Ameren Missouri

Renewable Energy Standard
Compliance Plan
2011-2013

Prepared in Compliance with 4 CSR 240-20.100

April 15, 2011

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Reference Table

Introduction

The Missouri Renewable Energy Standard (RES) began as a public initiative and was placed on the Missouri ballot during the November 4, 2008 election. Labeled as Proposition C, it requires the three investor owned utilities (IOUs) in the state (Ameren Missouri, Empire District and Kansas City Power & Light) to provide renewable energy resources as a percentage of the total retail sales that each utility makes to its customers in the state.

After an extensive rule making process involving stakeholders from the Missouri Public Service Commission, the PSC staff, Office of Public Council, MIEC, MEDA, the three IOUs, various wind, solar and biomass developers, etc., the Public Service Commission published final rules on July 7, 2010.

As part of the statute and rule making, Section (7) (B) requires that the IOUs file a plan that covers their intended compliance measures for the current year plus the immediately following 2 years.

There are two basic forms of compliance that are required under the RES. Compliance with what we term the "non-solar" RES relates to compliance using renewable energy credits (RECs) and/or actual energy from all forms of qualified renewable generation resources (wind, hydro, biomass, etc.) as certified by the Missouri Department of Natural Resources (DNR). There is a separate component, the "solar" RES, that requires compliance which can only be met with solar RECs or actual energy from solar generation resources.

The following table details the renewables percentage requirements of the retail electric sales for the non-solar and solar RES:

Time Period	Non-Solar	Solar*
2011-2013	2%	2%
2014-2017	5%	2%
2008-2020	10%	2%
2021-forward	15%	2%

*(Solar percentages are applied to the non-solar RES amounts)

As referenced above, the DNR is responsible for determining all eligible renewable resources that can be utilized by the IOUs in meeting the requirements of the RES. DNR rule 10 CSR 140-8.010 (2), contains the list of all eligible renewable resources allowed to meet the compliance with the RES.

Ameren Missouri's compliance plan contained in this report adheres to the use of only those renewable resources as currently defined by the above referenced rule.

In addition, the RES rules allow for the banking of RECs for up to a three year time period. This will allow for the use of eligible RECs generated from January 1, 2008 to the current time period in meeting the RES requirements for calendar year 2011.

Any generation and/or RECs from a Missouri renewable resource are entitled to a factor of 1.25 applied to each MWh.

The following information in this report will demonstrate the specific means in which Ameren Missouri intends to meet its obligations under both the non-solar and solar RES for the calendar years 2011-2013. A part of each section will address the necessary information required for each individual year.

Planned RES Compliance
Section (7) (B) 1 A

2011

Non-Solar RES

Ameren Missouri currently operates or has contracted for generation with the following eligible renewable resources:

- Keokuk Hydro-electric Generation Station
- Horizon Pioneer Prairie Wind Farm

The Ameren Missouri Keokuk Hydro-electric Generation Station is located on the Mississippi River in Keokuk, Iowa. The station consists of 15 separate generators. The individual nameplate ratings range from 7.2 to 8.8 MWs.

The total annual generational output from the Keokuk facility has been between 803,000 MWhs to 950,000 MWhs.

This generation facility is wholly owned by Ameren Missouri and has been operational since 1913.

In June, 2009 Ameren Missouri and Pioneer Prairie Wind Farm I LLC entered into a 15 year power purchase agreement. Ameren Missouri is purchasing 102.3 MWs of nameplate generation from the Pioneer Prairie Wind Farm consisting of 65 turbines, located in north east Iowa. The facility site covers approximately 10,000 acres of land located in Mitchell County, Iowa in Wayne and Stacyville Townships.

The generation output is expected to average 319,000 MWhs annually.

Banked RECs

In accordance with 4 CSR 240-20.100 Section (3) (F), which requires utilities utilize a commission designated central third-party registry for REC accounting, the North American Renewable Registry (NAR) was selected to be utilized by the IOUs in Missouri.

RECs from the above referenced generators, covering the 2008-2010 time periods, were registered and placed in the Ameren Missouri account with NAR starting in November, 2010 and continuing through January, 2011.

