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BEFORE THE ARIZONA CORPORATION COMMISSION

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MIKE GLEASON
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

Arizona Corporation Commission

DOCKETED

APR 28 2008

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IN THE MATTER OF THE APPLICATION)
OF UNS ELECTRIC, INC. FOR APPROVAL)
OF ITS RENEWABLE ENERGY)
STANDARD, INCLUDING ITS)
DISTRIBUTED RENEWABLE ENERGY)
PLAN AND RENEWABLE ENERGY)
STANDARD TARIFF)

DOCKET NO. E-04204A-07-0593

DECISION NO. 70315

ORDER

Open Meeting
April 8 and 9, 2008
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. UNS Electric, Inc. ("UNS" or "Company") is engaged in providing electric service within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission ("Commission").

Background

2. On October 12, 2007, UNS filed its application for approval of its Renewable Energy Standard and Tariff ("REST") Plan.

3. UNS includes the following in its application:

- A. Proposed Implementation Plan,
- B. Proposed REST Tariff and Proposed Customer Self-Directed Tariff,
- C. Proposed REST Adjustor Mechanism,

- 1 D. Renewable Energy Credit Purchase Program,
- 2 E. Customer Self-Directed Renewable Energy Option Tariff,
- 3 F. Request for release from the Environmental Portfolio Standard and authority to
- 4 apply EPS funding to REST programs, and
- 5 G. Request for consolidation of reporting requirements.

6 **A. Proposed Implementation Plan**

7 4. UNS includes two proposed Implementation Plans for consideration by the

8 Commission. For each, UNS includes the resource technology employed, the cost, and a line item

9 budget.

10 Full Compliance Opportunity Plan

11 5. The Full Compliance Opportunity Plan ("Option 1") includes activities and costs

12 that UNS believes are required to meet the renewable and distributed energy ("DE") goals set forth

13 in the REST. The REST renewable energy requirement is 1.75 percent of retail kWh sales in

14 2008, with 10 percent of that from DE, and half of DE from residential sources.

15 6. UNS estimates the cost of Option 1 to be \$4.3 million in 2008. The REST Sample

16 Tariff is estimated to collect \$2.4 million. The additional required revenue would come from

17 increasing the caps in the Sample Tariff for residential and large non-residential customers. This

18 additional revenue results in a total of \$4.5 million for UNS' Option 1. The Option 1 proposed

19 revenue effects are shown in Table 1.

20 Table 1 – Option 1 Customer Impact, Year 2008

Customer Class	Total \$	Pct of \$	Avg. Bill	Monthly Cap	Pct of Customers at Cap
Residential	\$2,987,000	66.9%	\$3.20	\$5.20	30%
Non-Residential	\$1,209,000	27.1%	\$9.82	\$39.00	11%
Non-Residential \geq 3 MW	\$208,000	4.7%	\$1,375.00	\$1,500.00	74%
Total	\$4,464,000	100.0%			

26 ...

27 ...

28 ...

18. Table 5 shows the cost per month for various customer types based on typical monthly energy use for the three proposals discussed above.

Table 4
UNS Renewable Energy Programs
EPS and REST - Customer Rates and Caps

	<u>UNS Proposed Plans</u>			
	<u>Present</u> <u>EPS</u>	<u>Sample</u> <u>Tariff</u>	<u>Full</u> <u>Compliance</u>	<u>Staff Proposed</u> <u>Plan</u>
Rate per kWh	\$0.000875	\$0.004988\$	\$0.004988\$	\$0.004988
Residential Cap	\$0.35	\$1.05	\$5.20	\$2.00
Non-Residential Cap	\$13.00	\$39.00	\$39.00	\$39.00
Non-Residential \geq 3 MW Cap	\$39.00	\$117.00	\$1,500.00	\$500.00

Table 5
UNS Renewable Energy Programs
EPS and REST - Customer Type
Monthly Surcharge Comparison

