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BEFORE THE ARIZONA CORPORATION COMMISSION

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JUN 29 2012

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IN THE MATTER OF THE APPLICATION  
OF ARIZONA PUBLIC SERVICE  
COMPANY FOR APPROVAL OF ITS 2013  
RENEWABLE ENERGY STANDARD  
IMPLEMENTATION FOR RESET OF  
RENEWABLE ENERGY ADJUSTOR

DOCKET NO. E-01345A-12-0290

APPLICATION

16

The attached 2013 – 2017 Renewable Energy Standard (RES) Implementation Plan (2013 RES Plan) continues APS's commitment to meeting renewable energy targets established by prior Commission orders. In approving APS's 2012 RES Plan, the Commission provided guidance on how APS should move forward with its RES program. Based upon the previously-approved RES Plan, APS projects that in 2015, it will serve its retail load with more than double the amount of renewable energy required by the RES rules.

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APS's 2013 Plan maintains the course for meeting this projection. It does not propose new programs. Instead, the attached Plan seeks only the incremental funding needed to fulfill the Commission's directions.

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Accordingly, APS submits its 2013 RES Plan (attached as Exhibit A) pursuant to A.A.C. R14-2-1813. For convenience, APS also attaches a summary of the Plan as

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1 Exhibit B and a PowerPoint presentation describing the Plan as Exhibit C. The Plan  
2 includes the following:

- 3 • Two options related to 2013 distributed energy (DE) incentive levels;
- 4 • A proposal, in compliance with Commission Docket No. 72737,<sup>1</sup>  
5 regarding the role of Renewable Energy Credits (RECs) when incentives  
6 are no longer needed to facilitate DE installation;
- 7 • A request for administrative changes to APS's 2012 Schools and  
8 Government (S&G) Program;
- 9 • A request to strengthen programs related to solar installer education;
- 10 • A description of APS's previously-approved Community Solar Program;<sup>2</sup>  
and
- 11 • Estimated budgets for 2013 through 2017.

11 This pleading briefly touches upon each in turn.

12 **I. APS Proposes Two DE Options—No Cash Incentives v. One Last Year of**  
13 **Cash Incentives.**

14 Approved DE commitments will ensure that APS complies with its non-  
15 residential DE requirements through 2020 and residential DE requirements through  
16 2015. Although APS may not need additional cash incentives to reach compliance in  
17 2013, the Commission may choose to continue with some additional level of incentive  
18 funding. To address these alternative perspectives, APS offers two DE options for its  
19 2013 RES Plan. Under both Options, APS proposes moving to a track and record  
20 method of demonstrating compliance with its DE requirements.

21 **A. DE Option One: no additional DE cash incentives in 2013.**

22 DE Option One involves no additional incentive funds for residential or non-  
23 residential DE in 2013. In 2011, residential DE incentives for photovoltaic (PV) systems  
24 under APS's RES Plan fell from \$1.95 to \$1.00 per watt. This rapid decline continued in  
25 2012, with residential DE incentives falling from \$0.75 per watt at the beginning of the  
26 year to an estimated \$0.20 per watt by year's end. Declining PV costs and the  
27 prevalence of consumer leasing models that require little to no upfront payments from

28 <sup>1</sup> Decision No. 72737, p. 39 (2012).

<sup>2</sup> See *id.*

1 customers have created sustained levels of high customer demand. Given the maturation  
2 of the DE market and APS's robust compliance numbers, the Commission may consider  
3 eliminating DE cash incentives in 2013. The Commission may take this step for all DE,  
4 or order APS to continue offering incentives for specific programs, such as non-PV  
5 residential technologies. A proposed REAC-1 Adjustment Schedule that reflects DE  
6 Option One is attached as Exhibit D in redlined and clean forms.

7 **B. DE Option Two: sufficient cash incentives (for one more year) to**  
8 **approximate 2012 activity, but at a lower incentive level.**

9 APS offers DE Option Two if the Commission decides to delay Option One (APS  
10 believes that a zero DE incentive is inevitable). DE Option Two involves structuring  
11 2013 incentives in a way to stimulate the same amount of installation activity that  
12 occurred in 2012, but with a smaller budget to reflect lower incentive levels. If the  
13 Commission selects DE Option Two, APS assumes that 2013 will be the last year for  
14 APS to offer incentives under its RES program. Under Option Two, APS proposes to  
15 start residential incentives in 2013 where 2012 incentive levels conclude. APS currently  
16 estimates that residential PV incentives will end 2012 at \$0.20/watt.