Ameren Missouri
NAR Account
REC Balance

Period of Generation	Keokuk	Pioneer Prairie
1/1/08-12/31/08	803,208	-0-
1/1/09-12/31/09	949,909	88,023
1/1/10-12/31/-10	930,246	294,696

During the CY 2011, Ameren Missouri anticipates that the Keokuk facility will add approximately 900,000 MWhs while Pioneer Prairie will add approximately 319,000 MWhs to the NAR account.

Planned Actions

For the 2011 compliance year, Ameren Missouri will utilize the generational output from the Keokuk and Pioneer Prairie facilities. Specifically, Ameren Missouri will use RECs that have been banked from the output of the Keokuk facility that were generated in CY 2008 to meet the full base requirements for the entire 2011 compliance year. Ameren Missouri will continue to place RECs into the NAR account associated with the actual 2011 generation from both Keokuk and Pioneer Prairie facilities.

2011
Solar RES

During the 4th quarter 2010, Ameren Missouri completed the following transactions in order to meet its 2011 solar compliance requirements:

Transaction	Vintage	Quantity S-RECs
Purchased from Sun-Run, Inc through Evolution Markets	2009-2010	9,006
Purchased from 3 Degrees	2009	1,545
Purchased from 3 Degrees	2010	2,055
Total		12,606

The above quantity of S-RECs has also been placed into Ameren Missouri's NAR account.

In conjunction with the above purchases, Ameren Missouri completed the installation of approximately 100 kW of solar generation capacity at its headquarters facility located in St. Louis.

This multi-technology installation is anticipated to produce between 130-145 MWhs of solar generation annually. All generation from this facility will be utilized towards the solar requirements of the RES.

In addition, Ameren Missouri filed a Standard Offer Contract tariff with the PSC in November, 2010. This tariff became effective on January 1, 2011. Under the terms of the approved tariff, Ameren Missouri will buy S-RECs from its electric customers who have installed or are installing net metered solar facilities (100 kW or less) at their homes and/or businesses.

All S-RECs associated with the customer installed net metered systems, as well as the generation at the Ameren Missouri headquarters facility are entitled to the 1.25 factor as they represent Missouri based generation.

Through March 31, 2011 Ameren Missouri has contracted with 54 customers representing 433 S-RECs in CY 2011 which will count as 541 due to the in-state factor. There are an additional 185 contracts pending completion of their installations representing an additional 1836 S-RECs which would count as 2295 with the applied factor.

Planned Actions

For the 2011 compliance year Ameren Missouri will use S-RECs that have been banked through the purchase with Evolution Markets, 3 Degrees and customers who accept the Standard Offer Contract. In addition, Ameren Missouri will utilize the generational output from the solar installation at its St. Louis headquarters. Any additional needs will be met by the procurement of S-RECs from new customer net metered systems, direct offers from qualified facilities and/or third party brokers.

During CY 2011, Ameren Missouri will be performing conceptual engineering design work to evaluate the ability to construct utility scale solar generation at several of its existing generating facilities. Cost, construction potential, siting and permitting requirements, etc., will be evaluated in order to determine future options in meeting the solar RES requirements.

Throughout the calendar year, Ameren Missouri will continue to accept and evaluate unsolicited proposals from solar developers.

2012

Non-Solar RES

In addition to the continued generation that Ameren Missouri will receive from the Keokuk Hydro-electric Generation Station and the Horizon Pioneer Prairie Wind Farm, Ameren Missouri will begin operations at its new landfill gas generating station.

Ameren Missouri Maryland Heights Renewable Energy Center

Ameren Missouri has recently begun construction on a landfill gas to electric energy generation facility. The facility is located in Maryland Heights, MO and was previously known as the Fred Weber Landfill site. Though the landfill assets have since been sold to IESI-BFC Ltd., there should be no impact to the generation operations at the site. This generation facility will utilize 3 (4.9 MW) gas turbines specifically designed to be fueled with methane gas captured from landfill operations.

Anticipated to become operational in late summer, 2012, this facility is expected to generate between 35,000 – 41,000 MWhs from the commencement of operations until December 31, 2012. In the following years, this facility is expected to gradually increase generational capabilities, reaching approximately 96,400 MWhs annually.

Banked RECs

During CY 2012, in addition to the expected 35,000-41,000 MWhs of generation from the Maryland Heights operation, Ameren Missouri anticipates that the Keokuk facility will add approximately 900,000 MWhs while Pioneer Prairie will add approximately 319,000 MWhs to the NAR account. All amounts associated with generation from the Maryland Heights operation are eligible for the 1.25 factor as these hours come from a Missouri resource.

