission  
DOCKETED

JUL - 8 2011

July 8, 2011

Commissioner Paul Newman  
Arizona Corporation Commission  
1200 W. Washington Street  
Phoenix, Arizona 85007

DOCKETED BY

Re: Reclamation Power Group, Inc. W-T-E Facility  
Docket No. E-01750A-10-0453

Dear Commissioner Newman,

Thank you for your letter of June 30, 2011 and your interest in Mohave Electric Cooperative, Incorporated's (MEC or Cooperative) Application to designate a specific municipal waste to energy facility (W-T-E Facility) proposed by Reclamation Power Group, Inc. (RPG) as a pilot program pursuant to A.A.C. R14-2-1802.d or to waive the Commission's Renewable Energy rules as necessary to recognize energy produced from the W-T-E Facility as renewable energy credits under A.A.C. R14-2-1803. The Application is narrowly tailored to deal with a specific W-T-E Facility - something that does not currently exist within the State of Arizona. Once developed, the Commission will have a real life example, using current production and air quality protection technologies, to evaluate in future actions.

As you have recognized during prior Open Meetings, MEC is committed to actively pursuing renewables as a component of its energy portfolio. The pending Application represents the Cooperative's commitment to openly consider all forms of renewable energy that can cost effectively and reliably meet its members' energy demands, while complying with the countless laws, rules and regulations of the numerous governmental bodies, at the local, county, state and federal levels, that exercise jurisdiction over various aspects of the electric business, including its power production and delivery functions.

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We attach a document prepared by the Local Government Coalition For Renewable Energy summarizing why Waste to Energy should be recognized as a renewable resource. This fact based document, supported by the referenced studies and literature, effectively counters the large volume of misinformed comments recently received by the Commission. We encourage all the Commissioners to read it before rendering a decision on Mohave's Application. We will be glad to provide copies of the ten (10) attachments the document references upon request, but did not include here because they collectively constitute over 300 pages of material.

Please note, the approval of the pending Application will not make the output of the W-T-E Facility a part of MEC's REST program. MEC's current REST plan and its proposed 2012 REST plan, filed July 1, 2011, do not include the W-T-E Facility. However, approval of the Application is a critical first step to MEC and the Facility's developer, RPG, initiating meaningful discussions on the cost and efficacy of including this resource as part of MEC's renewable portfolio. Such discussions, if successful, would result in draft agreements that would not be executed by MEC unless and until the Commission expressly approves an amendment of its REST plan to include the W-T-E Facility. Additionally, MEC has informed Staff that it does not intend to request that Renewable Energy Credits associated with the W-T-E Facility satisfy MEC's distributed renewable energy requirement.

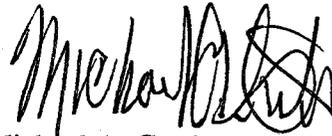
As to your request that MEC and RPG have representatives present when this matter is considered at Open Meeting, please be advised that MEC had its legal counsel and RPG had management representatives (from Idaho) available to respond to questions at the Commission's June 21, 2011 Open Meeting. As you know, the matter was continued at that time.

The Cooperative has directed the undersigned, its General Counsel, and William Sullivan be present at the upcoming July 12, 2011 Open Meeting. We understand that Ron Blendu, a member of RPG's management, intends to again travel from Idaho to attend the July 12, 2011 Open Meeting. These individuals should be able to appropriately respond to questions related to the Cooperative's pending application, Staff's proposed order and the Exceptions that have been filed by the parties.

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In order to minimize the time these representatives, as well as other interested persons, will need to expend at the Open Meeting, it is respectfully requested that the Agenda be clarified to indicate that the item will not be heard before 1:30 p.m. on July 12, 2011.

Sincerely,



Michael A. Curtis  
General Counsel for Mohave Electric  
Cooperative, Incorporated

MAC/maw

Enclosure: Coalition Summary

cc: Chairman Gary Pierce (with enclosure)  
Commissioner Brenda Burns (with enclosure)  
Commissioner Sandra Kennedy (with enclosure)  
Commissioner Bob Stump (with enclosure)  
Steve Olea (with enclosure)  
Janice Alward, Esq. (with enclosure)  
Lyn Farmer (with enclosure)  
Timothy M. Hogan, Esq. (with enclosure)  
Sandra Bahr (with enclosure)

Barron County Waste-to-Energy  
and Recycling Facility  
(Almena, Wisconsin)

Bristol Resource Recovery Facility  
Operating Committee  
(Bristol, Connecticut)