<u>Customer Types</u>	<u>Typical</u> <u>kWh / mo.</u>	<u>UNS Proposed Plans</u>			<u>Staff</u> <u>Proposed</u> <u>Plan</u>
		<u>EPS</u>	<u>Sample Tariff</u>	<u>Full Compliance</u>	
Low Consuming Residence	400	\$0.35	\$1.05	\$2.00	\$2.00
Avg. Consuming Residence	960	\$0.35	\$1.05	\$4.79	\$2.00
High Use Residence	2,000	\$0.35	\$1.05	\$5.20	\$2.00
Dentist Office	2,000	\$1.75	\$9.98	\$9.98	\$9.98
Hairstylist	3,900	\$3.41	\$19.45	\$19.45	\$19.45
Department Store	170,000	\$13.00	\$39.00	\$39.00	\$39.00
Mall	1,627,100	\$13.00	\$39.00	\$39.00	\$39.00
Retail Video Store	14,400	\$12.60	\$39.00	\$39.00	\$39.00
Large Hotel	1,067,100	\$13.00	\$39.00	\$39.00	\$39.00
Large Building Supply	346,500	\$13.00	\$39.00	\$39.00	\$39.00
Hotel/Motel	27,960	\$13.00	\$39.00	\$39.00	\$39.00
Fast Food	60,160	\$13.00	\$39.00	\$39.00	\$39.00
Large High Rise Office Bldg	1,476,100	\$13.00	\$39.00	\$39.00	\$39.00
Hospital (< 3 MW)	1,509,600	\$13.00	\$39.00	\$39.00	\$39.00
Supermarket	233,600	\$13.00	\$39.00	\$39.00	\$39.00
Convenience Store	20,160	\$13.00	\$39.00	\$39.00	\$39.00
Hospital (> 3 MW)	2,700,000	\$39.00	\$117.00	\$1,500.00	\$500.00
Copper Mine	72,000,000	\$39.00	\$117.00	\$1,500.00	\$500.00

19. The Company is required by A.A.C. R14-2-1809.A to file a tariff under which a customer may apply to UNS for funds to install renewable distributed energy facilities. UNS has developed a Customer Self-Directed Renewable Energy Option Tariff ("REST-TS2") and has

1 included it in the filing made herein. The REST-TS2 applies to either REST Implementation Plan
2 Option. Staff has recommended that REST-TS2 be approved.

3 **C. Release from Environmental Portfolio Standard**

4 20. According to UNS, the REST is meant to supplant the current Environmental
5 Portfolio Standard ("EPS"), A.A.C. R14-2-1618. UNS also recognizes that there is no specific
6 provision in the REST rules or Decision No. 69217 that releases affected utilities from the EPS
7 obligations or addresses the disposition of EPS surcharge funding. For this reason, UNS requests
8 that it be formally released from the requirements of the EPS and that it be permitted to apply all
9 unused EPS surcharge funding to REST program expenses.

10 21. It is Staff's understanding, as well, that the REST is meant to supplant the EPS.
11 Accordingly, Staff has recommended that UNS be released from the requirements of the EPS and
12 that any remaining EPS funding be applied to the REST program in order to make use of the EPS
13 funding for the purpose of developing renewable generation as it was originally intended. Staff
14 further recommends that the Renewable Energy Standard Rules (A.A.C. R14-2-1801 through -
15 1806) supersede the Environmental Portfolio Standard Rules (A.A.C. R14-2-1618) and any other
16 reporting requirements related to renewable energy resources. Staff further recommends that UNS
17 no longer charge customers the current EPS surcharge and shall no longer file the annual
18 Environmental Portfolio Surcharge Report ordered by Decision No. 63353.

19 **D. Renewable Energy Credit Purchase Program**

20 22. UNS currently has a SunShare program that provides incentives for solar
21 photovoltaic facilities ("PV") of 10 kW or less. This program provides only up-front incentives.
22 UNS proposes a new Renewable Energy Credit Purchase Program ("RECPP") that is different
23 from SunShare in several ways:

- 24 A. added other solar technologies,
25 B. added other renewable technologies,
26 C. added performance-based incentives, and
27 D. added larger facilities.

28 23. UNS provided Attachment D in its filing, "Conforming Project Incentive Matrix," a
table showing incentive payments per kWh as they are reduced over time.

1 24. The difference between the program under Option 1 and the program under Option
2 2 is the rebate amounts for PV and solar water heating. The rebates are higher for PV under
3 Option 1 (\$4.50/watt v. \$3.00/watt in years 2008 and 2009). The incentive for solar water heating
4 under Option 1 is \$1,500 plus \$0.50 per kWh up to a maximum of \$3,500. Under Option 2, it is
5 \$750 plus \$0.25 per kWh up to a maximum of \$1,750.

