ORIGINAL

NEW APPLICATION

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BEFORE THE ARIZONA CORPORATION CO

Arizona Corporation Commission
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COMMISSIONERS
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E-01049A-11-0054

IN THE MATTER OF THE APPLICATION OF MORENCI WATER & ELECTRIC COMPANY – ELECTRIC DIVISION – FOR APPROVAL OF ITS 2011-12 ENERGY EFFICIENCY IMPLEMENTATION PLAN AND REQUEST FOR PARTIAL WAIVERS	DOCKET NO. E-01049A-11-_____

APPLICATION FOR APPROVAL AND REQUEST FOR PARTIAL WAIVERS

The Morenci Water and Electric Company ("MWE") hereby submits its proposed 2011-12 Energy Efficiency Implementation Plan ("2011-12 EEIP") in compliance with the Arizona Corporation Commission's Energy Efficiency Rules ("EE Rules") – A.A.C. R14-2-2401 through R14-2-2419. MWE requests approval of its proposed 2011-12 EEIP, which is attached to this pleading as Exhibit 1. The 2011-12 EEIP maximizes the potential for energy efficiency within its service territory, based on the specific demographics and characteristics within its service territory.

MWE further requests a partial waiver: (1) excluding Freeport-McMoRan Copper & Gold, Inc. ("FMI") mining operations load at Morenci and Safford from the calculation of the Energy Efficiency Standard; (2) excluding MWE from the EE Rules standards for non-mining load to the extent that MWE fails to meet those standards given the unique aspects of MWE's service territory that will be explained in the following section; and (3) excusing MWE from providing the information required in A.A.C R14-2-2407 and R14-2-2409 (which require extensive calculations and analysis) due to its small staff and lack of expertise and personnel – and instead allowed it to provide information similar to what is included within its 2011-12 EEIP.

I. INTRODUCTION.

MWE's load profile is well-documented. More than 98 percent of its load is mining load due to energy sales for FMI mining operations at Morenci and Safford. Electricity represents a major

cost input to mining operations at both locations. In terms of number of customers, MWE is a small electric utility that serves approximately 2,373 non-mining customers in and around the town of Morenci, Arizona. MWE serves the FMI Morenci mine per an agreement approved in Decision No. 66937 (April 21, 2004). MWE also serves the mine owned and operated by FMI Safford, Inc. as approved in Decision Nos. 69200 and 69211 (December 21, 2006). MWE's customer base consists of approximately 2,104 residential customers and 269 non-residential customers with demand under 3 MW. MWE's non-mining customers are predominantly residential. Currently, approximately 1,171 of MWE's residential customers are renters within MWE's town-site. Further, the mining operations at Morenci and Safford are the only customers with demand over 3 MW each month. Presently, MWE owns no generation and procures all of its power from the wholesale market to meet load.

II. PARTIAL WAIVER REQUEST.

MWE's request for a partial waiver consists of three components, which are detailed in the following paragraphs:

1. Excluding Mining Load.

MWE requests to exclude mining load from the calculation of the Energy Efficiency Standards under the Energy Efficiency Rules. Electricity is a major cost input to mining operations; consequently, mining companies have every incentive to make those operations as energy efficient as possible.[1] But the fact remains that those mining operations require a significant amount of energy to operate both now and in the future. Further, since mining operations have a high load factor (meaning the mines are operable at a level capacity 24 hours a day and seven days a week) there is not much opportunity for peak load reduction. Based on these factors, MWE believes excluding mining load is reasonable and appropriate. MWE cannot meet the proposed energy efficiency standards if mining load is included in determining its energy efficiency requirements.

[1] MWE details in its plan an example of how mining operations are seeking to be as efficient as possible – through the development of a Sulfuric Acid Plant (that MWE believes is a combined heat and power facility as defined in the EE Rules) at the Safford mine-site that will produce excess power available for mining operations.

2. Excluding MWE from the EE Rules standards for non-mining load.

The unique factors within MWE's service territory will make it extremely difficult to meet the EE Rules standards for non-mining load. There is little growth in MWE's service territory. Consequently, programs for new housing and new construction are not applicable in MWE's service territory. Further, many of its existing customers do not have Heating, Ventilation and Air Conditioning ("HVAC") units or pools (let alone pool pumps). Many of the programs offered by the large Arizona electric utilities to existing customers are to address load from use of HVAC and pool pumps, which are the typical large sources of residential usage. These programs would not be successful for MWE. The Company has sought to put together a portfolio of programs that would be attractive to its customers and likely to have the best chance of success. But there are not many programs that would be successful within MWE's service territory.

MWE believes its portfolio of programs proposed here will maximize the potential for energy efficiency within its service territory – and result in savings for its customers. Even so, MWE is concerned that it will very likely not be able to meet the standards within the EE Rules *even if* the mining load is excluded from the requirements. The specific demographics and characteristics present in MWE's service territory make it highly unlikely *any* portfolio of programs will result in enough reduced consumption to meet the aggressive standards put forth in the EE Rules.

3. Excusing MWE from the reporting requirements under R14-2-2407 and R14-2-2409.

Finally, MWE has a small administrative staff and limited resources, and no personnel with the expertise to conduct the extensive technical calculations and analysis required in A.A.C R14-2-2407 and R14-2-2409. The Company would have to expend significant expense to retain qualified consultants able to provide all of the information required in those regulations. The Company is able to provide the information similar to what it has included in its 2011-12 EEIP, but lacks the expertise to make more extensive calculations and analyses in reports. While MWE will make attempts to provide as much information as it can, the Company requests that its reporting requirements be more streamlined – and that it be required to provide information similar to what was provided in its

proposed plan.

In consideration for these waivers, MWE notes that it is *not seeking any performance incentive* to implement these programs. Further, MWE is seeking approval of a set amount from mining operations at both Morenci and Safford to fund programs geared towards MWE's residential customers. This will reduce the amount of funding necessary from non-mining customers. Considering only funding obtained from non-mining customers, and given MWE's cost-benefit analysis, MWE believes its programs and portfolio will be cost-effective.