17 Starting the 2013 standard PV incentive program at \$0.20/watt (and assuming  
18 2012 levels of DE activity) will require a residential incentive budget of \$9 million. APS  
19 proposes to allocate the \$9 million among residential incentive types as follows:

- 20 (i) \$5.3 million for the standard PV incentive program with a similar  
21 market-based step down mechanism (but starting at \$0.20/watt) that  
22 the Commission approved for the 2012 RES Plan;
- 23 (ii) \$3 million for non-PV technologies, including Solar Water Heating  
24 (SWH) incentives. APS proposes reducing SWH incentives from  
25 \$0.50/kWh equivalent in energy savings to \$0.45/kWh; and
- 26 (iii) \$700,000 for APS's Energy Star Plus Solar Homes (Home Builder)  
27 program. The PV incentive under this Program would be lowered  
28 from \$0.85/watt to \$0.30/watt. Once this carve-out is exhausted,

1 interested homebuilders could apply for incentives under the  
2 standard PV incentive program.

3 This residential budget would add approximately 40 MW of new capacity on APS's  
4 system. Forty MW of new capacity, in addition to existing installations and program  
5 commitments, would ensure that APS complies with its residential DE requirement  
6 through 2016.

7 The 2013 non-residential DE incentive under DE Option Two will include both  
8 Upfront Incentive (UFI) and Production-Based Incentive (PBI) components. Regarding  
9 non-residential UFIs, APS proposes to (i) redefine the projects eligible for a UFI as  
10 those seeking a total incentive at or below \$75,000; and (ii) cap incentives at \$0.40/watt.  
11 For this program, APS proposes a budget of \$400,000.

12 Regarding PBIs under DE Option Two, APS proposes to split the program into 4  
13 separate blocks of capacity with the Commission selecting the number of blocks to  
14 implement, if any. The number of blocks selected will define both the number of  
15 nomination periods in 2013 and the total lifetime budget expansion. Each block will add  
16 5 MW, involve a \$0.07/kWh PBI cap and add \$6.9 million to the current \$765.8 million  
17 in lifetime PBI commitments. APS notes that it needs no additional non-residential DE  
18 until 2020 to maintain compliance. A proposed Adjustment Schedule REAC-1 that  
19 reflects DE Option Two is attached as Exhibit E in redlined and clean forms.

20 **C. Moving from RECs to a "Track and Record" method for establishing**  
21 **compliance**

22 With any transition away from DE cash incentives, it is not clear how APS will  
23 continue to acquire RECs. Currently, APS procures a REC from its owner by giving the  
24 owner a cash incentive. But without cash incentives, APS must establish a new means of  
25 securing compliance with DE requirements. Under DE Option One, this would occur  
26 immediately. Even with an incentive budget under DE Option Two, DE installations  
27 may deplete the authorized budget (for one or more technologies) in the middle of 2013.  
28 Or incentive levels might decline such that customers continue to install DE, but without

1 a cash incentive. Both DE Options in this Plan require that APS transition to tracking  
2 and recording DE production.

3 APS seeks authorization from the Commission to demonstrate compliance with  
4 DE requirements by tracking and recording DE production under both Options presented  
5 in the Plan. Under APS's proposed track and record system, any new DE installation  
6 interconnected within the APS's service territory would be counted towards APS's DE  
7 requirement independent of REC ownership. APS requests that this authorization  
8 become effective on January 1, 2013. Moving to a track and record system is an efficient  
9 and effective mechanism to demonstrate compliance with DE requirements. It is also  
10 consistent with, and would not harm the implementation of, the current RES rules.  
11 Those rules base compliance on DE produced as a percentage of APS's overall RES  
12 requirements.<sup>3</sup> The rules only created RECs as a means to track compliance. To the  
13 extent APS can track and record DE, RECs are unnecessary for APS to demonstrate  
14 compliance with DE requirements. And because the rules are already structured around  
15 achieving certain energy production targets, it is unlikely that removing RECs from the  
16 rules would trigger the need for other substantive changes.

17 **II. Administrative Changes to the 2012 Third-Party Schools and Government**  
18 **Program (2012 S&G Program)**

19 The Commission approved APS's 2012 S&G Program in Decision No. 72737.<sup>4</sup>  
20 The 2012 S&G Program will add 25 MW of new capacity. Third parties will own 18.75  
21 MW and APS will own 6.25 MW.

