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BEFORE THE ARIZONA CORPORATION COMMISSION

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Arizona Corporation Commission

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AZ CORP COMMISSION
DOCKET CONTROL

IN THE MATTER OF THE APPLICATION
OF MOHAVE ELECTRIC COOPERATIVE,
INCORPORATED FOR APPROVAL OF A
WASTE-TO-ENERGY FACILITY AS A
PILOT PROGRAM UNDER THE
RENEWABLE ENERGY RULES OR, IN
THE ALTERNATIVE, FOR A LIMITED
WAIVER

DOCKET NO. E-01750A-10-0453

INITIAL CLOSING BRIEF
BY MOHAVE ELECTRIC
COOPERATIVE, INCORPORATED

INTRODUCTION

Mohave Electric Cooperative, Incorporated (“Mohave”) respectfully requests the Arizona Corporation Commission (“Commission”) summarily affirm Decision No. 72500, dated July 25, 2011. Mohave, and Reclamation Power Group, LLC (“RPG”), support the Decision as adopted by the Commission. Decision No. 72500 recognizes the “energy produced at the RPG WTE¹ [facility] as a pilot program pursuant to A.A.C. R14-2-1802(D)” and considers 90 percent of the total kWhs derived from the RPG WTE facility “as being produced by an Eligible Renewable Energy Resource.”² The Decision further recognizes that waiver is an independent and alternative basis upon which to approve Mohave’s application.³ These findings and conclusions were and remain supported by the record including, without

¹ WTE is short for waste to energy.

² Decision at p.11, ll. 2-7.

³ Id. at p. 9, ll.15-18.

1 limitation, the Staff Memorandum,⁴ the testimony of Staff Witnesses Laura Furrey and Steve
2 Olea, and Mohave witnesses Robert Estes, Ron Blendu, Professors Themelis and Castaldi,
3 and Michael Curtis.

4 "In all trials, actions and proceedings the burden of proof shall be upon the
5 party adverse to the commission . . ."⁵ As the party petitioning for rehearing and challenging
6 Decision No. 72500, the Sierra Club – Grand Canyon Chapter has the burden of
7 demonstrating, by clear and satisfactory evidence, that the Decision is "unjust or unwarranted
8 or should be changed."⁶ The Sierra Club has not met this burden.

9 **DESIGNATING THE RPG FACILITY A PILOT PROGRAM**

10 **WAS AND REMAINS APPROPRIATE**

11 The existing renewable standard and tariff rules ("REST Rules")⁷ allow for both
12 a waiver of the REST Rules⁸ and adoption of pilot programs in which additional technologies
13 are established as Eligible Energy Resources.⁹ Furthermore, the REST Rules already
14 recognize use of municipal solid waste ("MSW") (and not just its biogenic component) in
15 conjunction with a Biogas Electric Generator or a Landfill Gas Generator as an Eligible
16 Renewable Resource.¹⁰

17 ⁴ Exhibit S-1, admitted at the Open Meeting Evidentiary Hearing (OMEH) conducted July 12 and 13, 2011;
18 Exhibit S-2 admitted at Rehearing. Hereinafter the Staff Memorandum and proposed Order will be referred to
as Exhibit S-2.

19 ⁵ A.R.S. § 40-254E.

20 ⁶ A.R.S. § 40-253E.

21 ⁷ A.A.C. R14-2-1801, et. seq.

22 ⁸ A.A.C. R14-2-1816(A) provides: "The Commission may waive compliance with any provision of this Article
for good cause."

23 ⁹ A.A.C. R14-2-1802(D) provides: "The Commission may adopt pilot programs in which additional
technologies are established as Eligible Renewable Energy Resources. Any such additional technologies shall
24 be Renewable Energy Resources that produce electricity, replace electricity generated by Conventional Energy
Resources, or replace the use of fossil fuels with Renewable Energy Resources. Energy conservation products,
25 energy management products, energy efficiency products, or products that use non-renewable fuels shall not be
eligible for these pilot programs."

¹⁰ A.A.C. R14-2-1802(A)(1) & (8).

