



## ESG/Sustainability Template – Section 2: Quantitative Information

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**Parent Company:** *UNS Energy Corporation (a Fortis Inc. company)*  
**Operating Company(s):** *Tucson Electric Power Company and UniSource Energy Services (UNS Electric, Inc. and UNS Gas, Inc.)*  
**Business Type(s):** *Vertically Integrated*  
**State(s) of Operation:** *Arizona*  
**State(s) with RPS Programs:** *Arizona*  
**Regulatory Environment:** *Regulated*  
**Report Date:** *8/24/2018*

Ref. No.		Baseline		2014	2015	Last Year 2016	Current Year 2017	Next Year 2018	Future Year 2032	Comments, Links, Additional Information, and Notes
		2005	2006							
<b>Portfolio</b>										
<b>1</b>	<b>Owned Nameplate Generation Capacity at end of year (MW)</b>	2,064	2,954	2,759	2,992	3,008	2,838	3,201		Owned generation capacity provided as nominal capacity, rather than nameplate capacity, for consistency with annual Fortis, Inc. reporting and the Tucson Electric Power and UNS Electric, Inc. Integrated Resource Plans.
1.1	Coal	1,528	1,528	1,332 <sup>(1)</sup>	1,412	1,412	1,242	793		(1) In August 2015, TEP exhausted its existing coal supply at Sundt Station Unit 4 and plans to continue operating Sundt Station Unit 4 with natural gas as a primary fuel source. The the nominal generating capacity assumes the unit is fueled by coal.
1.2	Natural Gas	527	1,373	1,373	1,525	1,525	1,525	2,145		
1.3	Nuclear									
1.4	Petroleum									
1.5	Total Renewable Energy Resources	9	53	54	55	71	71	263		
1.5.1	Biomass/Biogas	4	4	4	4	4	4			
1.5.2	Geothermal									
1.5.3	Hydroelectric									
1.5.4	Solar	5	49	50	51	67	67	263		Updated 2015-2016 data to include utility owned rooftop solar installations.
1.5.5	Wind									
1.6	Other									
<b>2.i</b>	<b>Owned Net Generation for the data year (MWh)</b>	11,216,461	10,514,805	11,936,297	12,285,034	11,541,767	13,444,750	12,588,093		Owned net generation was determined from operational reports as EIA Form 923 does not indicate net generation by ownership; includes generation for retail and wholesale customers.
2.1.i	Coal	10,818,707	9,198,136	8,521,224	8,282,304	7,565,120	7,643,454	5,650,315		
2.2.i	Natural Gas	369,461	1,262,460	3,306,502	3,890,623	3,843,714	5,690,128	6,294,808		
2.3.i	Nuclear									
2.4.i	Petroleum									
2.5.i	Total Renewable Energy Resources	28,293	54,210	108,571	112,107	132,933	111,168	642,970		
2.5.1.i	Biomass/Biogas	28,293	22,067	31,600	28,496	24,474				
2.5.2.i	Geothermal									
2.5.3.i	Hydroelectric									
2.5.4.i	Solar	Not Available	32,142	76,971	83,611	108,459	111,168	642,970		Updated 2015-2016 data to include utility owned rooftop solar installations.
2.5.5.i	Wind									
2.6.i	Other									
<b>2.ii</b>	<b>Purchased Net Generation for the data year (MWh)</b>	3,313,729	5,057,121	4,264,353	2,982,149	4,409,318	3,838,420	3,868,683		Purchased net generation in accordance with SEC Reporting; includes generation for retail and wholesale customers.
2.1.ii	Coal									
2.2.ii	Natural Gas						2,427,651			
2.3.ii	Nuclear									
2.4.ii	Petroleum									
2.5.ii	Total Renewable Energy Resources		344,429	499,556	751,190	768,280	847,626	2,357,059		
2.5.1.ii	Biomass/Biogas									
2.5.2.ii	Geothermal									
2.5.3.ii	Hydroelectric									
2.5.4.ii	Solar		206,121	336,633	526,525	557,027	621,037	1,312,477		
2.5.5.ii	Wind		138,308	162,923	224,665	211,253	226,589	1,044,582		
2.6.ii	Other	3,313,729	4,712,692	3,764,797	2,230,959	3,641,038	563,143	1,511,624		Other purchases include market purchases from the grid which cannot be identified by type.
