



**Tucson Electric Power**  
**88 East Broadway Blvd., P.O. Box 711**  
**Tucson, Arizona 85702**

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APR 01 2013

AZ CORP COMM  
Director - Utilities

April 1, 2013

Docket Control  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, AZ 85007

Re: Notice of Filing – Tucson Electric Power Company’s 2013 REST Compliance Report  
Docket No. E-01933A-11-0269

Pursuant to Arizona Administrative Code R14-2-1812, each Affected Utility shall file with Docket Control a report that describes its compliance with the requirements of the Renewable Energy Standard and Tariff (“REST”) Rules. Arizona Corporation Commission (“Commission”) Decision No. 72736 (January 13, 2012) approved Tucson Electric Power Company’s (“TEP”) 2012 REST Plan. Please find enclosed TEP’s redacted 2013 REST Compliance Report for year-end 2012. The report contains confidential information that is being provided directly to Commission Staff pursuant to the terms of the Protective Agreement executed in Docket No. E-01933A-11-0269.

If you have questions or comments please contact me at (520) 884-3680.

Sincerely,

Jessica Bryne  
Regulatory Services

Enclosure: Compliance Report

cc: Compliance Section, ACC





Tucson Electric Power

**Response to R14-2-1812 Utility Reporting Requirements  
of the  
Arizona Corporation Commission**

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**RENEWABLES DATA  
FOR  
YEAR-END 2012**

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# Executive Summary

## I. Standardized Reporting Format

Arizona Corporation Commission (“Commission”) Decision No. 72736, January 18, 2012, required Tucson Electric Power (“TEP” or “Company”) to submit a report for Commission Staff approval on the Company’s joint RES plan formatting efforts with Arizona Public Service (APS) and in consultation with other state utility representatives and industry stakeholders. On February 19, 2013, Commission Staff docketed its formal approval of the group’s standardized reporting format for use in subsequent RES Compliance Reports and Implementation Plans.

## II. 2012 Renewable Energy Standard (RES) Results

### Compliance with RES Requirements

For calendar year 2012, the Commission established an annual RES requirement of 3.5 percent of the utility’s 2012 retail kilowatt-hour (kWh) sales, with 30 percent of the total requirement to be fulfilled with energy produced from Distributed Generation (“DG”) resources. This separate DG carve-out provision requires half of the total DG requirement to come from residential resources and half from non-residential resources. A summary of TEP’s 2012 compliance requirements is shown in Table 1a. For the purposes of RES compliance tracking, a Renewable Energy Credit (REC) is defined as a kWh or kWh equivalent of eligible renewable resources; however, throughout this Compliance Report, TEP reports its production in MWh. *See* A.A.C. R14-2-1801(N).

Table 1b (see page 5) shows TEP compliance and total RES resources. In 2012, the Company’s total RES resources were 481,945 MWh, which is 5.2 percent of TEP’s total 2012 retail sales requirement. Total DG energy production for the year reached 156,849 MWh. Total Residential performance was 118 percent of the requirement for 2012, and Non-Residential was 205 percent of the Non-Residential requirement.