III. ENERGY EFFICIENCY SURCHARGE.

MWE's 2011-12 EEIP details the amount of kWh savings it believes it could obtain with its program portfolio, the savings for non-mining customers, budget, and descriptions for each individual program – as well as further details on why the requested waivers are reasonable and appropriate for MWE.

MWE proposes an Energy Efficiency Surcharge ("EES") to recover the costs associated with its 2011-12 EEIP. The EES is designed to recover costs in the same year in which funds are expended and based upon the energy efficiency budget included in this plan – which assumes that MWE's waiver requests are granted. MWE proposes to roll over into subsequent years any funds not expended in 2011. MWE proposes to have the rates and charges for the EES in effect for the two years the plan is effective. MWE is proposing the following EES: (1) $0.000245 per kWh per month for all residential and non-mining non-residential customers; and (2) $650 per month for mining operations at Safford and Morenci each. For the average residential customer (using the average of 595 kWh per month) this will result in an EES of equal to approximately $0.15 per month. MWE determined the amounts to be charge to mining operations based on what it would take to make its portfolio (and most of the programs within that portfolio) cost-effective based on its understanding of the Societal Cost Test. MWE's proposed EES tariff is attached to this pleading as Exhibit 2.

IV. CONCLUSION.

MWE commits to working with the Commission and intends to make best efforts to maximize the potential for energy efficiency within its service territory. MWE therefore requests that

the Commission approve its 2011-12 EEIP, grant the partial waivers as detailed in this pleading, and approve the EES.

RESPECTFULLY SUBMITTED this 31st day of January, 2011.

MORENCI WATER AND ELECTRIC COMPANY

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Exhibit

"1"

MORENCI WATER & ELECTRIC COMPANY

ENERGY EFFICIENCY IMPLEMENTATION PLAN FOR 2011 TO 2012

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BACKGROUND

INTRODUCTION

In Decision No. 71819 (August 10, 2010), the Arizona Corporation Commission approved the Energy Efficiency Rules ("EE Rules"). The Arizona Attorney General's Office certified the EE Rules on November 1, 2010. The effective date of the EE Rules, codified at A.A.C. R14-2-2401 through R14-2-2419, is December 31, 2010. In accordance with those rules, Morenci Water & Electric Company ("MWE") is filing its initial Energy Efficiency Implementation Plan for 2011 through 2012 (hereinafter referred to as MWE's "2011-12 EEIP").[1]

MWE requests approval of its 2011-12 EEIP. The plan consists of four individual programs. These programs were derived from existing programs approved for Arizona Public Service Company ("APS"), Tucson Electric Power Company ("TEP"), and UNS Electric, Inc. ("UNS Electric"), but tailored to meet the unique nature of MWE's service territory and customer profile. Most MW&E customers have swamp coolers instead of refrigerated air conditioning. All of MW&E service territory has natural gas service from Southwest Gas Corporation and most houses have gas space heating and gas water heating. Further, MWE's 2011-12 EEIP is a simplified portfolio of programs designed so that MWE can effectively administrate those programs and have the best opportunity to maximize reduced energy consumption within its service territory – resulting in savings for its residential customers and non-residential customers fewer than 3 megawatts (MW).

Waiver Request

MWE is requesting under A.A.C. R14-2-2419 to exclude Freeport McMoRan Copper & Gold Morenci, Inc. (FMI) mining operations load at Morenci and Safford from the calculation of the Energy Efficiency Standards under A.A.C. R14-2-2404. MWE's load profile is well-documented. More than 98 percent of its load is mining load due to

[1] According to AAC R14-2-2405, affected utilities must file their initial implementation plans within 30 days of the effective date of the rules. Consequently, MWE has filed its initial EEIP on January 31, 2011 rather than June 1, 2011.

energy sales for FMI mining operations at Morenci and Safford. Electricity represents a major cost input to mining operations at both locations; therefore there is already every incentive to make those operations as efficient as possible.

Further, there is simply not much opportunity to reduce energy consumption for mining operations beyond what is already being done. The mining operations at Morenci and at Safford require a significant amount of energy in order to operate both now and in the future. MWE cannot meet the proposed energy efficiency standards if mining operations continue. Those operations constitute the key economic driver for Greenlee and Graham Counties – producing copper cathode. Since mining operations have a high load factor (meaning the mines are operable at a level capacity 24 hours a day and seven days a week) there is not much opportunity for peak load reduction.

MWE believes under these circumstances a waiver to exclude energy sales to FMI mining operations at Morenci and Safford from the calculation of energy efficiency standards is appropriate and necessary. FMI independently examines means to make mining operations at both locations as efficient as possible through its Safford Technology Center. For instance, FMI has developed a Sulfuric Acid Plant (a combined heat and power facility) at the Safford mine-site that will produce excess power available for mining operations. The following section describes that plant and why it would qualify as a combined heat and power facility under the EE Rules.

Further, MWE has a small administrative staff and limited resources – and it currently lacks the staffing levels to all of the information required in A.A.C. R14-2-2407 and R14-2-2409. While MWE will make attempts to provide as much information as possible, MWE requests more streamlined reporting requirements from what is mandatory under those regulations.

Finally, there is little growth in MWE's service territory. Many of its existing customers do not have Heating, Ventilation and Air Conditioning ("HVAC") units or pool pumps. Many of the programs offered by APS or TEP to existing customers would not be successful

in MWE's service territory because they involve new home construction, HVAC or pool pumps. Therefore, there is a limited portfolio of programs that could be successfully adopted for MWE's service territory. As a result, it is unlikely the programs that can be successfully implemented in MWE's service territory will result in enough reduced consumption to meet the aggressive standards put forth in the EE Rules. For this reason, MWE requests a further waiver to the extent that it falls short of those standards. MWE believes, however, that its portfolio of programs will maximize the potential for energy efficiency within its service territory. This will result in savings for its customers.

MWE notes that it is not seeking any performance incentive to implement these programs. And it is also seeking approval of a fixed charge from mining operations at both Morenci and Safford to fund programs geared toward MWE's residential and non-mining commercial customers. In other words, none of this funding will go towards efficiency measures for mining operations. This will reduce the amount of funding necessary from non-mining customers. Considering only funding obtained from non-mining customers, MWE's portfolio will be cost-effective.