<b>3</b>	<b>Investing in the Future: Capital Expenditures, Energy Efficiency (EE), and Smart Meters</b>									
3.1	Total Annual Capital Expenditures (nominal dollars)	\$ 203,428,000	\$ 615,397,000	\$ 552,353,000	\$ 395,280,000	\$ 412,025,000				
3.2	Incremental Annual Electricity Savings from EE Measures (MWh)	122,353	182,131	200,358	192,099	144,150	107,300			
3.3	Incremental Annual Investment in Electric EE Programs (nominal dollars)	\$ 1,965,000	\$ 15,233,000	\$ 16,784,000	\$ 24,123,000	\$ 18,430,000				
3.4	Percent of Total Electric Customers with Smart Meters (at end of year)	Not Available	76.94%	96.15%	98.85%	98.17%				
<b>4</b>	<b>Retail Electric Customer Count (at end of year)</b>	470,016	508,159	511,344	514,912	518,712				
4.1	Commercial	45,214	51,223	51,476	51,705	52,033				
4.2	Industrial	684	626	606	595	533				
4.3	Residential	424,118	456,310	459,262	462,612	466,146				
<b>Emissions</b>										
<b>5</b>	<b>GHG Emissions: Carbon Dioxide (CO2) and Carbon Dioxide Equivalent (CO2e)</b>									
<b>5.1</b>	<b>Owned Generation</b>									
5.1.1	Carbon Dioxide (CO2)									
5.1.1.1	Total Owned Generation CO2 Emissions (MT)	11,028,143	9,527,938	9,825,331	10,167,350	9,307,386	10,115,157	8,112,183		Includes facilities not subject to GHG Reporting (emissions below reporting threshold)
5.1.1.2	Total Owned Generation CO2 Emissions Intensity (MT/Net MWh)	0.983	0.906	0.823	0.828	0.806	0.752	0.644		
5.1.2	Carbon Dioxide Equivalent (CO2e)									
5.1.2.1	Total Owned Generation CO2e Emissions (MT)	11,116,386	9,598,686	9,919,479	10,234,486	9,369,033				Includes facilities not subject to GHG Reporting (emissions below reporting threshold)
5.1.2.2	Total Owned Generation CO2e Emissions Intensity (MT/Net MWh)	0.991	0.913	0.831	0.833	0.812				
<b>5.2</b>	<b>Purchased Power</b>									
5.2.1	Carbon Dioxide (CO2)									
5.2.1.1	Total Purchased Generation CO2 Emissions (MT)	1,552,864	1,749,055	1,499,526	907,277	1,431,502				Purchase power emissions factor taken from EPA eGRID, WECC Region
5.2.1.2	Total Purchased Generation CO2 Emissions Intensity (MT/Net MWh)	0.469	0.346	0.352	0.304	0.325				
5.2.2	Carbon Dioxide Equivalent (CO2e)									
5.2.2.1	Total Purchased Generation CO2e Emissions (MT)	1,560,329	1,928,003	1,610,646	912,975	1,440,229				Purchase power emissions factor taken from EPA eGRID, WECC Region
5.2.2.2	Total Purchased Generation CO2e Emissions Intensity (MT/Net MWh)	0.471	0.381	0.378	0.306	0.327				
<b>5.3</b>	<b>Owned Generation + Purchased Power</b>									
5.3.1	Carbon Dioxide (CO2)									
5.3.1.1	Total Owned + Purchased Generation CO2 Emissions (MT)	12,581,007	11,276,993	11,324,857	11,074,627	10,738,888				Includes facilities not subject to GHG Reporting (emissions below reporting threshold)
5.3.1.2	Total Owned + Purchased Generation CO2 Emissions Intensity (MT/Net MWh)	0.866	0.724	0.699	0.725	0.673				
5.3.2	Carbon Dioxide Equivalent (CO2e)									