City of Ames, Iowa

City of Harrisburg, Pennsylvania

City and County of Honolulu,  
Hawaii

City of Huntsville Solid Waste  
Disposal Authority  
(Huntsville, Alabama)

County Sanitation Districts of  
Los Angeles County  
(Whittier, California)

ecomaine (Portland, Maine)

Kent County, Michigan

Lancaster County Solid  
Waste Management Authority  
(Lancaster, Pennsylvania)

Marion County, Oregon

Mid-Maine Waste Action Corp.  
(Auburn, Maine)

Northeast Maryland Waste  
Disposal Authority  
(Baltimore, Maryland)

Pollution Control Financing  
Authority of Camden County  
(Camden, New Jersey)

Spokane Regional Solid Waste  
System (Spokane, Washington)

Wasatch Integrated Waste  
Management District  
(Layton, Utah)

York County Solid Waste Authority  
(York, Pennsylvania)

\* In coordination with the  
U.S. Conference of Mayors/  
Municipal Waste  
Management Association

## LOCAL GOVERNMENT COALITION FOR RENEWABLE ENERGY

### America's Need for Clean, Renewable Energy: THE CASE FOR WASTE-TO-ENERGY

- ▶ America needs to dramatically increase its use of clean, renewable energy.
- ▶ Waste-to-energy (WTE) is one of the most environmentally protective sources of renewable energy.
- ▶ WTE is a largely untapped resource in the U.S., only 7% of our municipal solid waste (MSW) is directed to WTE while 69% is landfilled.<sup>1</sup>
- ▶ WTE has far greater use in many other nations that are at least equally conscientious stewards of the environment and is widely recognized as the best environmental solution for managing the non-recycled portion of municipal waste. See Attachment ("Att.") 1, p. 601 (for the reader's convenience, many of the sources cited here are reproduced in the Appendix).<sup>2</sup>
- ▶ As the former Chief of EPA's Energy Recovery Branch recently emphasized, "[i]f you want to have an impact on greenhouse gas mitigation, focus on MSW [because there's] nationally significant energy available from MSW combustion [and] even if you have >50% recycling, you still have a significant amount of energy to recover." Att. 2, slide 19 (keynote address, North American Waste-to-Energy Conference, May 18, 2009).

#### *Here are the facts:*

**WTE IS RENEWABLE ENERGY** – WTE's status as renewable energy (i.e., an energy resource that is replaced rapidly by recurring processes) is well established:

- WTE is widely recognized as renewable at both state and federal levels: e.g., Department of Energy, EPA, Biomass Research and Development Act of 2000, Energy Policy Act of 2005, Public Utility Regulatory Policy Act, and laws and regulations in nearly 25 states.<sup>3</sup>
- The World Economic Forum's January 2009 report, *Green Investing – Towards a Clean Energy Infrastructure*, recognizes WTE as one of eight "key renewable energy sectors" and "particularly promising in terms of . . . abatement potential" for carbon emissions. Att. 3, p. 27.

**MODERN WTE FACILITIES – TRUE "GREEN" TECHNOLOGY** – A very clean and efficient energy source:

- Reflecting state and federal requirements for the most advanced emissions control technology, WTE emissions have plummeted since the late 1980's (e.g., annual WTE emissions of dioxin have decreased by a factor of 1,000 to less than 12 grams), Att. 4, p. 1722, and WTE emissions are lower than landfill emissions for 9 of 10 major air pollutants, Att. 5, p. B-30.

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- As a result, USEPA recognizes WTE as a renewable energy source that “produce[s] 2800 megawatts of electricity with **less environmental impact than almost any other source of electricity.**”<sup>4</sup>
- EPA’s hierarchy for “integrated waste management” **recommends waste combustion with energy recovery over landfilling** (as does the European Union).<sup>5</sup>
- WTE’s efficiency and reliability are clear as well:
  - WTE recovers approximately 600 kWh of electricity per ton of waste, which is approximately **10 times the electric energy recoverable from a ton of landfilled waste.** Att. 6, p. 1714; *see also* Att. 5, p. B-29.
  - WTE is the **paradigm example of “distributed generation”** that serves nearby load without the need for new long-distance transmission lines (unlike other renewables).
  - WTE is also **base-load generation**, available 24/7 and unaffected by days that are cloudy or calm.
- The Nature Conservancy ranks WTE as one of the most environmentally protective alternative energy sources. Att. 7, p. 24.
- As is often the case with environmentally preferred alternatives, WTE can cost more (at least on a short-term and intermediate basis) – **And our communities accept the higher cost precisely because the result is better for the environment.**