Safford Sulfuric Acid Plant

FMI is constructing a Sulfuric Acid Plant at the Safford mine-site. The plant will be located behind the meter. It will use steam generated from heating sulfur to produce up to 17 MW of electric generation. Of that amount, 12 MW of capacity will be available for mining operations; 5.0 MW of capacity will be used for the sulfuric acid plant operations. The plant will require up to 4.0 MW of capacity at start-up, but will be self-powering thereafter. It is estimated that the plant can produce up to 94,608,000 kilowatt hours (kWh) of excess power annually. This plant is expected to come on-line in mid-2011.

The plant is designed to convert mined sulfur into sulfuric acid. Sulfur feeds into a furnace, which then is oxidized to produce sulfur dioxide. This gas is subsequently transported into a waste heat boiler – where it combines with steam and becomes saturated. The saturated steam is the transported to a super-heater; the super-heated steam runs the turbine generator that produces electricity. The sulfur dioxide gas

then travels through a converter – producin g sulfuric acid. This sulfuric acid will then be used for mining operations.

MWE believes that this qualifies as a combined heat and power facility under the definition of the energy efficiency rules[2] – because it utilizes useful process heat to produce electricity and require no additional power from conventional sources besides that used for start up. In other words, the plant will be entirely self-sufficient from a power perspective (after start-up); and up to 12 MW capacity will be consumed by the FMI Safford mine site and used for mining operations instead of electricity generated from conventional sources.

MWE provides this information to illustrate an additional means FMI is taking at the Safford location to maximize efficient use of energy and lessen dependence on conventional sources of power. MWE notes no ratepayer funds will be used towards the construction, operation and maintenance of this plant. In short, even if a waiver is granted, MWE believes FMI will continue to seek efficiencies for its mining operations because it is in the mines' best interest to do so.

PLAN PORTFOLIO, COSTS, SAVINGS AND NET BENEFITS

MWE reviewed programs at APS and TEP to develop with programs it could offer customers in its service territory. As a result, MWE is proposing four Demand Side Management ("DSM") programs as part of its 2011-12 EEIP:

- Compact Fluorescent Lamp ("CFL") Program
- Appliance Recycling Program
- Refrigerator Replacement Program
- Education & Outreach Program

These programs are designed to reduce the use of energy by encouraging customers to implement certain energy-efficient measures, services or practices. The programs will also apply to customers in MWE-owned housing, because while the housing is mine-owned, the resident is responsible for the electric utility bill.

[2] A.A.C. R14-2-2401.4.

Therefore, the resident benefits from efficiency measures that reduce that bill. As explained above, mining operations is providing some of the funding for these programs.

These programs were selected because MWE believes they have the best chance to be successful in MWE's service territory, given the unique nature of MWE's customer profile. Programs geared toward new home construction, for example, would not be successful because there is very little growth within MWE's service territory at this time. Further, programs addressing HVAC consumption or pool pumps would likely be unsuccessful based on the lack of either within MWE's service territory. Therefore, MWE derived programs from those that are geared towards existing homes, appliances and CFLs due to them having the best chance of success (by reducing energy consumption and aiding the customers in saving money).

These programs were also selected to try and meet the standards put forth in the EE Rules for MWE for 2011 and 2012. According to the EE Rules at R14-2-2404, the Cumulative Annual Energy Savings must equal to 1.25% of annual retail sales in 2010 for 2011, and 3.00% of annual retail sales in 2011 for 2012. In 2009, the energy sales to MWE customers (excluding sales to mining operations at Morenci and Safford) equaled 28,787,858 kWh according to MWE's 2009 Utilities Division Annual Report. Assuming retail sales are the same for both 2010 and 2011, MWE will have to meet the following targets to meet the standards in the EE Rules:

Year	kWh Savings
2011	359,848 kWh
2012	863,635 kWh

MWE, however, does not anticipate meeting these goals. To do so, MWE would have to offer successful programs to reduce energy usage for new construction, HVAC and pool pump savings. But none of those are programs likely to be successful in MWE's service territory. MWE has little to no growth in its service territory. A majority of MWE's customers use evaporative cooling and do not have pools. Therefore, those types of programs offered by APS and TEP in their service territories would not be effective in MWE's service territory. Further, any additional programs MWE could

possibly offer would fall substantially short of being cost-effective – even according to the Societal Cost test ("SC Test"). Even so, MWE believes its program offerings will maximize the potential for energy efficiency savings in its service territory, and that it the following kWh savings shown below are obtainable:

Year	kWh Savings
2011	91,563 kWh
2012	184,791 kWh

Also, because MWE's cost for fuel and purchase power is low (due to how it is able to take advantage of power procured for the mining operations in Morenci), MWE's avoided cost is less and the magnitude of the benefit to customers per-kWh used is less pronounced. This impacts the cost-effectiveness of the programs – as measured under the Total Resource Cost test ("TRC Test") and the SC Test.

The kWh savings is based on anticipated savings from each of the following programs:

Program	**kWh Savings 2011**	**kWh Savings 2012**
CFL	54,428	110,520
Appliance Recycling	21,220	42,440
Refrigerator Replacement	15,915	31,830
Education & Outreach	N/A	N/A
TOTAL	**91,563**	**184,791**

MWE's budget for its four programs is approximately $23,000 (in 2011) and $23,100 (in 2012). Since MWE's has no previous experience with these types of programs, this budget is considered preliminary. Even so, MWE has proposed a surcharge designed to recover the estimated budget. More details about the proposed surcharge are provided later in this section. MWE's Energy Efficiency Implementation Budget is detailed below.