Table 1a - Renewable Resources

Resource	Install Year	Technology	Ownership	Mwac	MWdc	Production (Actual) kWh	+	Production (Annualized) <sup>2</sup> kWh	+	Multiplier Credits <sup>3</sup>	=	Total kWh or Equivalent
<b>GENERATION:</b>												
Springerville 1	2001-2004	Fixed Axis	TEP		4.600	5,507,113				1.50		8,260,670
Springerville 2		Fixed Axis	TEP		1.800	2,154,957				1.00		2,154,957
Solon Tech Park 1		Single Axis	TEP		1.600	3,043,343				1.00		3,043,343
Solon Tech Park 2		Fixed Axis	TEP		5.000	7,991,886				1.00		7,991,886
Headquarters		Fixed Axis	TEP		0.060	99,154				1.00		99,154
Warehouse OH		Fixed Axis	TEP		0.560	996,251				1.00		996,251
Prairie Fire		Fixed Axis	TEP		5.000	50,123		9,000,000		1.00		9,000,000
DeMoss-Petrie	2001-2004	Fixed Axis	TEP		0.216	111,288				1.50		166,932
Amonix		Dual Axis	PPA		2.000	4,148,769		4,400,000		1.00		4,400,000
Astrosol		Fixed Axis	PPA		6.000	393,000		10,800,000		1.00		10,800,000
NRG		Single Axis	PPA		34.000	10,576,364		68,000,000		1.00		68,000,000
Picture Rock		Single Axis	PPA		25.000	2,993,000		50,000,000		1.00		50,000,000
E. ON UASTP		Single Axis	PPA		6.000	59,000		12,000,000		1.00		12,000,000
Macho Springs		Wind	PPA	50.400		126,073,000				1.00		126,073,000
Los Reales Landfill		Landfill Gas	PPA	5.000		21,146,908				1.06		22,415,722
Manufacturing Credit		PV	Global Solar		4.302					2,190.00		9,421,958
<i>Gross Total (if needed)</i>											334,823,873	
<i>Adjustments (if needed)</i>											(9,728,059)	
<b>Subtotal Generation</b>				<b>55</b>	<b>96</b>	<b>185,344,157</b>					<b>325,095,814</b>	(A)
<b>DISTRIBUTED ENERGY (DE):</b>												
<i>Residential:</i>												
<b>Installed</b>												
Total PV		PV			23.885	36,114,561		41,798,750		1.0		41,798,750
PV		PV	Customer Owned		15.811			27,669,250				
PV		PV	Leased		8.074			14,129,500				
Thermal		Thermal	Customer Owned					5,997,750		1.0		5,997,750
<b>Reserved</b>												
PV		PV			4.714			8,249,500		1.0		8,249,500
Thermal		Thermal						436,299		1.0		436,299
<i>Gross Total (if needed)</i>											56,482,299	
<i>Adjustments (if needed)</i>												
<i>Extra Credits</i>												
<i>In-State Manufacturing and Installation Content</i>											97,470	
<i>In-State Power Plant Installation Credit</i>											324,901	
<i>Distributed Generation Credit</i>											324,901	
<b>Subtotal Residential</b>				<b>-</b>	<b>29</b>	<b>36,114,561</b>		<b>56,482,299</b>			<b>57,229,571</b>	(B)

Resource	Install Year	Technology	Ownership	Mwac	MWdc	Production (Actual) kWh	Production + (Annualized) <sup>2</sup> kWh	Multiplier Credits <sup>3</sup>	=	Total kWh or Equivalent
<b>Non-Residential:</b>										
<b>Installed</b>										
<b>UFI</b>										
PV		PV	Customer Owned		5.067	6,134,208	8,867,250	1.0		8,867,250
Thermal		Thermal	Customer Owned				2,968,698	1.0		2,968,698
Wind		Wind	Customer Owned		0.012	5,624		1.0		5,624
Daylighting		Daylighting	Customer Owned				44,000	1.0		44,000
<b>PBI</b>										
PV		PV	Customer Owned		15.447	24,887,428	27,032,250	1.0		27,032,250
Chilling		Chilling	Customer Owned			1,531,394		1.0		1,531,394
<b>Reserved</b>										
<b>UFI</b>										
PV		PV	Customer Owned		0.607		1,062,250	1.0		1,062,250
Thermal		Thermal	Customer Owned				2,661,070	1.0		2,661,070
Daylighting		Daylighting	Customer Owned				98,039	1.0		98,039
<b>PBI</b>										
PV		PV	Customer Owned		25.952		45,416,000	1.0		45,416,000
<b>Wholesale (10% of DG Req.)</b>										9,728,059
<b>Gross Total (if needed)</b>										99,414,634
<b>Adjustments (if needed)</b>										
Extra Credits										
In-State Manufacturing and Installation Content										38,992
In-State Power Plant Installation Credit										83,096
Distributed Generation Credit										83,096
<b>Subtotal Non-Residential</b>				-	<b>47</b>	<b>32,558,654</b>	<b>88,149,557</b>			<b>99,619,818</b> (C)
<b>Subtotal Distributed Energy (B + C)</b>				-	<b>76</b>	<b>68,673,215</b>	<b>144,631,856</b>			<b>156,849,389</b> (D)
<b>Total RES Resources (A + D)</b>				<b>55</b>	<b>172</b>	<b>254,017,372</b>	<b>144,631,856</b>			<b>481,945,203</b> (E)
<b>Total MWac equivalent<sup>2</sup></b>				<b>201</b>						

Notes to Table 1:

<sup>1</sup> Assumes the following kWh per installed kW:  
 Residential and Non-Residential: 1750 kWh/kW  
 Utility Generation, Fixed Tilt: 1800 kWh/kW  
 Utility Generation, Single-Axis Tracker: 2000 kWh/kW  
 Utility Generation, Dual-Axis Tracker: 2200 kWh/kW

<sup>2</sup> Represents the total RES portfolio energy in kWhac. An 85% dc-ac conversion factor is applied to all dc capacity.