1 By its Application, Mohave requested the Commission grant either, or both, a
2 waiver or designation of a pilot program such that the energy produced from MSW through
3 the proposed RPG WTE facility using bubbling bed technology would be recognized as an
4 “Eligible Renewable Energy Resource” as defined by A.A.C. R14-2-1802 and/or as otherwise
5 qualifying as “Renewable Energy Credits” under A.A.C. R14-2-1803 and eligible to satisfy
6 the annual renewable energy requirements established by A.A.C. R14-2-1804.¹¹

7 After conducting independent research and analysis relying on unbiased sources
8 relating to MSW WTE facilities generally,¹² Staff, among other findings, determined:

9 1. Treatment of MSW as a renewable resource varies at both the state and
10 federal level.¹³

11 2. The Energy Information Administration (“EIA”) classifies MSW as a
12 renewable resource, separating the energy produced from MSW into biogenic and non-
13 biogenic portions.¹⁴

14 3. Biogenic MSW accounted for almost 6 percent of the renewable energy
15 consumed in the United States in 2008.¹⁵

16 4. The MSW sampled by RPG is composed of about 82 percent biogenic
17 material, prior to recycling and about 95 percent biogenic material after recycling at the
18 plant.¹⁶

19 5. ASTM-D6866 and the balance methods are two recognized ways of
20 determining the biogenic portion of mixed waste that arrive at the same result.¹⁷

21 ¹¹ Mohave Application (OMEH Exhibit A-5) at p. 1.

22 ¹² Furrey, Rehearing Transcript (RH Tr.) at p. 447, ll. 13-19.

23 ¹³ Exhibit S-2 at p.2.

24 ¹⁴ Id.

25 ¹⁵ Id. at p.3.

¹⁶ Id.

¹⁷ Id. at pp. 3-4.

1 6. The resultant emissions from MSW WTE facilities lies somewhere
2 between those of natural gas (least dirty) and coal (dirtiest) thermal power plants.¹⁸

3 7. Carbon dioxide emissions from biogenic sources are considered
4 “recycled” or carbon-neutral because the sources of the emissions, prior to being used as fuel,
5 were absorbing CO₂.¹⁹

6 8. Methane leakage from landfills accounts for significant emissions of CO₂
7 equivalent (“CO₂e”) and one ton of MSW combusted rather than landfilled reduces
8 greenhouse gas emissions by an average of one ton of CO₂.²⁰

9 9. Less MSW being sent to the land fill leads to reduced land impacts
10 associated with landfill sites, with WTE plants reducing the space required for landfilling by
11 about one square foot per ton of MSW.²¹

12 10. WTE plants do not have the aqueous emissions, or leachate that may be
13 experienced in landfills, either now or in the distant future.²²

14 11. Burning waste at extremely high temperatures also destroys chemical
15 compounds and disease –causing bacteria.²³

16 12. WTE facilities equipped to recover recyclables increase recycling rates
17 and save energy and CO₂ emissions that would have been emitted if the materials were mined
18 and/or manufactured.²⁴

21 ¹⁸ Id. at p. 4.

22 ¹⁹ Id. at p. 5.

23 ²⁰ Id.

24 ²¹ Id.

25 ²² Id.

²³ Id. at p. 6.

²⁴ Id.

1 The foregoing independent analysis led Staff to conclude that “a portion of the
2 energy produced from [the] waste-to-energy facility could be counted as renewable for
3 renewable energy credits in Arizona”²⁵ and that the potential benefits of the RPG WTE
4 facility outweigh the potential consequences, especially when compared to the alternative of
5 landfilling.²⁶

6 Staff internally discussed whether to go waiver or pilot program.²⁷ While Mr.
7 Olea, the Division’s Director, ultimately went with a waiver,²⁸ he testified that the
8 Commission could go with a pilot too.²⁹ In fact, Ms. Furrey testified that Staff would not
9 object if the Decision was amended to clearly grant both a waiver and designate the facility as
10 a pilot program.³⁰ The point is, as Mr. Olea testified, “this type of project could be a pilot
11 program to be studied to see if this is something you would want to do more of in the
12 future.”³¹

13 The Staff’s recommendations were set forth in its well-referenced Staff
14 Memorandum and proposed Order³² and docketed for the Commission’s consideration and
15 action. Both Mohave and the Sierra Club – Grand Canyon Chapter filed Exceptions, with the
16 Sierra Club requesting the Application be denied completely and Mohave requesting all kWhs
17 produced by the RPG WTE facility be treated as coming from an Eligible Renewable Energy
18 Resource. Neither Party’s Exceptions requested an evidentiary hearing and no statute or rule
19

20 ²⁵ Furrey, RH Tr. at p. 448, ll. 5-9.