Regarding benefits, MWE's Energy Charge per kWh is currently $.1015 per kWh (including a base cost of purchase power of $.07522 per kWh). MWE, however, has a purchase power and fuel adjustor rate of $(0.051) per kWh. Therefore, customers pay about $.0505 per kWh. Based on these amounts MWE anticipates the following customer savings:

Year	Savings
2011	$4,623.93
2012	$9,331.95

The actual cost of purchase power for MWE equals $0.047619048 per kWh as of November 2010. Therefore, MWE anticipates the avoided costs would equal the following for 2011 and 2012:

Year	Utility Avoided Cost for Non-Mining Customers
2011	$4,360.14
2012	$8,799.57

In addition, MWE anticipates the following environmental benefits, based on the type of purchased power most likely to be displaced by the programs within its 2011-12 EEIP assuming the following values:

Environmental Factor	**Value**	**Units**
SOx	0.00445	lbs/MWh
NOx	0.08455	lbs/MWh
Water	317	Gallons/MWh (utility water savings only)

From APS' Environmental Benefits listed on page 32 in its 2011 Demand Side Management Implementation Plan for 2011.

Projected Environmental Benefits, MWE's 2011-12 EEIP

Water Savings	87,605	Gallons
SOx	1.23	lbs
NOx	23.37	lbs

MWE further assumes that monetization of valued water savings is approximately $0.0040 per gallon – taken from APS' 2011 Plan.

MWE analyzed the cost-effectiveness of each program and the entire portfolio using the TRC Test and SC Test, using the following assumptions:

Program Term	2 years
Energy ($/kWh)	$0.047619048
TRC Discount Rate	8.50%
Social Discount Rate	5.00%
Water Savings	$0.0040 per gallon

MWE incorporated many of these assumptions from data contained within programs for TEP and APS.

Only the CFL program would be cost-effective when considering all of the funding from all customers. But when excluding the funding from mining operations, the portfolio and all of the programs (excluding education and outreach) are cost-effective under the SC Test. The following table shows the total cost-effectiveness of MWE's portfolio when excluding consideration of funding from mining operations:

Total Resource Cost Test Portfolio Benefits	$11,493.41
Total Resource Cost Portfolio Costs	$13,191.19
Total Resource Cost Net Benefits	($1,697.78)
Societal Cost Test Portfolio Benefits	$12,133.99
Societal Cost Test Portfolio Costs	$13,850.34
Societal Cost Test Portfolio Net Benefits	($1,716.35)
Portfolio Total Resource Cost Test	0.87
Portfolio Societal Cost Test	0.90

Program	Societal Cost Test
CFL Program	1.07
Appliance Recycling	1.03
Refrigerator Replacement	1.01
Education & Outreach	N/A

Funding from mining operations is excluded from the Societal Cost test determinations for the Appliance Recycling and Refrigerator Replacement Programs.

BASELINE INFORMATION

MWE has not implemented any formal DSM programs to date within its service territory. Further, MWE's residential and non-residential customer base (in terms of number of customers) is very small. Its service territory has experienced very little growth in the number of residential and non-residential customers over the past five years.

In terms of estimated demand and energy in the absence of any energy efficiency or demand side management programs, MWE believes that retail energy sales for 2009 (excluding sales to FMI Morenci and FMI Safford) is a reasonably accurate measure of energy sales through 2012. Therefore, MWE estimates retail energy sales to equal approximately 28,787,000 kWh annually through 2012. Maximum peak load for customers excluding FMI Morenci and FMI Safford is estimated to be approximately 5 MW (out of a total of 256 MW) under a baseline condition.

MWE does not believe a baseline study would be an efficient use of resources – since there are limited (if any) new market opportunities beyond what is being offered.

BUDGET

MWE's budget projections are based on the programs it is proposing as part of its 2011-12 EEIP. MWE reviewed public information available as to other utilities' budgets for their respective DSM and Energy Efficiency programs – while specifically tailoring those programs to be successful within MWE's unique service territory. MWE believes its programs have the potential to maximize energy savings within its service territory – including cumulative savings of over 91 MW (in 2011) and over 184 MW (in 2012).

More detailed budgets are provided in the specific program descriptions that follow this introduction:

Program	**2011**	**2012**
CFL Program	$3,700	$3,800
Appliance Recycling Program	$1,750	$1,750
Refrigerator Replacement Program	$16,500	$16,500
Education and Outreach	$1,050	$1,050
TOTAL	**$23,000**	**$23,100**

The majority of the programs are designed to provide direct benefits to customers. MWE proposes to minimize the amounts necessary for implementation and administration, and to only include budgeted amounts for tasks and functions necessary to carry out the programs. MWE does not anticipate customers electing to Self Direct through MWE. As explained above, both the mining operations at Morenci and Safford have every incentive to reduce energy use and have taken several steps to do so – independent of any programs MWE would implement.

PERFORMANCE INCENTIVES

MWE is not proposing any performance incentives for its 2011-12 EEIP. MWE may determine to propose performance incentives in future years, but is not seeking them here in consideration for the waiver requests.

ENERGY EFFICIENCY SURCHARGE

MWE proposes an Energy Efficiency Surcharge ("EES") to recover the costs associated with its 2011-2012 EEIP. The EES is designed to recover costs in the same year in which funds are expended and based upon the energy efficiency budget included in this plan. MWE proposes to roll over into subsequent years any funds not expended in 2011. MWE proposes to have the rates and charges for the EES in effect for the two years its plan is effective.

Even though MWE is requesting to waive the energy sales to both FMI Morenci and FMI Safford, both entities will be assessed a surcharge under MWE's proposal. The per-kWh surcharge rate for residential and non-mining non-residential customers, along with the monthly set surcharges to the mines, is designed to recover the budgeted amount for MWE's 2011-12 EEIP.

MWE proposes the following for its EES:

- For all residential and non-residential customers besides FMI Morenci and FMI Safford: $0.000245 per kWh per month.
- For mining operations at Safford and Morenci: $650 per month each.

MWE determined the amounts to be charged to mining operations based on what it would take to make three of its DSM programs at or very near cost-effective under the SC Test. These programs are the Appliance Recycling and Refrigerator Replacement Programs. In this way, the per-kWh charge to other customers can be reduced to manageable levels for those customers.