Planned Actions

For the 2012 compliance year, Ameren Missouri will continue to draw upon its bank of RECs that it will have accumulated through the contributions from generation at the Keokuk, Pioneer Prairie and Maryland Heights facilities, retiring the oldest RECs first.

2012

Solar RES

Currently, Ameren Missouri anticipates the continuation of its Solar Standard Offer Contract to customers who install net metered solar electric generation (capacities of 100kW or less) at their homes and/or businesses.

During CY 2011, Ameren Missouri anticipates issuing a request to procure solar RECs through the market for use in 2012.

The combination of customer and third party procured S-RECs represents the basis by which Ameren Missouri will meet its solar compliance requirements for CY 2012.

In the first half of CY 2012, Ameren Missouri will compare the results of its engineering studies conducted in CY 2011, related to the potential construction and operation of utility scale solar generation at current Ameren Missouri power plant sites, to other options. The evaluation of these results will be taken into consideration along with offers from 3rd party solar developers and market prices of solar RECs.

2013

Non-Solar RES

In CY 2013, Ameren Missouri will be receiving full generation from the Keokuk Hydro-electric Generating Station, Pioneer Prairie Wind Farm and the Maryland Heights landfill gas generating facility.

Banked RECs

During CY 2013, Ameren Missouri anticipates that the Keokuk facility will add approximately 900,000 MWhs, Pioneer Prairie will add approximately 319,000 MWhs and the Maryland Heights operation will add approximately 96,400 MWhs of generation to the NAR account. The generation from the Maryland Heights facility will have a factor of 1.25 applied since it is from a Missouri based resource.

Planned Actions

For the 2013 compliance year, Ameren Missouri will continue to draw upon its bank of RECs that it will have accumulated through the contributions from generation at the Keokuk, Pioneer Prairie and Maryland Heights facilities, retiring the oldest RECs first.

2013

Solar RES

Currently, Ameren Missouri anticipates the continuation of its Solar Standard Offer Contract to customers who install net metered solar electric generation (capacities of less than 100 kW) at their homes and/or businesses.

During CY 2012, Ameren Missouri anticipates issuing a request to procure solar RECs through the market for use in 2013.

The combination of customer and third party procured S-RECs represents the primary basis by which Ameren Missouri will meet its solar compliance requirements for CY 2013. However the solar compliance plan may also include utility owned generation. This will be dependent on the results of internal studies conducted in the 2011-2012 time frame, concerning the construction and development of Ameren Missouri owning and operating its own utility scale solar generation.

List of Executed Contracts
Section (7) (B) 1 B

The following provides a basic summary of contracts which are being utilized by Ameren Missouri to procure certified RECs as well as RECs with associated energy.

Non-Solar RES

Ameren Missouri has executed only one third party contract associated with the purchase and delivery of renewable energy to the Ameren Missouri system that is being used to meet the non-solar RES compliance provisions. This is a 15 year power purchase agreement between Ameren Missouri and Horizon's Pioneer Prairie Wind Farm.

Solar RES

Ameren Missouri has executed two purchase agreements whereby solar RECs have been procured to meet the 2011 requirements.

One contract has been procured with Sun-Run Inc. through Evolution Markets and the second contract is with 3 Degrees.

As of March 31, 2011, Ameren Missouri has also executed 54 agreements with its customers who have installed small scale solar net metered systems and have chosen to accept the terms and conditions of the Standard Offer Contract. An additional 185 contracts are pending with customers.

A contract summary of all currently executed agreements that are being utilized to meet compliance with the provisions of 4 CSR 240-20.100 is included in **Table 1** attached.

Projected Retail Sales
Section (7) (B) 1 C

The attachment in **Table 2** demonstrates the current forecasted total retail electric sales by year and the corresponding portfolio requirements in MWhs for both the non-solar and solar RES.

Comparison to Preferred Resource Plan
Section (7) (B) 1 D

The RES Compliance Plan detailed in this report, mirrors the renewables plan in the 2011 Integrated Resource Plan filed by Ameren Missouri on Feb. 23, 2011. The compliance actions listed in this RES Compliance Plan demonstrate the continuous planning addressed in the IRP regarding the potential for developing an Ameren Missouri owned solar generation facility. Ameren Missouri has begun an engineering review and study to assess the economic and operational aspects of utility scale solar generation at two of its existing power plant sites. Should the results of that study indicate that such a project is warranted, Ameren Missouri could potentially have such a facility operational in the 2013 time frame.

