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AZ CORP COMMISSION
DOCKET CONTROL

December 11, 2008

Arizona Corporation Commission

DOCKETED

DEC 11 2008

Commissioner Gary Pierce
Arizona Corporation Commission
1275 West Washington
Phoenix, Arizona 85007

DOCKETED BY

Re: Arizona Public Service Company RES Implementation Plan
Docket No. E-01345A-08-0331

Dear Commissioner Pierce:

This letter is in response to your November 14, 2008 letter requesting additional information on the APS 2009 Renewable Energy Standard ("RES") Implementation Plan, specifically the cost to meet the Annual Renewable Energy Requirement,¹ the cost to meet the Distributed Renewable Energy Requirement ("Distributed Requirement"),² and the costs of meeting the Distributed Requirement with one-half residential applications and one-half non-residential, non-utility applications.³ In response, we have prepared a schedule that contains this information.

In Table 1, which is attached, APS has provided RES projected budget information segmented for Renewable Generation and the Residential and Non-Residential Distributed categories.⁴ In 2009, the projected cost to meet the Annual Renewable Energy Requirement is \$78.4 million, of which \$12.2 million is for utility-scale renewable generation. The total projected cost to meet the Distributed Requirement is \$66.2 million; the projected cost of the non-residential component is \$9.1 million; and the residential component is \$57.1 million.

The years 2008 through 2013 were also included in Table 1 to highlight several key items that should be noted in this analysis. These items include:

¹ Pursuant to RES Rule R14-2-1804.

² Pursuant to R14-2-1805(A) and (B).

³ Pursuant to R14-2-1805(D).

⁴ Table 1 also includes the costs per megawatt hour, to assist Commission Staff in responding to your request. For example, for 2009 Renewable Generation cost is projected to be \$68.12, Residential DE is projected to be \$169.85, and Non-Residential DE is projected to be \$130.40.

- The 2008 numbers reflect projected year end program results, while the 2009 through 2013 numbers are projections that assume that APS will be in full compliance. Importantly, the 2009 through 2013 years of the APS Implementation Plan include technology assumptions that are significant cost drivers for the figures in Table 1. For example, each year from 2009 to 2013 assumes several dozen Non-Residential daylighting projects, and one or two biomass/biogas projects that are expected to be relatively inexpensive compared to photovoltaic solar. To date, APS has not approved any reservations for these technologies, although we have received a small number of reservation requests. If APS's actual project mix continues to be predominantly solar as it has been in 2008, the actual cost will likely be much higher.
- All distributed incentives are scheduled to be reduced approximately 10% in 2011 and another 15% in 2013, consistent with the approach recommended by the Uniform Credit Purchase Program Working Group. The Working Group believes that as technologies mature, the need for incentives will decline over time. This reduces the cost per megawatt hour ("MWh") for both Residential and Non-Residential sectors, although the reductions are more noticeable for Residential. This is because Non-Residential incentives are predominantly production-based (*i.e.*, paid on a cents per kilowatt hour ("kWh") basis) and the incentives carry forward for terms of 10, 15, or 20 years. For example, a production-based incentive executed in 2009 that pays the program participant \$0.18 per kWh will be paid that rate for 20 years, while a production-based incentive executed in 2011 would pay the participant \$0.162 per kWh. Therefore, new production-based incentives in 2011 paid at the lower rate are only part of the Non-Residential budget for 2011. On the other hand, the entire Residential budget for 2011 is made up of up-front incentives that are lower than the previous year.
- Much like the distributed component, Renewable Generation per unit cost varies from year to year, depending on the renewable projects become operational. For example, the average cost per MWh decreases in 2009 because of the addition of a wind project, while average cost per MWh rises in 2011, when the Solana Concentrated Solar Power plant is expected to be in-service.
- Table 1 was designed to only include the cost to APS and does not include the cost of participant contributions towards their project. One of the key tenets of the APS Distributed Energy Administration Plan is that participants pay at least some portion of the cost of their system. That is exemplified by RES program requirements, such as the 60% cap on non-residential production-based projects, and 15% minimum participant contribution for residential

Commissioner Gary Pierce
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water heating. Including participant contributions would increase per unit costs significantly.

We hope that this information is useful in your review. If you should have any further questions, please do not hesitate to contact me. If you would prefer, we would be pleased to meet with you to discuss these issues.

Sincerely,

A handwritten signature in black ink, appearing to read "Deborah R. Scott". The signature is fluid and cursive, with the first name being the most prominent.

Deborah R. Scott

Attachment

cc: Chairman Mike Gleason
Commissioner Jeff Hatch-Miller
Commissioner William Mundell
Commissioner Kristin K. Mayes
Docket Control
Administrative Law Judge Lyn Farmer
Brian McNeil, Executive Director
Ernest Johnson, Utilities Division
Janice Alward, Chief Counsel
Parties of Record

Table 1: APS Renewable Energy Cost

	2008	2009	2010	2011	2012	2013
Renewable Generation Expenses (R14-2-1804):¹						
Total Renewable Generation (\$MM)	\$ 6.9	\$ 12.2	\$ 12.5	\$ 20.8	\$ 46.1	\$ 53.5
Cost per MWh ²	\$ 71.84	\$ 68.12	\$ 64.10	\$ 75.79	\$ 93.27	\$ 100.14
Distributed Energy Expenses (R14-2-1805):^{1,3,4}						
Residential (\$MM)	\$ 18.6	\$ 57.1	\$ 52.6	\$ 60.6	\$ 73.8	\$ 38.9
Cost per MWh	\$ 195.60	\$ 169.85	\$ 171.46	\$ 149.53	\$ 146.15	\$ 134.51
Non-Residential (\$MM)	\$ 5.8	\$ 9.1	\$ 12.0	\$ 15.3	\$ 19.5	\$ 21.2
Cost per MWh	\$ 235.58	\$ 130.40	\$ 128.39	\$ 121.47	\$ 118.74	\$ 117.47
Total Generation and Distributed (\$MM)	\$ 31.3	\$ 78.4	\$ 77.0	\$ 96.7	\$ 139.4	\$ 113.7

1: Cost and cost per MWh includes both energy/incentives and all non-project costs.

2: Includes the total cost to APS, including the RES portion (Above Market) and the Non-RES portion (Up to Market). Non-RES portion is collected in base rates and PSA as purchased power.

3: Includes cost to APS, but not customer portion or governmental incentives. Also assumes 20 years of system production for up-front incentives.

4: DE cost per MWh is levelized using APS's weighted average cost of capital.

SERVICE LIST
Docket No. E-01345A-08-0331

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this 11th day of December, 2008, to:

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