Under this proposal, the following amounts are likely to be collected annually from the EES towards the 2011-12 EEIP:

Customer Class	Avg. kWh Use	Rate	Estimated Monthly Total Collected (aggregate)	Estimated Annual Amount Collected (aggregate)	% of MWE's 2011 EEIP Budget
Residential	595	$.000245	$315.60 ($.15 * 2,104 customers)	$3,787.20	16.37%
Non-Residential	4,723	$.000245	$312.04 ($1.16 * 269 customers)	$3,744.48	16.19%
FMI Morenci and FMI Safford	N/A	$650 per month each	$1,300 ($650 * 2 customers)	$15,600	67.44%
TOTAL				**$23,131.68**	**100%**

MWE proposes that the EES become effective when its 2011-12 EEIP is approved.

MWE PROGRAMS FOR 2011 AND 2012

1. COMPACT FLUORESCENT LAMP ("CFL") PROGRAM

Purpose

The purpose of the CFL Program is to provide one of the simplest and easiest ways customers within MWE's service territory can reduce energy use. MWE intends to increase the availability and information regarding the use of CFLs by customers as one way to reduce energy consumption and increase efficiency of energy use.

The CFL Program goals are to: (1) increase the availability of CFLs for MWE customers; (2) promote the use and acceptance of CFLs (and other energy efficiency lighting products when appropriate); and (3) provide information regarding the benefits of using CFLs to reduce peak demand and overall energy consumption for its residential and non-residential customers.

Program Description

The program will focus on expanding the availability of CFLs within its service territory. Even so, the program will not exclude other energy efficient Energy Star lighting products.

MWE will solicit discount pricing from manufacturers and distribute qualifying products through retailers within MWE's service territory. Customers will be made aware of the availability of CFLs being offered for purchase by non-residential customers within MWE's service territory. While MWE's service territory lacks many of the participating retailers within other utilities' service territories, there are some retailers that offer lighting products that are customers of MWE. MWE will work with those retailers and manufacturers to develop an agreement where discount pricing will be passed on to consumers.

This program will be available to all MWE customers, and that both MWE's residential and non-residential customers will participate. Because MWE's service territory is relatively isolated from other

populated areas, MWE does not anticipate significant participation by non-MWE customers.

MWE anticipates the following products and services through the program will include:

- Discount pricing of CFL products including screw-in spiral CFLs, replacements for standard base incandescent lamps, spot and perhaps flood CFLs and dimming CFLs.
- Identification of participating retailers within MWE's service territory.
- Educational materials providing information to consumers and retailers about the benefits of using CFLs and other energy efficient lighting products.

While MWE understands the market for CFLs has matured in the last few years, its service territory has likely not reached the same level of maturity. MWE believes that there is still considerable potential that its CFL program will enhance the use of energy efficient lighting significantly beyond its current level.

Implementation

MWE will solicit participating by lighting manufacturers in the program. MWE will work directly to ensure Program delivery from manufacturers to retailers. MWE will solicit discount pricing as well as coordinate with the eligible retailers within its service territory. Because of its small residential and non-residential customer base, MWE may opt to utilize a third-party implementation contractor if feasible.

To the extent feasible, MWE will work with the Arizona Energy Office to provide training, education and awareness.

Marketing and Communications

MWE will advertise in the local newspaper and possibly on local radio regarding the benefits of energy efficient lighting in general and CFLs in particular. MWE will also cooperate and assist in any point-of-sale advertising at retailers within its service territory. It will further provide information regarding the Energy Star label, and the value of Energy Star lighting. MWE will also have general information regarding the benefits of energy efficiency lighting to customers – including information how CFLs can reduce customer energy bills, provide equal or better lighting output and quality, and benefit the environment. Finally, MWE will provide information regarding the safe and proper disposal of CFLs.

Program Implementation Schedule

MWE believes it can implement the program three to six months after it receives approval.

Measurement and Evaluation

MWE will collect necessary data to track how the program is meeting its stated goals and objectives. This includes the following data:

- The number of CFLs purchased through the program and provided to each participating retailer – organized by type.
- The number of CFLs subsequently purchased by customers – organized by type.

MWE will use this data and use best efforts to track the following information:

- Aggregate savings in kW (capacity) and kWh (energy).
- Environmental benefits, including reduced emissions and water savings.
- Incremental benefits and net benefits, in dollars.

- Costs incurred for the program – disaggregated by type of cost (e.g. costs for the CFLs, administrative costs, monitoring and evaluating).

MWE will evaluate the progress of this program toward meeting energy efficiency goals, including noting any problems, the level of customer participation, and when modifications to the program are warranted or justified.

Program Budget

Table 1 – 2011 to 2012 Budget

Year	2011	2012
Total Budget	$3,700	$3,800
Incentives (Discount Pricing)	$2,500	$2,600
Administrative Costs	$1,200	$1,200
Administration as a % of Total Budget	32.4%	31.6%

Estimated Energy Savings

Table 2 provides the assumed base lamp wattage and corresponding CFL wattages as recommended by manufacturers. This table also provides the expected demand and energy savings:

Table 2 – Estimated Energy Savings from CFLs

Fixture Type	ES Integral CFL			
Incandescent Fixture Watt Range	40	60	75	100
CFL Fixture Watt Range	9	14	19	23
Energy Saved based on 10,000 hr rated life	310 kWh	460 kWh	560 kWh	770 kWh
Savings based on the replacement cost of incandescent bulbs	$2.96	$6.63	$4.63	$4.63

Sources: Kenneth Barbalace, Compact Fluorescent Lights (CFLs). EnvironmentalChemistry.com. April 18, 2007 at http://environmentalchemistry.com/yogi/environmental/200704compactfluorescentlights.html and the Life Cycle Cost Estimate CFL Calculator at www.energystar.gov.

Table 3 shows estimated energy savings from this Program for 2011 and 2012. Table 4 shows projected annual environmental benefits.

Table 3 – Projected Lamp Sales and Capacity and Energy Benefits

Year	2011	2012
Projected Lamp Sales	1,603	1,652
Non-mining peak savings (kW)	49.69	51.21
Cumulative Energy Savings (kWh)	54,428	110,520

*Assuming 100% lamp sale for a 9 Watt CFL bulb from Table 2. 310 kWh savings per bulb over life cycle of 9.13 years, which equals 33.954 kWh savings per bulb per year. For year 1 – times 1,603 bulbs equals 54,428 kWh in year one. For year 2 – times 1,652 bulbs equals 56,092 kWh in year two. Assuming each bulb is on 3 hours a day, 365 days a year.