**WTE HELPS MITIGATE CLIMATE CHANGE** – WTE’s role in reducing greenhouse gas emissions (GHG) is widely recognized:

- As EPA’s solid waste management planning methodology recognizes, WTE reduces GHG emissions in 3 ways by (i) generating electricity and/or steam without having to use fossil fuel sources, (ii) avoiding the potential methane emissions that would result if the same waste was landfilled, and (iii) recovering ferrous and nonferrous metals, which avoids the additional energy consumption that would be required if the same metals were produced from virgin ores. Att. 6, pp. 1711-14; *see also* Att. 5, Part B, Summary and pp. B-23 to B-32.
- Similarly, “key information” EPA recently provided to congressional staff demonstrates that **WTE yields “significant reductions of CO<sub>2</sub>” and WTE has a “better [GHG] profile than landfilling with energy recovery.”** Att. 2, slides 6, 8 and 26.
- **GHG emissions from WTE are primarily of biogenic origin** (approximately two-thirds). Att. 6, p. 1716. These emissions are already part of the natural carbon cycle because the biogenic carbon that comprises paper, food and other biomass in municipal waste is removed from the atmosphere as part of the plant growth-natural carbon cycle.
- The remaining petrochemical-based material (approximately one-third) can also be considered renewable (it’s generated year after year), but if relegated to landfilling rather than combustion with energy recovery that material would represent the loss of a vast amount of valuable energy – **WTE recovers the energy equivalent of one barrel of oil from each ton of MSW.**

- EPA analysis also shows that **WTE yields the best results (compared to landfills) in terms of maximum energy recovery and lowest GHG and criteria pollutant emissions.** Att. 6, pp. 1711-14, 1716-17.
- Scientific studies show that WTE reduces GHG emissions by 0.5-1.3 tons of carbon dioxide equivalents (CO<sub>2</sub>e) per ton of MSW combusted rather than landfilled. See Att. 4, p. 1719; Att. 6, p. 1711.
- The Intergovernmental Panel on Climate Change (IPCC), a leading forum of independent scientific experts on climate change, **emphasizes WTE's dual benefits of (i) offsetting fossil fuel combustion and (ii) avoided landfill methane emissions.** Att. 1, p. 601.<sup>6</sup>
- The Kyoto Protocol's Clean Development Mechanism **approves WTE as a source of tradeable GHG emission reduction credits that displaces electricity from fossil fuels and avoids landfill methane emissions from waste.** Att. 8, pp 1-3.
- Similarly, the Feb. 20, 2007 joint statement of Columbia University's-Earth Institute Global Roundtable on Climate Change (GROCC) **identifies WTE as an important means to reduce carbon emissions from fossil fuel-based electricity and methane emissions from landfills.** Att. 9, pp. 9, 11.<sup>7</sup>
- Finally, the Chief of EPA's Energy Recovery Branch referred to an evolving "best integrated material management strategy" of 45% recycling, 10% landfilling and 45% WTE. Att. 2, slide 30. But even at the 23% WTE rate the EU15 has achieved (and EU reliance on WTE continues to increase),<sup>8</sup> the additional reduction in CO<sub>2</sub>e emissions in the U.S. would be 63.7 million tons, **which is equivalent to removing more than 13.3 million passenger cars from the nation's roads.**<sup>9</sup>

**WTE ENCOURAGES RECYCLING** – WTE is also entirely compatible with recycling:

- **WTE communities outperform non-WTE communities in recycling, with recycling rates that are typically at least 5 percentage points above the national average** and in some cases lead the nation in recycling. Att. 10, pp. ii, 8.
- These points are confirmed by a recent (June 2009) national survey that conservatively calculated (i.e., understated) the recycling rate for WTE communities. Att. 10, pp. ii, 6-11.<sup>10</sup>
- Although recycling rates are driven by state recycling policies that apply equally to WTE and non-WTE communities, **WTE communities' recycling rates are generally higher than non-WTE communities in the same state.** Att. 10, p. 11 and Figure 3.
- State laws and policies also discourage diversion of recyclable materials to combustion in a WTE facility:
  - For example, an Oregon county using WTE cannot "take any action that would hinder or discourage recycling activities in the county." Ore. Rev. Stat. § 459.153. That statute is focused on WTE-reliant Marion County, which **consistently achieves one of the highest recycling rates in the nation – more than 58.2%** (which is also the highest in Oregon).<sup>11</sup>