6 25. Staff objects to one UNS' installation guidelines for photovoltaic systems. UNS'
7 requirement states that eligible PV systems must be installed with a horizontal tilt angle between
8 10 degrees and 60 degrees. A 0 degree tilt is not allowed. This may seem like a small difference,
9 but it is important to recognize that a 0 degree tilt may make the difference between an
10 economically viable system and one that does not "pencil out." The reason is that, even though the
11 0 degree tilt will provide a less than optimal annual system performance, on a large flat-roof
12 commercial building, the option of installing the system without a rack can make or break the
13 economics of a system.

14 26. Staff has recommended that the UNS photovoltaic installation requirements allow
15 for a 0 degree horizontal tilt angle option. Further, Staff has recommended that UNS be directed
16 to either modify its SunShare PV Off-Angle Shading Annual Energy Derating Chart to allow for a
17 0 degree tilt or, at UNS' option, merely allow the same rating for 0 degrees as is calculated for a 10
18 degree horizontal tilt.

19 27. In its RECPP, UNS has proposed an exception to the requirements in REST Rule
20 14-2-1803.B, which defines how energy production will be calculated. Staff realizes that UNS
21 offered its proposed calculation method during the REST Rule approval process, but UNS did not
22 prevail, and the Commission approved the working in R14-2-1803.B.

23 28. Staff believes that it is only fair to all utilities and customers that a uniform set of
24 requirements be used to determine the calculation of Renewable Energy Credits. Staff has
25 recommended that the Commission deny UNS' request for an exception to the wording in R14-2-
26 1803.B

27 29. Staff notes that the work of the Uniform Credit Purchase Program ("UCPP")
28 Working Group, which commenced in 2006, should be completed prior to development of

1 reasonable uniform incentives for each renewable generation technology. Staff anticipates that the
2 work of the UCPP Working Group should be completed in 2008. Staff has recommended that, if
3 the Commission approves a UCPP, UNS should be required to develop a mechanism to
4 incorporate UCPP procedures and incentive levels for all eligible technologies in its proposed
5 REST Plan for 2009 and later years.

6 **E. Fair Value**

7 30. Staff has analyzed UNS' application in terms of whether there are fair value
8 implications. In Decision No. 59951, issued on January 3, 1997, the Commission determined
9 UNS' fair value rate base to be \$118,495,489. Staff considered this figure for purposes of this
10 analysis. The proposed 2008 Renewable Energy Standard Implementation Plan, Customer Self-
11 Directed Tariff, and REST Tariff would have no impact on the Company's fair value rate base or
12 rate of return because plant developed pursuant to the REST program is not added to the rate base.

13 **F. REST Adjustor Mechanism**

14 31. UNS has requested establishment of an adjustor mechanism for recovery of REST
15 program expenses. Establishment of a new adjustor mechanism is best addressed in a general rate
16 case. Therefore, Staff has addressed UNS' proposed adjustor mechanism in the currently ongoing
17 UNS rate case, Docket No. E-04204A-06-0783. While the adjustor mechanism is addressed by
18 Staff in the rate case, the REST rates are properly addressed in this Implementation Plan
19 proceeding.

20 **G. Consolidation**

21 32. UNS requests that the reporting requirements set forth for the Green Watts
22 SunShare Program in Decision No. 67178 (August 10, 2004) and as modified in Decision No.
23 69201 (December 21, 2006) be consolidated with the reporting requirements set forth in A.C.C.
24 R14-2-1812. Staff finds this request to be reasonable.

25 **H. Staff Recommendations Summary**

26 33. Staff has recommended that UNS' Option 1 be rejected, and that Staff's proposed
27 2008 Renewable Energy Standard Implementation Plan be approved, as discussed herein. In the
28 ...

1 event that the Commission does not adopt Staff's proposed REST Plan for UNS, Staff has
2 recommended that UNS' Option 2 be approved.

3 34. Staff has recommended that a REST Tariff be approved that includes the rate of
4 \$0.004988 per kWh and monthly caps of \$2.00 for residential customers, \$39.00 for non-
5 residential customers, and \$500.00 for non-residential customers with demands of 3 MW or
6 greater.

7 35. Staff has recommended that UNS' Customer Self-Directed Renewable Energy
8 Option tariff be approved.