MWE believes that CFL purchases will result in water savings and reductions in NOx and SOx if CFLs replaced incandescent bulbs. The following is its best estimate of savings:

Table 4 – Projected Environmental Benefits, 2011-2012

Water Savings	52,283	Gallons
SOx	0.73	lbs
NOx	13.94	lbs

Program Cost Effectiveness

MWE assessed the CFL Program using the TRC Test and the SC Test. MWE considered the following factors when determining the cost effectiveness of this program:

- Net demand and energy savings attributable to the program;
- Net incremental cost to the customer of purchasing qualifying products;
- TEP's Program administration costs;
- The present value of Program benefits including avoided costs over the life of the measures; and
- Lost revenues.

Table 5 – Cost-Effectiveness Analysis Assumptions

Program Term	2 years
Energy ($/kWh)	$0.047619048
TRC Discount Rate	8.50%
Social Discount Rate	5.00%
Water Savings	$0.0040 per gallon

MWE incorporated these assumptions from data contained within programs for TEP and APS.

Table 6 is the benefit/cost analysis for this Program.

Table 6 – Benefit/Cost Analysis Results Summary

Resource Cost Portfolio Benefit	$6,859.35
Resource Cost Portfolio Costs	$6,638.07
Resource Cost Net Benefits	$221.28
Societal Cost Test Portfolio Benefits	$7,451.13
Societal Cost Test Portfolio Costs	$6,970.52
Societal Cost Test Portfolio Net Benefits	$480.61
Total Resource Cost Test	1.03
Societal Cost Test	1.07

2. APPLIANCE RECYCLING PROGRAM

Purpose

The purpose of the Appliance Recycling Program is to provide a means for the removal of old or second refrigerators and freezers in households. MWE intends to implement use of an appliance recycling contractor to schedule pick-up appointments, appliance pick-up; and recycling services.

The Appliance Recycling Program goals are to: (1) reduce energy consumption; and (2) keep inefficient appliances out of the used market.

Program Description

The program will focus on providing a means for MWE customers to recycle appliances – particularly refrigerators and freezers. All residential and non-residential customers are eligible for this program.

MWE will offer, through its appliance recycling contractor, free pick-up and recycling of old or second operable refrigerators and freezers. These older refrigerators and freezers will be recycled in an environmentally safe manner. Further, as a means of additional incentive, customers will be offered a cash rebate of $30. MWE will make best efforts to use an Arizona recycling contractor, and use (if available) an Arizona recycling facility. Refrigerators and freezers will be recycled in accordance with established U.S. Environmental Protection Agency best practice industry standards; this includes proper disposal of those appliances with Clorofluorocarbons (CFCs).

Implementation

MWE will solicit an appliance recycling contractor to pick-up old and second refrigerators and freezers at least quarterly and deliver those appliances to a facility that will properly dispose of appliances in accordance with U.S. EPA best practice industry standards. MWE will

work with the contractor to ensure customer eligibility and facilitate the scheduling of pick-ups to properly dispose of and recycle turned-in appliances. MWE will provide payment of incentives for those customers who have had old or second appliances picked up by the appliance recycling contractor. Because of MWE's relatively small service territory and remote location, it does not expect any significant free rider or spillover issues.

Marketing and Communications

MWE will advertise in the local newspaper and possibly on local radio regarding the costs of operating second or older less efficient refrigerators and freezers. MWE will further provide education and promotional materials designed to inform customers about the benefits of recycling second refrigerators and freezers in particular – including materials from the EPA's new "Energy Star® Recycle My Old Fridge Campaign". MWE will provide information regarding the cost of operating second refrigerators and freezers and older more inefficient appliances, the benefits of replacement with Energy Star® qualified models, and the importance of proper disposal and recycling of older units.

Program Implementation Schedule

MWE believes it can implement the program three to six months after it receives approval. MWE will aim to serve up to 20 homes a year with this program.

Measurement and Evaluation

MWE will collect necessary data to track how the program is meeting its stated goals and objectives. This includes the following data:

- The number of refrigerators and freezers recycled through the program.
- The specifications of units recycled (if feasible) and the specifications of units replacing the recycled units.

MWE will use this data and use best efforts to track the following information:

- Aggregate savings in kW (capacity) and kWh (energy).
- Environmental benefits, including reduced emissions and water savings.
- Incremental benefits and net benefits, in dollars.
- Costs incurred for the program – disaggregated by type of cost (e.g. costs for the pickup and recycling of appliances, administrative costs, monitoring and evaluating).

MWE will evaluate the progress of this program toward meeting energy efficiency goals, including noting any problems, the level of customer participation, and when modifications to the program are warranted or justified.

Program Budget

Table 1 – 2011 to 2012 Budget

Year	2011	2012
Total Budget	$1,750	$1,750
Incentives (Discount Pricing)	$600	$600
Removal Costs	$1,000	$1,000
Administrative Costs	$150	$150
Administration as a % of Total Budget	8.6%	8.6%

Assuming $50 cost per removal as stated at http://www.epa.gov/ozone/title6/608/disposal/household.html. MWE estimates that the cost of removal is towards the high end given that MWE's service territory is remote.

Estimated Energy Savings

Total annual participation goals and demand and energy savings are present in Tables 2 and 3. MWE believes that up to 20 appliances annually will be recycled by the program.

Table 2 – Estimated Appliance Recycling Annual Energy and Demand Savings per Home

Measure	Refrigerators	Freezers
Net Annual kWh Savings per Unit with Losses	1,061	1,061
Net kW Savings per Unit with Losses	0.153	0.153

From APS' 2010 Energy Efficiency Implementation Plan – Appliance Recycling Program (July 15, 2009) at Table 3.