5.3.2.1	Total Owned + Purchased Generation CO2e Emissions (MT)	12,676,715	11,526,689	11,530,125	11,147,461	10,809,262				Includes facilities not subject to GHG Reporting (emissions below reporting threshold)
5.3.2.2	Total Owned + Purchased Generation CO2e Emissions Intensity (MT/Net MWh)	0.872	0.740	0.712	0.730	0.678				
<b>5.4</b>	<b>Non-Generation CO2e Emissions</b>									
5.4.1	Fugitive CO2e emissions of sulfur hexafluoride (MT)	Not Available	22,903	17,061	39,952	38,906				
5.4.2	Fugitive CO2e emissions from natural gas distribution (MT)	Not Available	14,588	14,650	14,646	14,710				



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Ref. No.		Baseline			Last Year	Current Year	Next Year	Future Year	Comments, Links, Additional Information, and Notes	
		2005	2014	2015	2016	2017	2018	2032		
6	<b>Nitrogen Oxide (NOx), Sulfur Dioxide (SO2), Mercury (Hg)</b>									
6.1	Generation basis for calculation	Fossil								
6.2	<b>Nitrogen Oxide (NOx)</b>									
6.2.1	Total NOx Emissions (MT)	16,362	10,679	10,237	9,343	8,607	8,030	5,683	Includes facilities not subject to Acid Rain Reporting (unit capacities are below reporting threshold)	
6.2.2	Total NOx Emissions Intensity (MT/Net MWh)	0.001459	0.001016	0.000858	0.000761	0.000746	0.000597	0.000451		
6.3	<b>Sulfur Dioxide (SO2)</b>									
6.3.1	Total SO2 Emissions (MT)	15,614	6,306	5,890	5,125	4,682	5,326	4,550	Includes facilities not subject to Acid Rain Reporting (unit capacities are below reporting threshold)	
6.3.2	Total SO2 Emissions Intensity (MT/Net MWh)	0.001392	0.000600	0.000493	0.000417	0.000406	0.000396	0.000361		
6.4	<b>Mercury (Hg)</b>									
6.4.1	Total Hg Emissions (kg)	Not Available	Not Available	Not Available	Not Available	12.58		19.47		
6.4.2	Total Hg Emissions Intensity (kg/Net MWh)	Not Available	Not Available	Not Available	Not Available	0.000001		0.000002		
<b>Resources</b>										
7	<b>Human Resources</b>									
7.1	Total Number of Employees	1,947	2,031	2,015	2,023	2,024				
7.2	Total Number on Board of Directors/Trustees	11	9	8	9	9				
7.3	Total Women on Board of Directors/Trustees	2	1	1	1	2				
7.4	Total Minorities on Board of Directors/Trustees	3	2	2	2	2				
7.5	<b>Employee Safety Metrics</b>									
7.5.1	Recordable Incident Rate	Not Available	1.56	1.54	1.69	1.18				
7.5.2	Lost-time Case Rate	Not Available	0.50	0.72	0.68	0.74				
7.5.3	Days Away, Restricted, and Transfer (DART) Rate	Not Available	1.06	1.08	1.00	0.89				
7.5.4	Work-related Fatalities	Not Available	0	0	0	0				
8	<b>Fresh Water Resources</b>									
8.1	Water Withdrawals - Consumptive (Billions of Liters/Net MWh)	Not Available	0.0000211	0.00000175	0.00000183	0.00000185				
8.2	Water Withdrawals - Non-Consumptive (Billions of Liters/Net MWh)	Not Available	Not Available	Not Available	Not Available	Not Available				
9	<b>Waste Products</b>									
9.1	Amount of Hazardous Waste Manifested for Disposal (Metric Tons)	Not Available	Not Available	Not Available	Not Available	579.89				
9.2	Percent of Coal Combustion Products Beneficially Used	Not Available	Not Available	Not Available	Not Available	5%				