9 36. Staff has recommended that UNS make a compliance filing within 15 days of the
10 effective date of the Commission Decision in this case. This filing should include a revised UNS
11 2008 Renewable Energy Standard Implementation Plan, a REST Tariff, and a Customer Self-
12 Directed Renewable Energy Option tariff consistent with this Decision.

13 37. Staff has recommended that the proposed 2008 Renewable Energy Standard
14 Implementation Plan, Customer Self-Directed Renewable Energy Option tariff, and REST Tariff
15 remain in effect until further order of the Commission.

16 38. Staff has recommended that the Commission approve UNS' Renewable Energy
17 Credit Purchase Program, as modified by Staff, as a replacement for its SunShare program. Staff
18 has recommended that, if the Commission approves a Uniform Credit Purchase Program, UNS
19 develop a mechanism to incorporate Uniform Credit Purchase Program procedures and incentive
20 levels for all eligible technologies in its proposed REST Plan for 2009 and later years, including
21 Staff's recommendations shown herein.

22 39. Staff has recommended that UNS be released from the requirements of the
23 Environmental Portfolio Standard and that any remaining Environmental Portfolio Surcharge
24 funding be applied to the REST program.

25 40. Staff has recommended that the Renewable Energy Standard Rules (A.A.C. R14-2-
26 1801 through -1806) supersede the Environmental Portfolio Standard Rules (A.A.C. R14-2-1618)
27 and any other reporting requirements related to renewable energy resources.

28 ...

1 IT IS FURTHER ORDERED that the Renewable Energy Credit Purchase Program,
2 Customer Self-Directed Renewable Energy Option tariff, and REST tariff be approved, as
3 discussed herein.

4 IT IS FURTHER ORDERED that, if the Commission approves a Uniform Credit Purchase
5 Program, UNS Electric, Inc shall develop a mechanism to incorporate Uniform Credit Purchase
6 Program procedures and incentive levels for all eligible technologies in its proposed REST plan for
7 2009 and later years.

8 IT IS FURTHER ORDERED that the proposed 2008 Renewable Energy Standard
9 Implementation Plan, Customer Self-Directed Renewable Energy Option tariff, and REST Tariff
10 remain in effect until further order of the Commission.

11 IT IS FURTHER ORDERED that UNS Electric, Inc.'s Renewable Energy Credit Purchase
12 Program, as modified by Staff, is approved as a replacement for UNS Electric, Inc.'s SunShare
13 program.

14 IT IS FURTHER ORDERED that the Commission deny UNS Electric, Inc.'s request for an
15 exception to the wording in R14-2-1803.B.

16 IT IS FURTHER ORDERED that UNS Electric, Inc. be directed to either modify its
17 SunShare PV Off-Angle Shading Annual Energy Derating Chart to allow for a 0 degree tilt or, at
18 UNS Electric, Inc.'s option, merely allow the same rating for 0 degrees as is calculated for a 10
19 degree horizontal tilt.

20 IT IS FURTHER ORDERED that the annual reporting requirements for UNS Electric, Inc.
21 set forth for the Green Watts SunShare Program in Decision No. 63362 (February 8, 2001) and as
22 modified in Decision No. 66786 (February 13, 2004) be consolidated with the reporting
23 requirements set forth in A.C.C. R14-2-1812.

24 IT IS FURTHER ORDERED that the request for establishment of an adjustor mechanism
25 for recovery of REST Program expenses not be approved in this docket.

26 IT IS FURTHER ORDERED that UNS Electric, Inc. is released from the requirements of
27 the Environmental Portfolio Standard and that any remaining Environmental Portfolio Surcharge
28 funding be applied to the REST program.

1 IT IS FURTHER ORDERED that, for UNS Electric, Inc., the Renewable Energy Standard
2 Rules (A.A.C. R14-2-1801 through -1806) supersede the Environmental Portfolio Standard Rules
3 (A.A.C. R14-2-1618) and any other reporting requirements related to renewable energy resources.

4 IT IS FURTHER ORDERED that UNS Electric, Inc. shall no longer charge customers the
5 current Environmental Portfolio Standard surcharge and shall no longer file the Annual
6 Environmental Portfolio Surcharge Report ordered by Decision No. 63353.

7 IT IS FURTHER ORDERED that UNS Electric, Inc. shall make a compliance filing within
8 15 days of the effective date of the Commission Decision in this case. This filing should include a
9 revised UNS Electric, Inc. 2008 Renewable Energy Standard Implementation Plan, a REST Tariff,
10 and a Customer Self-Directed Renewable Energy Option tariff consistent with this Decision.