Table 3 – Estimated Appliance Recycling Program Estimated Energy and Demand Savings

Year	2011	2012
Number of expected participating units	20	20
Peak (kW)	3.06	6.12
Energy Savings (MWh) (cumulative)	21.22	42.44

Table 4 – Projected Environmental Benefits, 2011-2012

Water Savings	20,180	Gallons
SOx	0.283	Lbs
NOx	5.38	lbs

Program Cost Effectiveness

MWE assessed the Appliance Recycling Program using the TRC Test and the SC Test. MWE considered the following factors when determining the cost effectiveness of this program:

- Net demand and energy savings attributable to the program;
- Net incremental cost to the customer of purchasing qualifying products;
- MWE's Program administration costs;
- The present value of Program benefits including avoided costs over the life of the measures; and
- Lost revenues.

Table 5 – Cost-Effectiveness Analysis Assumptions

Program Term	2 years
Energy ($/kWh)	$0.047619048
TRC Discount Rate	8.50%
Social Discount Rate	5.00%
Water Savings	$0.0040 per gallon

MWE incorporated these assumptions from data contained within programs for TEP and APS.

Table 6 is the benefit/cost analysis for this Program. This program is not cost-effective if one factors in the entire cost of the program. But if one assumes that $250 is funded by mining operations, and excludes that from the program cost for purposes of the benefit/cost analysis, then the program is cost effective. Table 6 bases the Program cost at $1,500.

Table 6 – Benefit/Cost Analysis Results Summary

Resource Cost Portfolio Benefit	$2,648.02
Resource Cost Portfolio Costs	$2,656.67
Resource Cost Net Benefits	($8.65)
Societal Cost Test Portfolio Benefits	$2,876.14
Societal Cost Test Portfolio Costs	$2,789.12
Societal Cost Test Portfolio Net Benefits	$87.02
Total Resource Cost Test	1.00
Societal Cost Test	1.03

3. REFRIGERATOR REPLACEMENT PROGRAM

Purpose

For eligible customers MWE will replace up to 15 older refrigerator units with Energy Star® qualified refrigerators. MWE will select residential customers whose refrigerators are not Energy Star® qualified units for replacement.

The Refrigerator Replacement Program goal is to (1) lessen the amount of older inefficient refrigerators; and (2) replace those units with more efficient Energy Star® models.

Program Description

The program will focus on providing a means for all MWE customers to participate in energy efficiency by being eligible for a more energy efficient refrigerator. All residential customers are eligible to participate.

MWE will select up to 15 customers per year where an older non-efficient refrigerator will be replaced by an Energy Star® qualified refrigerator unit. MWE will seek to purchase, once a year, up to 15 new units in bulk from a local distributor for sale and delivery in bulk. MWE will arrange to pick-up and recycle, through its appliance recycling contractor, the older non-efficient units. These older refrigerators and freezers will be recycled in an environmentally safe manner. MWE will make best efforts to use an Arizona recycling contractor, and use (if available) an Arizona recycling facility. Refrigerators and freezers will be recycled in accordance with established U.S. Environmental Protection Agency best practice industry standards; this includes proper disposal of those appliances with CFCs.

Implementation

MWE will purchase up to 15 Energy Star® refrigerators from retail or wholesale establishments. MWE will notify up to 15 residential

customers annually that they are selected to have their older refrigerators replaced with a new Energy Star® model. Customers will be provided a description of the model replacing their older unit. MWE will supervise the replacement of the units and this will occur once per calendar year.

All residential customers are eligible for this program. MWE will utilize the appliance recycling contractor from its Appliance Recycling Program to pick-up the old refrigerators to be replaced as part of this program and deliver those appliances to a facility that will properly dispose of appliances in accordance with U.S. EPA best practice industry standards.

Marketing and Communications

MWE will notify eligible customers that their residence has been selected to have a new Energy Star® efficient refrigerator replacing an old unit in the residence. MWE will further provide education and promotional materials designed to inform customers about the benefits of Energy Star qualified models.

Program Implementation Schedule

MWE believes it can implement the program within 12 months after it receives approval. MWE believes it can serve up to 15 homes a year with this program.

Measurement and Evaluation

MWE will collect necessary data to track how the program is meeting its stated goals and objectives. This includes the following data:

- The number of older refrigerators replaced with new Energy Star® models.
- The specifications of units recycled and the specifications of units replacing the recycled units.

MWE will use this data and use best efforts to track the following information:

- Aggregate savings in kW (capacity) and kWh (energy).
- Environmental benefits, including reduced emissions and water savings.
- Incremental benefits and net benefits, in dollars.
- Costs incurred for the program – disaggregated by type of cost (e.g. costs for the pickup and recycling of appliances, administrative costs, monitoring and evaluating).

MWE will evaluate the progress of this program toward meeting energy efficiency goals, including noting any problems, the level of customer participation, and when modifications to the program are warranted or justified.

Program Budget

Table 1 – 2011 to 2012 Budget

Year	2011	2012
Total Budget	$16,500	$16,500
Cost of New Refrigerators	$15,000	$15,000
Administrative Costs	$1,500	$1,500
Administration as a % of Total Budget	9.09%	9.09%

Assumes the cost of an EnergyStar refrigerator is the Manufacturers Standard Retail Price (MSRP) of approximately $969 to $999 – for example for the GE® Energy Star® 21.0 Cubic Foot Top-Freezer Refrigerator Model #:GTL21KBXBS located at: http://products.geappliances.com/ApplProducts/Dispatcher?REQUEST=SpecPage&Sku=GTL21KBXBS.

Estimated Energy Savings

Total annual participation goals and demand and energy savings are present in Tables 2 and 3. MWE believes that it can replace up to 15 appliances annually through the program.

Table 2 – Estimated Appliance Recycling Annual Energy and Demand Savings per Home

Measure	Refrigerators
Net Annual kWh Savings per Unit with Losses	1,061
Net kW Savings per Unit with Losses	0.153

From APS' 2010 Energy Efficiency Implementation Plan – Appliance Recycling Program (July 15, 2009).