RES Compliance Plan Cost
Section (7) (B) 1 E

The ability to utilize renewable resources that currently exist in rate base, places Ameren Missouri and its rate payers in a unique position regarding compliance cost. As stipulated in the statute and rule, though the megawatt hours from these renewable resources can be utilized to meet the compliance requirements, some costs were incurred prior to the compliance requirements and are already included in the current rate base. Consequently, these particular renewable resources will have no cost implications towards meeting the specifics of the RES and therefore will result in no cost impact to the plan nor the rate cap limitation of 1%.

The cost of the RES Compliance Plan for 2011 is therefore comprised of the following items:

Purchase of solar RECs from 3rd parties
Purchase of solar RECs from residential and commercial customers
Issuance of solar rebates
Construction of the solar facility at the Ameren Missouri headquarters
Cost to register RECs with the North American Renewable Registry

Details related to the cost of each component are included in **Table 3**.

3Rd Party Solar REC Procurement

The market price for solar RECs varies significantly across the continental U.S. ($7.00-$650.00 per REC). Ameren Missouri's procurement of solar RECs, at an average price of $7.79 per solar REC, to meet the requirements of the RES represents the least cost basis for meeting the compliance requirements at the current time. Due to the limited amount of solar RECs from customer installations and the Ameren Missouri installation at its headquarters facility, the procurement of solar RECs from 3rd party marketers also represents the only viable means in which to meet the compliance requirements.

Standard Offer Contract

The price per REC ($100 per MWh) offered under the Ameren Missouri Standard Offer Contract was determined by taking into account the total cost to install solar in the region, the rebate required by statute and the eligibility for the Federal tax credit. Total funding for the program was capped at $2.0 million. The intent is to determine overall customer participation and the ability to stimulate development of these distributive generation systems that may offer added benefit to the overall system.

Solar Rebates

Solar rebates are required by statute at $2.00 per watt and are limited to an individual maximum of $50,000. The number of rebates issued through March 31, 2011 totals 124 for $1,235,840 with an additional 94 that are pending and represent $1,498,690. Rebates are not paid until the individual system becomes operational.

Ameren Missouri Headquarters-Solar Installation

Construction of a multi-technology solar array was completed in December, 2010. The primary objectives for this installation are:

- Provide customers with accurate cost data for the various technologies
- Determine operational efficiencies between the technologies
- Familiarize Ameren Missouri personnel with operational information related to solar generation
- Utilize generation to help meet the solar RES requirements

Because the basic technologies employed for solar generation are the same whether used for residential or utility scale, the information that will be provided by this installation regarding capital, maintenance, labor, installation and other operational costs will prove beneficial in determining any advantages in constructing a utility scale generation project to meet the compliance requirements.

REC Registration Fees

In accordance with 4 CSR 240-20.100 Section (3) (F), utilities are to use a commission designated common central third party registry for REC accounting of the RES requirements. The North Ameren Renewable Registry (NAR) was selected by the commission for this purpose.

Tracking and registration fees are charged by NAR for all RECs deposited and then retired from the utilities' accounts. This administration cost is detailed in **Table 3** attached.

The total O&M and Capital Costs incurred for compliance with the RES during CY 2011 are as detailed in **Table 3**.

During CY 2012, final capital costs associated with the Maryland Heights Landfill Gas project will be incurred along with the first operational and maintenance costs. The first gas delivery charges will also be incurred in CY 2012. Those costs have been estimated for both CY 2012 and CY 2013 and included in **Table 3**.

RES Retail Rate Impact
Section (7) (B) 1 F

As established in Case No. ER-2010-0036, the total revenue requirement for Ameren Missouri is $2.9 billion. The application of a 1% rate increase would equate to a rate impact of $29 million.

As demonstrated in Table 3, the costs affecting the annual rate impact are well below $29 million.

Compliance with Air, Water or Land Use Requirements

Section (7) (B) 1 G

All generating facilities utilized by Ameren Missouri to meet the requirements of the Missouri Renewable Energy Standard have, to our knowledge, received all necessary environmental and operational permits and are in compliance with any necessary federal, state and/or local requirements related to air, water and land use.