<sup>3</sup> Extra Credit Multipliers

Early Installation Extra Credit: Installed and Began Operating in

2001 0.3  
 2002 0.2  
 2003 0.1

In-State Power Plant Extra Credit (1997-2005) 0.5

In-State Manufacturing and Installation Content (1997-2005) 0.5 X (% in-state content in installed plant)

DE Solar Electric Generator and Solar Incentive Program (1997-20) 0.5

Table 1b - Compliance Summary

Category	Metric	%	Compliance Measure (MWh)	RES Resources (MWh or Equivalent)	
Retail Sales	Actual MWh Sales for 2012		9,264,818		
Prior year carrying balance <sup>1</sup>				<b>113,034</b>	(F)
2012 Total RES Resources [From (E) in Table 1a]				<b>481,945</b>	(E)
2012 Total RES Requirement	% of Retail Sales	3.5%	324,269		
<b>DE Requirement</b>	% of RES Requirement	30%	97,281		
<i>DE Sub-Requirements:</i>					
Residential DE	% of DE Requirement	50%	48,640	<b>57,230</b>	(G)
Actual RECs				48,544	
Reserved RECs				8,686	
Non-Residential DE	% of DE Requirement	50%	48,640	<b>99,620</b>	(H)
Actual RECs				50,382	
Reserved RECs				49,237	
<b>Non-DE Target</b>	% of RES Requirement	70%	226,988	<b>438,130</b>	(I)
2012 RECs				325,096	
Carrying Balance				113,034	
Resources Used for 2012 Compliance ( G + H + I )			<b>324,269</b>	<b>324,269</b> <sup>2</sup>	(J)
<b>End 2012 carrying balance ( F + E - J )</b>				<b>212,884</b>	(K)
<b>Residential Carrying Balance</b>				-	
<b>Non-Residential Carrying Balance</b>				1,742	
<b>Non-DE Carrying Balance</b>				211,142	

Notes to Table 1b:

<sup>1</sup> Carrying Balance only applies to Non-DE RECs

<sup>2</sup> On March 31, 2013 Tucson Electric Power (TEP) retired 324,269,000 Renewable Energy Credits towards meeting its 2012 RES requirements.

**Table 2a – RES Resource Costs**

**REDACTED**



**Table 2b - RES Cash Incentive Costs Tucson Electric Power Company**

**2012 Distributed Energy Cash Incentive Program Costs**

	Up-Front Incentives				Incentives Paid (\$)
	MW	MWh	(\$/MW) <sup>1</sup>	(\$/MWh) <sup>1</sup>	
<b>Residential:</b>					
PV Leased	3.079	5,542	\$ 1,062,160.00	\$ 590.11	\$ 3,270,491
PV Customer Owned	3.601	6,482	910,395.00	505.77	3,278,326
Thermal		910		522.02	475,237
<i>Subtotal: Residential</i>					<b>\$ 7,024,054</b>

	Up-Front Incentives				Production-Based Incentives		2012 Total Incentives Paid (\$)
	MW	MWh	(\$/MW) <sup>1</sup>	(\$/MWh) <sup>1</sup>	(\$/MW)	(\$/MWh)	
<b>Non-Residential:</b>							
<b>UFI</b>							
PV	2.584	4,652	\$ 1,514,942.99	\$ 841.63			\$ 3,914,981
Thermal		1,842		453.11			834,622
Daylighting		44		900.00			39,600
<b>PBI</b>							
PV	4.350	7,830		113.73	\$ 204,708	\$ 113.73	890,437
<b>PBI Legacy</b>							
PV		20,169				149.67	3,018,673
Solar Chilling		1,531				100.00	153,139
<i>Subtotal: Non-Residential</i>							<b>8,851,454</b>

<b>Total DE Incentive Costs</b>							<b>\$ 15,875,508</b>
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Notes to Table:

<sup>1</sup> Based on expected annual system production.