Table 3 – Est imated Appliance Recycling Program Estimated Energy and Demand Savings

Year	2011	2012
Number of expected participating units	15	15
Peak (kW)	2.30	4.60
Energy Savings (MWh) (cumulative)	15.92	31.83

Table 4 – Projected Environmental Benefits, 2011-2012

Water Savings	15,137	Gallons
SOx	0.212	Lbs
NOx	4.03	Lbs

Program Cost Effectiveness

MWE assessed the Refrigerator Replacement Program using the TRC Test and the SC Test. MWE considered the following factors when determining the cost effectiveness of this program:

- Net demand and energy savings attributable to the program;
- Net incremental cost to the customer of purchasing qualifying products;
- MWE's Program administration costs;
- The present value of Program benefits including avoided costs over the life of the measures; and
- Lost revenues.

Table 5 – Cost-Effectiveness Analysis Assumptions

Program Term	2 years
Energy ($/kWh)	$0.047619048
TRC Discount Rate	8.50%
Social Discount Rate	5.00%
Water Savings	$0.0040 per gallon

MWE incorporated these assumptions from data contained within programs for TEP and APS.

Table 6 is the benefit/cost analysis for this Program. This program is not cost-effective if one factors in the entire cost of the program. But if one assumes that all but $1,150 is paid for by mining customers, and if $1,150 is then used as the program cost, then this program is cost-effective considering funding from all non-mining customers within MWE's service territory. Table 6 bases the Program cost at $1,150.

Table 6 – Benefit/Cost Analysis Results Summary

Resource Cost Portfolio Benefit	$1,986.02
Resource Cost Portfolio Costs	$2,036.78
Resource Cost Net Benefits	($50.76)
Societal Cost Test Portfolio Benefits	$2,157.11
Societal Cost Test Portfolio Costs	$2,138.32
Societal Cost Test Portfolio Net Benefits	$18.79
Total Resource Cost Test	0.98
Societal Cost Test	1.01

4. EDUCATION & OUTREACH PROGRAM

Purpose

The purpose of the Education & Outreach Program is to provide additional materials to communicate clearly the concepts of DSM, energy efficiency and demand response.

Program Description

MWE will communicate the benefits of energy conservation and peak demand to customers, as well as educating customers about Time-of-Use ("TOU") rates that MWE will propose in its upcoming rate case. MWE will do so in the following ways:

- For residential customers – provide materials that show simple measures on how customers can reduce their electric bills. MWE will also provide information regarding its other energy efficiency programs to the customers eligible for those programs.
- For commercial customers – provide materials that show general energy conservation information. MWE will also provide information regarding its CFL and Appliance Recycling Programs.

In addition, MWE proposes two other approaches under this program:

- Education programs for schools within MWE's service territory designed to show students the importance and value of energy conservation.
- TOU education designed to provide information on what TOU is and how customers can benefit from switching to TOU rates.

Implementation

Regarding residential and commercial education, MWE will have materials available at its office regarding the benefits of energy

conservation, DSM and demand response. MWE will provide a bill insert and publish notice of the availability of such materials for pickup.

Regarding education for schools – MWE will facilitate the purchase of age-appropriate energy conservation booklets and study guides for students.

Regarding TOU education – MWE will notify current customers about the availability of TOU rates (after conclusion of the upcoming rate case), as well as the benefits of TOU rates and how customers can take advantage of TOU.

Marketing and Communications

See the Implementation section above. MWE may seek other means to notify and inform customers on the benefits of energy efficiency. This may include advertising on the local Morenci radio station.

Program Implementation Schedule

MWE will commence the program immediately after approval. Implementation will be continuous, particularly after (and assuming) TOU rates are approved by the Commission.

Measurement and Evaluation

MWE will monitor the program and attempt to get feedback from its customers as to the effectiveness of the program and whether it persuades customers to pursue energy efficiency measures beyond what is being provided through the Company's 2011-12 EEIP. MWE will track how many customers enroll in TOU once such a rate is in effect. MWE will also solicit feedback from participating schools on whether the materials provided are effective.

Program Budget

Table 1 – 2011 to 2012 Budget

Year	2011	2012
Total Budget	$1,050	$1,050

Estimated Energy Savings

MWE cannot calculate energy and demand savings for this program. MWE believes that the program is still beneficial in informing customers who live in a relatively remote area about energy efficiency and its benefits.

Program Cost Effectiveness

MWE cannot calculate whether the program will be cost-effective in terms of kWh and kW, but believes it will help to heighten awareness of how energy efficiency can directly benefit customers.

Exhibit

"2"

MORENCI WATER AND ELECTRIC COMPANY ("MWE") Sheet No. 34.0

ENERGY EFFICIENCY SURCHARGE SCHEDULE

Applies to: The Morenci Water and Electric Company Service Area
Greenlee and Graham County, Arizona

MWE's Energy Efficiency Surcharge ("EES") – established in Decision No. XXXXX (DATE, 2011) – will apply to all retail service. This surcharge is being established to fund MWE's current Energy Efficiency Implementation Plan ("EEIP") and to meet the requirements and standards as set forth by the Arizona Corporation Commission in the Energy Efficiency Rules approved in Decision No. 71819 (August 10, 2010). All provisions of the customer's current applicable rate schedule will apply in addition to this surcharge. MWE will evaluate – from time to time – its program portfolio spending requirements. If necessary the EES may be changed if it becomes apparent that the funding requirements for MWE's EEIP have changed in order to meet the standard in future years. The Commission must approve any changes to the EES. Any change to the EES amounts will be applied in billing cycle 1 beginning in the month following Commission approval and will not be prorated. Additional details regarding the EES can found in MWE's EEIP in Docket No. E-01049A-11-XXXX, the Commission approved in Decision No. XXXXX (DATE).

Energy Efficiency Surcharge charges will be the following:

- A rate of $0.000245 per kWh will be charged to all MWE residential and non-mining non-residential customers.

- Customers with monthly demand in excess of 3 MW will be charged a set amount of $650 per month each.

The EES will be shown as a separate item on customer bills. MWE's EEIP offers programs for non-mining customers to improve energy efficiency and could possibly result in savings for customers. MWE is required under the rules to file new plan for approval every other year. For more information please contact MWE's office or the Arizona Corporation Commission at www.azcc.gov.

Issued: DATE Effective: DATE

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