Table 1
List of Executed Contracts

Ameren Missouri
Renewable Energy Compliance Plan
2011-2013
Executed Renewable Energy Contracts

Contracting Party	Resource Type	Contract Type	Contract Duration	Time Period	Expected Amount	Terms
Horizon Pioneer Prairie	Wind	Energy & RECs	9/1/09-8/31/24	2011 2012 2013	319,000 319,000 319,000	Deliveries of energy and RECs began 9/1/09 Term is 15 years with option to extend based on mutually acceptable terms and conditions.
SunRun Inc.	Solar	REC only	1 year	2011	9,006	Vintage 2009-2010 solar RECs Delivery made to NARR on 11/19/10
3 Degrees	Solar	Rec only	1 year	2011	3,600	Total of 2000 vintage 2009 solar RECs and 1600 vintage 2010 solar RECs
Various Residential and Commercial Customers	Solar	REC only <10kW	10 year	2011 2012 2013	895 1,800 2,500	Customers installing solar electric systems that are sized less than 10 kW may sell S-RECs for $100 per REC on a 10 year up front basis. The number of RECs is calculated based on system size applied to an industry calculator :PVWatts
Various Residential and Commercial Customers	Solar	REC only >10 kW/<100kW	5 year	2011 2012 2013	755 1,500 2,500	Customers installing solar electric systems that are sized greater than 10 kW but less than 100 kW may sell S-RECs for $100 per REC on a 5 year basis based on actual generation from their metered output.

Table 2
Forecasted Retail Electric Sales
And RES Requirements

Ameren Missouri
Projected Retail Electric Sales
Missouri Renewable Energy Standard

Year	Customer Forecast (MWH) Total Load	Renewable Requirement (%)	Renewable Requirement (MWH)	Solar Requirement (%)	Non-Solar Renewables Requirement
2011	38,476,460	2	769,529	15,391	754,139
2012	39,217,246	2	784,345	15,687	768,658
2013	39,462,288	2	789,246	15,785	773,461

Table 3
RES Compliance Plan Cost

Ameren Missouri
Projected Compliance Plan Cost
2011-2013

Plan Components	2011	2012	2013
Solar Rebates	$2,734,530*	$2,500,000	$2,500,000
Standard Offer Contract	$2,000,000	$2,000,000	$2,000,000
Solar Installation-GOB	$2.1 million**		
S-REC Procurement	$98,148	$200,000	$200,000
Maryland Heights Landfill			
Capital	$31.219 mill***	$20.20 mill***	
O&M****	-0-	$4.807 mill	$5.392 mill
NAR Registry	$140,679	$150,000	$150,000
Cumulative Estimated Annual Dollar Rate Impact	$5.288 mill	$20.041 mill	$20.626 mill

Note:
- * Includes rebates issued in CY 2010
- ** To be rate based over 20 year useful life
- *** To be rate based over 20 year useful life with 2012 in service date and $15.7 million capital spend in CY 2010
- **** Includes fuel cost for gas supply with annual O&M

Table 4
Preferred Resource Plan Summary
2011-2013

Ameren Missouri
Preferred Resource Plan
Missouri Renewable Energy Standard

Year	Generation Resources	Resource Type	Solar Resources
2011	Keokuk	Hydro	3rd party
	Pioneer Prairie	Wind	Customer owned
			Ameren GOB
2012	Keokuk	Hydro	3rd party
	Pioneer Prairie	Wind	Customer owned
	Maryland Heights	Landfill gas	Ameren GOB
2013	Keokuk	Hydro	3rd party
	Pioneer Prairie	Wind	Customer owned
	Maryland Heights	Landfill gas	Ameren GOB

Table 5
RES Compliance Plan Summary
2011-2013

Ameren Missouri
RES Compliance Plan
Missouri Renewable Energy Standard

Year	Generation Resources	Resource Type	Solar Resources
2011	Keokuk	Hydro	3rd party RECs
	Pioneer Prairie	Wind	Customer owned
			Ameren GOB
2012	Keokuk	Hydro	3rd party RECs
	Pioneer Prairie	Wind	Customer owned
	Maryland Heights	Landfill gas	Ameren GOB
2013	Keokuk	Hydro	3rd party RECS
	Pioneer Prairie	Wind	Customer owned
	Maryland Heights	Landfill gas	Ameren GOB
			Potential for Ameren owned utility scale