## Other Reports

<i>Tucson Electric Power Company</i>	<i>2012 Budget</i>	<i>2012 Budget</i>
	<i>REST Collections (\$)</i>	<i>Expenditures (\$)</i>
<i>To Be Recovered Through REST Charges</i>	\$ (29,976,305)	
<i>Carryover of REST Funds from 2010</i>	(4,875,000)	
<i>Total Available Funds</i>	(34,851,305)	
<b>REST Expenditures</b>		
<i>Purchased Renewable Energy</i>		
<i>Above Market Cost of Conventional Generation</i>		\$ 12,377,000
<i>Purchased Sun Edison RECs</i>		1,045,500
<i>TEP Owned</i>		4,228,918
<i>Total Purchased Renewable Energy</i>		17,651,418
<i>Customer Sited Distributed Renewable Energy</i>		
<i>Up-Front Payments to Customers</i>		5,000,000
<i>Production Based Payments to Customers</i>		5,753,375
<i>Consumer Education and Outreach</i>		100,000
<i>Legacy Costs</i>		3,000,000
<i>Meter Reading</i>		19,531
<i>Total Customer Sited Distributed Renewable Energy</i>		13,872,906
<i>Information Systems Integration Costs</i>		500,000
<i>Technical Training</i>		
<i>Schools Programs</i>		350,000
<i>Internal and Contractor Training</i>		75,000
<i>Total Technical Training</i>		425,000
<i>Net Metering</i>		227,982
<i>Outside Coordination, Support and R&amp;D</i>		
<i>Labor and Administration</i>		
<i>Internal and External Labor</i>		1,573,637
<i>Materials, Fees and Supplies</i>		71,362
<i>AZ Solar Website</i>		4,000
<i>Total Labor and Administration</i>		1,648,999
<i>Support to University Research</i>		250,000
<i>Technology Development Projects</i>		275,000
<i>Total Renewable Energy Balancing, Integration and Field Test</i>		525,000
<b>Grand Total</b>	<b>\$ (34,851,305)</b>	<b>\$ 34,851,305</b>

<b>Tucson Electric Power Company</b>	<b>2012 Actual REST Collections (\$)</b>	<b>2012 Actual Expenditures (\$)</b>
<i>To Be Recovered Through REST Charges</i>	\$ (30,294,347)	
<i>Carryover of REST Funds from 2010</i>	(4,875,000)	
<b>Total Available Funds</b>	<b>(35,169,347)</b>	
<b>REST Expenditures</b>		
<b>Purchased Renewable Energy</b>		
<i>Above Market Cost of Conventional Generation</i>		\$ 9,264,820
<i>Purchased Sun Edison RECs</i>		-
<i>TEP Owned</i>		4,193,814
<b>Total Purchased Renewable Energy</b>		<b>13,458,634</b>
<b>Customer Sited Distributed Renewable Energy</b>		
<i>Up-Front Payments to Customers Reserved</i>		5,000,203
<i>Production Based Payments to Customers</i>		4,837,461
<i>Consumer Education and Outreach</i>		101,378
<i>Legacy Costs</i>		2,196,225
<i>Meter Reading</i>		7,600
<b>Total Customer Sited Distributed Renewable Energy</b>		<b>12,142,867</b>
<b>Information Systems Integration Costs</b>		<b>497,221</b>
<b>Technical Training</b>		
<i>Schools Programs</i>		348,197
<i>Internal and Contractor Training</i>		71,975
<b>Total Technical Training</b>		<b>420,172</b>
<b>Net Metering</b>		<b>226,681</b>
<b>Outside Coordination, Support and R&amp;D</b>		
<b>Labor and Administration</b>		
<i>Internal and External Labor and Administration</i>		1,343,765
<i>Materials, Fees and Supplies</i>		69,608
<b>Total Labor and Administration</b>		<b>1,413,373</b>
<i>Support to University Research</i>		250,000
<i>Technology Development Projects</i>		238,969
<b>Total Renewable Energy Balancing, Integration and Field Test</b>		<b>488,969</b>
<b>Grand Total</b>	<b>\$ (35,169,347)</b>	<b>\$ 28,647,917</b>