### RECAP AND CONCLUSIONS

- ▶ WTE – a significant source of renewable energy that substantially reduces GHG emissions by (a) displacing electric power generation from fossil fuels, (b) avoiding methane emissions from landfill disposal of municipal waste, and (c) facilitating post-combustion recovery and reuse of ferrous and non-ferrous metals.
- ▶ Clean, baseload energy with very low emissions.
- ▶ Recovers 10 times the energy (electric power) from a ton of waste in comparison to landfill methane recovery-reuse.
- ▶ “Distributed” generation, i.e., energy is used where it is generated, which reduces the environmental impact and cost of transporting both waste and energy; and
- ▶ WTE complements recycling programs rather than competing with recycling.

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- <sup>1</sup> *The State of Garbage in America*, [http://www.jgpress.com/images/art/1010/bc101016\\_s.pdf](http://www.jgpress.com/images/art/1010/bc101016_s.pdf)(BioCycle, Oct. 2010).
  - <sup>2</sup> See also *Municipal Solid Waste in the United States 2007 Facts and Figures*, <http://www.epa.gov/osw/nonhaz/municipal/pubs/msw07rpt.pdf>, p. 13.
  - <sup>3</sup> <http://www.energyrecoverycouncil.org/waste-energy-produces-clean-renewable-a2984>.
  - <sup>4</sup> See <http://www.energyrecoverycouncil.org/userfiles/file/-epaletter.pdf>.
  - <sup>5</sup> *Municipal Solid Waste in the United States: 2007 Facts and Figures*, p. 11.
  - <sup>6</sup> The IPCC’s work in climate change earned the 2007 Nobel Peace Prize jointly with former Vice President Al Gore.
  - <sup>7</sup> Signatories to GROCC’s joint statement range from Dr. James Hansen, NASA Goddard Institute for Space Studies, to Environmental Defense.
  - <sup>8</sup> The 23% WTE utilization rate for the European Union is shown at [http://epp.eurostat.ec.europa.eu/portal/page/portal/waste/data/sectors/municipal\\_waste](http://epp.eurostat.ec.europa.eu/portal/page/portal/waste/data/sectors/municipal_waste) (scroll to “Additional Data and Statistics on Municipal Waste,” and select both “Municipal waste generated (total), 1000 tonnes (update 09/09)” and “Municipal waste incinerated, 1000 tonnes (update 09/09)”).
  - <sup>9</sup> The 63.7 million-ton figure noted in the text for reduced landfill CO<sub>2</sub>e emissions due to increased WTE usage was calculated based on: (i) data provided in *The State of Garbage in America* (BioCycle, Oct. 2010), *supra* n.1 (Table 2, which shows U.S. landfill disposal of approximately 270 million tons in 2008); and (ii) a factor of one ton of landfill CO<sub>2</sub>e emissions avoided per ton of WTE-processed MSW, which is widely recognized as representative of modern landfills with methane recovery and reuse. See Susan A. Thorneloe, et al., *The Impact of Municipal Solid Waste Management on Greenhouse Gas Emissions in the United States*, 52 J. Air and Waste Mgmt. Ass’n 1000, 1009 (Sept. 2002) (available at [http://www.co.olmsted.mn.us/health/docs/solid\\_waste/Thorneloe.pdf](http://www.co.olmsted.mn.us/health/docs/solid_waste/Thorneloe.pdf)). Increasing WTE usage in the U.S. to 23% (from the current 7%) would reduce landfill CO<sub>2</sub>e emissions by the previously noted 63.7 million tons, and using Department of Transportation data for annual CO<sub>2</sub>e emissions per passenger car (4.78 metric tons), see <http://www.epa.gov/otaq/climate/420f05004.htm> (scroll to Step 6, DOT fuel economy, passenger cars), a 63.7 million-ton reduction in landfill emissions equals the annual CO<sub>2</sub> emissions of 13,330,000 passenger cars.
  - <sup>10</sup> The WTE communities’ recycling rate omits several recyclables that the national rate includes, and the national rate is a composite that *includes* WTE communities – the more accurate comparison would *exclude* WTE communities in calculating the national rate.
  - <sup>11</sup> See *2009 Oregon Material Recovery and Waste Generation Rates Report*, September 2010 (10-LQ-020), Table I, <http://www.deq.state.or.us/lq/pubs/docs/sw/2009MRWGRatesReport.pdf>.