11 IT IS FURTHER ORDERED that this Order shall become effective immediately.

12 **BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**

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14 CHAIRMAN

COMMISSIONER

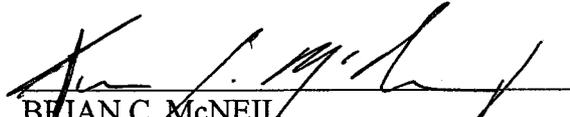
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COMMISSIONER

COMMISSIONER

COMMISSIONER

18 IN WITNESS WHEREOF, I, BRIAN C. McNEIL, Executive
19 Director of the Arizona Corporation Commission, have
20 hereunto, set my hand and caused the official seal of this
21 Commission to be affixed at the Capitol, in the City of
22 Phoenix, this 28th day of April, 2008.

23 
24 BRIAN C. McNEIL
Executive Director

25 DISSENT: 

26
27 DISSENT: 

28 EGJ:RGG:lhm\JFW

1 Commissioner Pierce *dissenting*:

2 I dissent from the Commission's approval of Staff's Proposed REST
3 Implementation plan. The Commission should have approved UNS Electric's Sample
4 Tariff Plan, which would have provided the same amount of renewable energy and the
5 same amount (maybe more) of distributed generation for nearly one million dollars less
6 than Staff's Proposed Plan. Aside from the cost savings entailed in UNS Electric's
7 Sample Tariff Plan, the only difference between the two plans is that the Sample Tariff
8 Plan relaxes the requirement found in A.A.C. R14-2-1805.D that 50% of distributed
9 generation ("DG") come from residential rooftops and 50% come from commercial
10 rooftops. Because there is no public policy basis for distinguishing between residential
11 DG and commercial DG, I cannot support Staff's Proposed Plan.

12 The cost of residential DG¹ is staggering. Staff's Proposed Plan costs \$3.1 million.
13 Eighty-six percent of that cost (\$2.7 million) is for residential and commercial DG. Of
14 that number, approximately ninety percent (\$2.4 million) is for residential DG. In other
15 words, more than three-fourths of the cost of Staff's Proposed Plan is for residential DG,
16 which will produce less than 5% of UNS Electric's renewable energy in 2008. A stubborn
17 insistence by this Commission that 50% of DG come from residential facilities is an
18 albatross around the neck of our REST rules.

19 Given the negative externalities associated with generating electricity using fossil
20 fuels, I believe the Commission is justified in requiring utilities to acquire a portion of

21 _____
22 ¹ It is difficult to make an apples-to-apples comparison of the cost of residential DG with
23 the cost of commercial DG because residential facilities receive an up-front incentive,
24 whereas commercial facilities receive a performance-based incentive. This results in
25 residential DG looking relatively more expensive in early years than commercial DG. It
26 also results in the risk of underperformance of the facility being shifted from residential
customers to all ratepayers. There is no doubt, however, that residential DG is more
expensive than commercial DG; the very reason residential customers receive an up-front
incentive is because, unlike commercial customers, they are difficult to entice with
performance-based incentives. The only uncertainty is the magnitude of the cost premium
of residential DG over commercial DG.

1 their electricity—at premium prices—from renewable and DG sources. We cannot afford,
2 however, to require utilities to pay super-premium prices for residential DG for no
3 discernable reason.

4 So far, I have spoken only of the direct costs of residential DG, but I'm equally
5 concerned about the opportunity costs. In other words, what did the Commission give up
6 when it required UNS Electric to devote \$2.4 million towards residential DG in 2008?
7 UNS Electric's application indicates that UNS Electric can generate or purchase 31,000
8 MWh of renewable energy for \$425,000. Assuming linear pricing, UNS Electric can
9 increase the amount of renewable energy it acquires in 2008 more than five fold if the
10 Commission would relax its residential DG requirement. In other words, for the same
11 cost, UNS Electric could have enjoyed more than five times the amount of reductions in
12 NO_x, SO_x, and Carbon Dioxide emissions in 2008 than it will experience under Staff's
13 Proposed Plan.