21 ²⁶ Id. at p. 7.

22 ²⁷ Open Meeting, Evidentiary Hearing held 7/13/11 & 7/14/11(“OMEH”) Tr. at p.128, ll.18-20.

23 ²⁸ OMEH Tr. at p.128, ll. 20-21.

24 ²⁹ OMEH Tr. at p. 128, ll. 21-22.

25 ³⁰ Rehearing Transcript (RH Tr.) at p. 451, ll. 9-12.

³¹ OMEH Tr. at p. 130, l. 16 - p.131, l. 3.

³² Exhibit S-2.

1 requires the Commission to conduct an evidentiary hearing before acting on Mohave's
2 Application.

3 The matter was agendized, but pulled from both the May 24 & 25 and the June
4 21 & 22 Open Meetings. When finally considered by the Commission at its July 12, 2011
5 Open Meeting, counsel for the Sierra Club, for the first time, orally requested an evidentiary
6 hearing on the Application. When the Commission indicated it might grant the opportunity
7 for the parties to present evidence the next day, the Sierra Club claimed the short notice and
8 an abbreviated hearing would violate the Club's due process rights. Advised by its counsel
9 that such a proceeding did not violate due process,³³ the Commission proceeded with an
10 abbreviated evidentiary hearing on July 13 and 14, 2011, receiving sworn testimony from Mr.
11 Olea, Ms. Furrey, Mr. Blendu, Ms. Bahr, Mr. Curtis, Mr. Angel and Mr. Salomon.³⁴
12 Additionally, Ms. Crumbaker of Maricopa County Air Quality Department provided public
13 comment and responded to Commissioners' questions regarding the air quality permitting
14 process that RPG was required to comply with in connection with building and operating the
15 WTE facility.³⁵ While Ms. Bahr and Mr. Angel testified Mohave's Application should be
16 denied, Mr. Olea, Ms. Furrey, Mr. Blendu and Mr. Curtis testified in support of granting the
17 Application either as proposed by Staff or as a pilot program. Ms. Furrey testified that her
18 analysis indicated that between 85 and 95 percent of the energy produced by the RPG WTE
19 facility could come from biogenic (i.e., renewable) materials based upon the information
20 derived from sampling done by RPG.³⁶

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23 ³³ OMEH Tr. at p. 94, ll. 10-24.

24 ³⁴ Mohave objected, contending an evidentiary hearing was unnecessary. OMEH Tr. at p. 90, ll. 17-24.

25 ³⁵ Mr. Olea, Mr. Curtis, Mr. Angel and Ms. Crumbaker all appeared at the request of Commissioner Newman, rather than any of the parties to the proceeding.

³⁶ OMEH Tr. at p. 168, ll. 15-22.

1 The Commission, by Decision No. 72500, adopted Staff's proposed Order, with
2 an amendment that, while acknowledging waiver was an alternative way to proceed,
3 recognized energy produced at the RPG WTE facility as a pilot program pursuant to A.A.C.
4 R14-2-1802(D) and, initially, treating 90% of the total kWhs of energy derived from the RPG
5 WTE facility as being produced by an Eligible Renewable Energy Resource. The
6 Commission also approved the monitoring and reporting requirements recommended by
7 Staff.