22 To promote the orderly and efficient administration of the 2012 S&G Program,  
23 APS proposes the following administrative changes: (i) holding six bi-monthly  
24 nomination cycles for equal amounts of capacity in each, with the first cycle  
25 commencing in November 2012; and (ii) setting the incentive cap at the same level, and  
26 on the same schedule, as the 2011 Schools and Government Program.<sup>5</sup> These changes

27 <sup>3</sup> See A.A.C. R14-2-1805.

28 <sup>4</sup> See Decision No. 72737, p. 38.

<sup>5</sup> The proposed incentive caps are \$0.106/kWh for a 15-year PBI and \$0.096/kWh for a 20-year PBI.

1 will facilitate consistency in the market place and ensure that some PBI bids occur now,  
2 but that some also occur towards the end of the year when market prices might have  
3 declined.

4 Beyond these administrative changes, two budget-related items warrant the  
5 Commission's attention. First, APS requests additional funds for lifetime authorization  
6 under the 2012 S&G Program. The Commission approved 18.75 MW for this program  
7 in 2012. But that approval did not include additional lifetime authorizations. APS  
8 estimates that installing 18.75 MW of third-party owned DE under the 2012 S&G  
9 Program will impose a lifetime PBI commitment of \$31.5 million.

10 The second budget-related item also concerns lifetime PBI commitments for the  
11 2012 S&G Program, but includes allocating undesignated funds from the approved 2008  
12 DE RFP. Based upon Commission approvals, APS budgeted \$225 million in lifetime  
13 authorizations for the 2008 DE RFP. APS, however, successfully implemented the  
14 projects under the DE RFP under budget by approximately \$23.5 million. APS proposes  
15 that in the alternative to a lifetime PBI commitment of \$31.5 million, the Commission  
16 apply the undesignated funds from the DE RFP to the projected 2012 S&G Program  
17 commitment and authorize a reduced lifetime PBI commitment of \$8 million.

### 18 **III. Administrative Changes to the DEAP and a Stakeholder Process for Future** 19 **Changes**

20 As APS administers its DE programs, it must continually adjust to changes in the  
21 marketplace, such as market trends and new business practices. APS's currently  
22 effective DEAP has grown organically in consultation with the industry to reflect those  
23 adjustments. Market trends now prompt APS to make additional changes to the DEAP.  
24 APS includes them in this 2013 RES Plan to afford the Commission an opportunity to  
25 review and comment.

#### 26 **A. Changes to DEAP administration driven by the market**

27 First, APS proposes to redefine small projects as only those that seek UFIs at or  
28 below \$75,000. This change would require conforming changes throughout the DEAP.

1 Second, APS proposes to eliminate off-grid incentives due to limited participation.  
2 Third, APS proposes to extend the construction timeline for multi-family housing,  
3 Energy Star-rated projects from 180 days to 365 days as requested by industry  
4 stakeholders. This timeline is consistent with commercial timelines. Fourth, APS  
5 proposes that incentives be paid directly to the installer for owned systems and the lessor  
6 for leased systems. This will streamline the process and reduce the extra step of the  
7 applicant assigning the incentive. Finally, APS proposes that if a customer changes a  
8 solar installer or dealer during the entire process, the customer must reapply for an  
9 incentive as if doing so for the first time.

10 **B. A stakeholder process for future changes to the DEAP**

11 In addition to these immediate proposals, APS requests permission to establish a  
12 formal stakeholder procedure for the purpose of implementing future changes to DEAP.  
13 Currently, APS actively works with industry stakeholders to improve the DEAP and  
14 continually improves its business practices with robust notice and participation. APS has  
15 not received complaints about this process. Nonetheless, APS recognizes that  
16 formalizing stakeholder notice and feedback is a desirable end unto itself. APS will  
17 supplement its 2013 RES Plan in October 2012 with additional detail about its proposed  
18 stakeholder process. APS will design its proposal to ensure an orderly and fair  
19 implementation of the DEAP that ultimately protects APS customers first and does not  
20 unduly benefit any one incentive type or stakeholder over another.

21 **IV. Strengthening Solar Education Programs**

22 Industry stakeholders and incentive program customers approve of APS's  
23 Qualified Solar Installer (QSI) Program. The QSI program educates Arizona solar  
24 installers by conveying sufficient information to meet the course requirements to sit for  
25 the North American Board of Certified Energy Practitioners entry level exam. The  
26 program protects customers from less qualified installers who purport to offer the same  
27 quality of service as installers with higher quality training and education, but at lower  
28 prices. APS now proposes that the QSI program become mandatory for all PV installers

1 who install systems on APS's distribution system. This would involve expanding the  
2 QSI program through additional classroom sessions and online training. Adding this  
3 mandatory requirement to APS's current QSI program would require a total budget of  
4 \$300,500.