14 Inquiring into the opportunity costs of 50% residential DG mandate begs the
15 question: what are we trying to achieve in our REST rules? Are we trying to increase the
16 number of DG facilities installed on residential rooftops, or are we trying to promote and
17 increase the use of renewable energy generally? The name of the rules—i.e., the
18 *Renewable Energy Standard and Tariff*—suggests that their purpose is to promote
19 renewable energy generally, and that is certainly how the rules are perceived by the
20 general public. Given this, it occurs to me that there is a certain amount of mislabeling
21 associated with approving a REST implementation plan that spends more money
22 installing residential DG than it does on generating and acquiring renewable energy.

23 If the Commission continues to use the REST rules to prop up residential DG,² it
24 will sour me on the entire enterprise. I dissent.

25 _____
26 ² I hold no animus towards residential DG. I'd be happy to see residential DG flourish so
long as it does so on the same terms that are being offered to commercial DG customers.

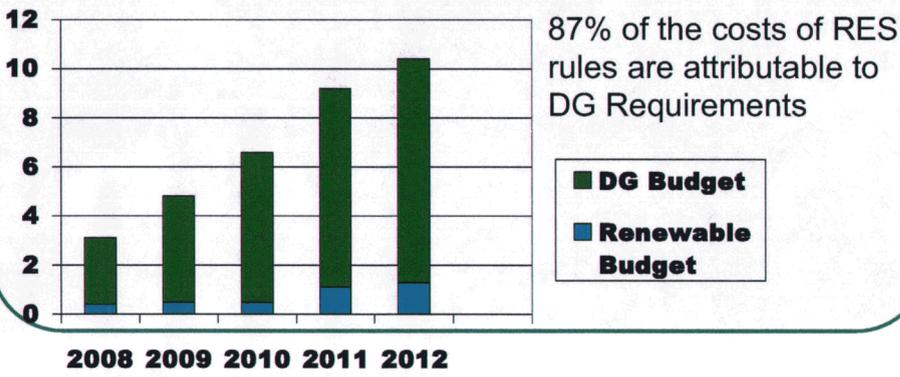
1 Note: Following are some tables and graphs that visually describe what I've tried to
2 explain here.

UNS Electric's REST Targets & Budget

	2008	2009	2010	2011	2012
TARGETS:					
Renewable Target	1.75%	2.00%	2.50%	3.00%	3.50%
DG Target	.175%	.3%	.5%	.75%	1.05%
BUDGET: (Millions)					
Renewable Budget	\$.4	\$.5	\$.5	\$ 1.1	\$ 1.3
DG Budget	\$ 2.7	\$ 4.3	\$ 6.1	\$ 8.1	\$ 9.1
Total Budget	\$ 3.1	\$ 4.8	\$ 6.6	\$ 9.2	\$ 10.4

UNS Electric's Forecasted REST Costs

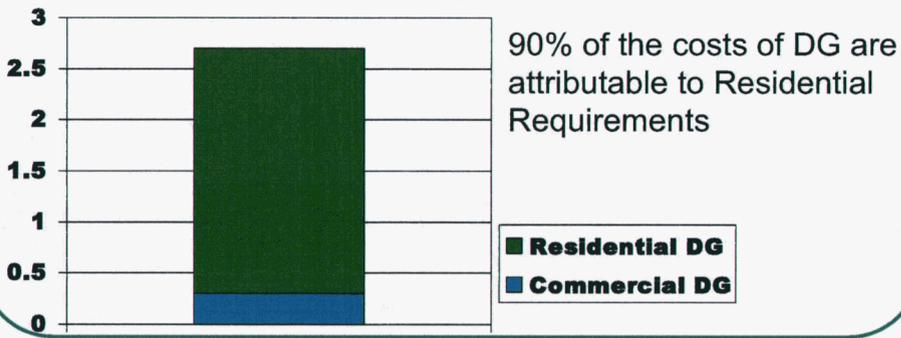
	2008	2009	2010	2011	2012
Total Cost (Millions)	\$ 3.1	\$ 4.8	\$ 6.6	\$ 9.2	\$ 10.4
Renewable Cost	\$.4	\$.5	\$.5	\$ 1.1	\$ 1.3
DG Cost	\$ 2.7	\$ 4.3	\$ 6.1	\$ 8.1	\$ 9.1



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UNS Electric's 2008 DG Budget

Total 2008 DG Budget	\$2.7
Residential DG Component	\$2.4
Commercial DG Component	\$.3



1 SERVICE LIST FOR: UNS Electric, Inc.
2 DOCKET NO. E-04204A-07-0593

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