8 **THE SIERRA CLUB'S ARGUMENTS WERE CONSIDERED**
9 **AND APPROPRIATELY REJECTED BY THE COMMISSION**

10 The Sierra Club contends 1) the RPG WTE Facility does not represent a new
11 technology,³⁷ 2) MSW is not a renewable energy resource,³⁸ 3) the assumptions of Staff
12 regarding the biogenic and nonbiogenic content of the MSW RPG will use are questionable,³⁹
13 4) Mohave has not shown "just cause" for a waiver;⁴⁰ 5) Mohave fails to demonstrate it
14 cannot comply with the renewable energy standard requirements in the absence of a waiver,⁴¹
15 and 6) the facility will adversely impact the environment by generating toxic emissions to air,
16 water and land, consuming water and reducing the amount of waste that will be recycled.⁴²
17 All of the Sierra Club's witnesses testifying on rehearing discussed one or more of these same
18 contentions. These are the same issues raised in the Sierra Club's Exceptions and by Ms.
19 Bahr when she testified during the Open Meeting Evidentiary Hearing.⁴³ The Commission
20

21 ³⁷ Bahr, S-8 at p. 2, l. 31.

22 ³⁸ Id. at ll. 35-37.

23 ³⁹ Id. at ll. 37-39.

24 ⁴⁰ Id. at ll. 39-40. Note A.A.C. R14-2-1816(A) actually uses the term "good cause" not "just cause".

25 ⁴¹ Id. at p. 4, ll. 8-9

⁴² Id. at p. 5, ll. 1-5.

⁴³ OMEH Tr. at p. 212, l. 22 – p. 213, l. 20; RH Tr. at p. 109, l. 15 – p. 110, l. 19.

1 has already considered and found these contentions unpersuasive. The Sierra Club has not
2 demonstrated by clear and satisfactory evidence that the Decision is unjust or unwarranted or
3 should now be changed.

4 **THE REST RULES ARE NOT LIMITED TO NEW TECHNOLOGIES**

5 Neither the waiver nor pilot program provision of the REST Rules is limited to
6 considering “new” technologies. Ms. Bahr so admits in her testimony.⁴⁴ This is not now and
7 never was a relevant issue.⁴⁵

8 **MSW IS A RENEWABLE RESOURCE**

9 As previously noted, the REST Rules already recognize use of MSW (and not
10 just its biogenic component) as an Eligible Renewable Resource when used in conjunction
11 with a Biogas Electric Generator or a Landfill Gas Generator.⁴⁶ Staff has recommended that
12 only the biogenic portion of the MSW be treated as a renewable resource when granting a
13 waiver or pilot program designation for the RPG WTE facility.⁴⁷ Mohave and RPG believe it
14 appropriate all MSW be recognized as a renewable energy resource, but recognize that the
15 Staff’s recommendation is consistent with the treatment of MSW by the U.S. Department of
16 Energy, the Energy Information Administration (“EIA”), and by Connecticut, the District of
17 Columbia, Maryland, Massachusetts, New Jersey, Pennsylvania, the International Panel on
18 Climate Change (“IPCC”), by the European Commission and by the U.S. Environmental
19 Protection Agency (“EPA”).⁴⁸ It is also consistent with the existing definition of Renewable
20 Energy Resource contained in the REST Rules: ““Renewable Energy Resource” means an
21

22 ⁴⁴ RH Tr. at p. 142, ll. 12 -16.

23 ⁴⁵ Mr. Blendu does explain that the RPG WTE facility would be only the 2nd active facility to use bubbling bed
technology for refuse derived fuel. A-4 at p. 5, ll. 7-10.

24 ⁴⁶ A.A.C. R14-2-1802(A)(1) & (8).

25 ⁴⁷ Furrey, Exhibit S-1 at p.4, ll. 8-15.

⁴⁸ Id.

1 energy resource that is replaced rapidly by a natural, ongoing process and that is not nuclear
2 or fossil fuel.” Again the position of the Sierra Club is without merit. Importantly, the REST
3 Rules do not require that the energy resource be so-called “clean” energy or that its
4 production be carbon neutral. In fact, Staff demonstrates that many Eligible Renewable
5 Energy Resources, not just MSW, would not satisfy the Sierra Club’s concept of clean
6 energy.⁴⁹

7 **A 90% PERCENT LEVEL**
8 **OF RENEWABLE ENERGY CREDITS IS APPROPRIATE**

9 The Sierra Club did not challenge Staff’s methodology for analyzing the MSW
10 to conclude that between 85 and 95 percent of the energy produced by the RPG WTE facility
11 could come from biogenic (i.e., renewable) materials. Rather the Sierra Club challenges the
12 underlying composition of the MSW used for Staff’s analysis.

13 It was reasonable for Staff to perform its analysis based upon the composition
14 of MSW sampled from the area most likely to supply the WTE plant,⁵⁰ rather than relying
15 primarily on the 2003 Cascadia Study of the Phoenix area.⁵¹ The Cascadia Study
16 demonstrates that MSW composition can vary by area. Additionally, the Cascadia Study is
17 somewhat dated and does not reflect the impact of a material recycling facility (“MCF”) at
18 the WTE Facility. Moreover, RPG sampled 15,300 pounds of MSW,⁵² while the Cascadia
19 Study only examined 200 to 300 pounds of MSW per load.⁵³ Since RPG was securing its
20
21

22 _____
23 ⁴⁹ Furrey, Exhibit S-1 at p.3, l. 19 – p.4, l. 6; RH Tr. at p. 141, l. 12 – p.142, l. 3.

24 ⁵⁰ RH Tr. at p. 352, ll. 3-21.

25 ⁵¹ Exhibit SC-9.

⁵² RE-1 to Estes Rebuttal (Exhibit A-1).

⁵³ Id. at p. 6, second paragraph.

1 sample for the purpose of both preparing an Air Quality permit and for submittal to obtain
2 supplier performance commitments,⁵⁴ RPG was incented to secure a representative sample.

3 While Staff supports recognizing 75% of the kWhs as produced by an Eligible
4 Renewable Energy Resource, the Commission has determined the higher end of the band of
5 reasonableness calculated by Staff of 90% is more appropriate. As Mr. Blendu testified, if the
6 amount were reduced to 75%, it would result in the price of the electricity or remaining RECs
7 going up and be detrimental to the ratepayer.⁵⁵

8 **JUST CAUSE HAS BEEN DEMONSTRATED**

9 Just cause for granting a waiver was set forth in both the Staff Memorandum
10 and Decision No. 72500 and is summarized *supra* in setting forth the major determinations
11 contained in the Staff Memorandum.⁵⁶ There is no need to restate the good cause again.
12 Suffice it to say that the Application, Staff and the Decision all adequately demonstrate good
13 cause to grant the Application⁵⁷ and the Sierra Club has not presented clear and sufficient
14 evidence necessitating the Commission to change its Decision.

15 **THE REST RULES DO NOT REQUIRE MOHAVE TO DEMONSTRATE**

16 **LACK OF OTHER RENEWABLE RESOURCES OR INABILITY**

17 **TO MEET THE RENEWABLE STANDARDS**

18 Even Ms. Bahr acknowledges that the Sierra Club's contention that Mohave
19 must demonstrate an inability to meet the renewable energy standards through acquiring
20 currently approved Eligible Renewable Energy Resources has no basis in the REST Rules.⁵⁸

21 _____
⁵⁴ RH Tr. at p. 341, ll. 1-5.

22 ⁵⁵ OMEH Tr. at 317, ll. 19-24.

23 ⁵⁶ See pp. 3-5, *supra*.

24 ⁵⁷ Ms. Furrey also discusses "good cause" at RH Tr. at p.452, ll. 1-9; see also, OMEH Exhibit A-3 (Local
25 Government coalition for Renewable Energy, America's Need for Clean, Renewable energy: THE CASE FOR
WASTE-TO-ENERGY).

⁵⁸ RH Tr. at p. 136, l. 10 – p. 137, l. 2;

1 Moreover, by granting the Application the Commission is not agreeing that any portion of the
2 WTE Facility's output will even be included within Mohave's REST portfolio. Nor is the
3 Commission rendering any determination as to the prudence of any power agreement Mohave
4 might enter into with RPG. These items will be decided in separate Commission proceedings
5 such as the annual REST plan review.

6 **WTE FACILITIES PROVIDE ENVIRONMENTAL BENEFITS**
7 **VERSUS LANDFILLING AND ARE HEAVILY REGULATED**
8 **TO PROTECT AIR QUALITY AND PUBLIC SAFETY**

9 Recognizing the REST Rules provide for wavier and pilot programs and that the
10 Staff's Memorandum was well researched and documented, the Sierra Club claims
11 environmental armageddon will befall Arizona if the Application is approved. The claims are
12 "misleading and based largely on outdated and/or unrepresentative data."⁵⁹

13 During the Open Meeting Evidentiary Hearing, Ms. Crumbaker outlined the
14 permitting process applicable to WTE facilities seeking to locate in Maricopa County.⁶⁰ Mr.
15 Estes, a Principal Environmental Scientist with URS Corporation retained by RPG to assist in
16 the air quality permitting process, explains the permitting process, including public
17 participation and compliance, applicable to the RPG WTE facility.⁶¹ He explains:

18
19 The entire process of developing and enforcing air quality
20 permitting and pollution control requirements is intended to
21 limit emissions so as to protect air quality and in so doing to
22 protect the environment and the public's health and safety.
23 The requirements applicable to RPG's planned W-T-E facility
24 are significant. The compliance requirements are designed to
25 ensure the permit and pollution control requirements are not
only installed, but maintained during the facility's operation.

24 ⁵⁹ Profs. Themelis and Castaldi (Exhibit A-2) at p. 2, ll. 14-15.

25 ⁶⁰ OMEH at p. 171, l. 22 – p. 174, l. 7.

⁶¹ Estes (Exhibit A-1) at p. 4, l. 17 – p. 8, l. 24.

1 ...

2
3 Notice will be provided to the public and an opportunity to
4 file comments will be provided. If deemed appropriate by the
5 regulatory agency, public hearings can be required. In my
6 opinion, there will be a full and fair opportunity to raise and
7 address legitimate air quality concerns relating to the
8 operation of RPG's planned W-T-E facility through the
9 permitting process.⁶²

10 The boiler emissions from RPG's WTE facility will be "treated with a series of
11 pollution control processes and equipment including selective non-catalytic reduction to
12 reduce nitrogen oxides, a spray dryer to reduce acid gases and mists, and a fabric filter
13 baghouse to collect particulate matter."⁶³

14 In fact, as a new plant, the RPG WTE facility will be subject to subpart Eb of
15 the Federal New Source Performance Standards, which establish: a) enforceable emission
16 limitations on opacity, particulate matter, cadmium, lead, mercury, sulfuric acid, hydrogen
17 chloride, dioxin/furans, nitrogen oxides and carbon monoxide; b) percent removals
18 requirements for mercury and acid gas emissions; and c) facility pre-construction
19 requirements including a siting plan and a waste management plan.⁶⁴ The RPG WTE facility
20 will also be subject to the National Emission Standards for Hazardous Air Pollutants
21 (NESHAP),⁶⁵ which only recently went into effect and establish: a) emission limits for
22 particulate matter, carbon monoxide and mercury; b) specific operating requirements to
23 control the foregoing emissions; and c) requirements for minimizing of boiler start-ups and

23 ⁶² Id. at p. 9, ll. 6-18

24 ⁶³ Id. at p. 4, ll. 12-15.

25 ⁶⁴ Id. at p. 5, l. 17 – p. 6, l. 6.

⁶⁵ See, 49 CFR 63, subpart JJJJJ

1 continuing to send to landfills the unrecycled MSW that would be sorted and recycled, with
2 the remainder turned into energy, at the WTE facility. The various permitting requirements
3 for the WTE facility will protect air quality, regulate emissions and provide the public with
4 additional opportunities to participate in the approval process. While the Sierra Club
5 contends that some of the those potential benefits are overstated and that potential detriments
6 are understated, they have not demonstrated by clear and satisfactory evidence that the
7 Decision is unjust, unwarranted or should now be changed. Decision No. 72500 should be
8 summarily affirmed.

9
10 DATED this 10th day of January, 2012.

11 CURTIS, GOODWIN, SULLIVAN,
12 UDALL & SCHWAB, P.L.C.

13
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