5 In addition, APS proposes to supplement installer education by hosting training  
6 for representatives from Authorities Having Jurisdiction. This training will facilitate  
7 high quality installations and promote installer accountability. Hosting this training will  
8 require an additional \$50,000 in the 2013 budget.

#### 9 **V. Community Solar**

10 As part of APS's plan to meet the energy requirement established in Commission  
11 Decision No. 71448, APS proposed its 25 MW Community Solar program in its 2012  
12 RES Plan. As with all utility-owned projects arising out of Decision No. 71448, APS's  
13 proposal included collecting the revenue requirements associated with the utility-owned  
14 projects through the RES Adjustor. The Commission approved APS's Community Solar  
15 program in Decision No. 72737, and ordered that the project is "to be installed in 2014  
16 and 2015."<sup>6</sup> The Commission's subsequent resolution of APS's 2011 rate case  
17 reaffirmed Decision No. 72737 and the financial treatment of Community Solar by  
18 providing that:

19 capital carrying costs for renewable energy-related capital investments that  
20 APS makes in compliance with Commission Decision No. 71448 shall be  
21 recovered through the RES adjustor unless and until specifically  
22 authorized for recovery in another adjustor or in base rates.

23 Accordingly, APS's 2013 RES Plan seeks no further approvals related to the  
24 Community Solar program. The Plan does, however, describe the Community Solar  
25 program and associated changes to APS's Green Power rate schedules.

26 The Community Solar program is a 25 MW program split into 3-7 separate  
27 projects to be installed in communities throughout APS's service territory. Third parties  
28 will build each part of the Community Solar program. APS will secure the lowest prices

<sup>6</sup> Decision No. 72737, p. 39.

<sup>7</sup> Decision No. 73183, Settlement Agreement, ¶ 8.2.

1 possible for its customers by selecting its third party partners through a competitive RFP  
2 process. APS will track the Community Solar program as a renewable generation  
3 resource for purposes of compliance with the RES rules. APS will also add Community  
4 Solar to its Green Power rate schedule in the appropriate docket and update the 2013  
5 RES docket with Green Power-related information. Adding Community Solar to the  
6 Green Power rate will permit customers to support solar in APS communities. That  
7 customer financial support—in the form of a “Green premium”—will be accounted for  
8 as a revenue credit to the RES budget, reducing the cost of renewables for all APS  
9 customers.

#### 10 **VI. Budget-related proposals**

11 In addition to the proposals identified above, APS’s 2013 RES Plan contains  
12 three additional budget-related proposals. First, APS issued an RFI for the Innovative  
13 Renewable Energy Projects initiative. The Commission authorized this initiative in  
14 Decision No. 72022 with the purpose of evaluating renewable technologies that may not  
15 yet be commercially viable. After an RFI, APS will decide if proceeding with the RFP is  
16 appropriate considering the technology(ies) in question and the related economics. If  
17 APS moves forward, it would proceed with the RFP in the first half of 2013. APS’s  
18 proposed 2013 RES budget includes \$75,000 for this initiative.

19 Second, APS’s proposed 2013 budget includes funds to continue supporting  
20 ArizonaGoesSolar.org—the primary portal by which customers and installers can  
21 interact with APS’s RES program. In response to industry requests, APS also makes  
22 available downloadable data through ArizonaGoesSolar.org that users can sort. In  
23 addition, should the Commission approve APS’s proffered framework for modifying the  
24 DEAP, APS would implement the framework through ArizonaGoesSolar.org. The  
25 budget in APS’s 2013 Plan includes \$15,000 for this website.

26 Finally, APS proposes continued support for its Commercialization and  
27 Integration (C&I) efforts. APS recognizes the Commission’s interest in holding RES  
28 C&I expenses to a necessary baseline. APS’s 2013 C&I budget only targets critical

1 initiatives related to grid integration and technology deployment with an emphasis on  
2 extracting value from existing multi-year studies and continued collaborative  
3 partnerships. APS proposes a 2013 budget of \$525,000 for these initiatives. With the  
4 accelerated integration of diverse renewable resources into APS's service territory, this  
5 budget is needed to ensure continued safety and reliability, and to maximize the benefit  
6 that these unique resources bring to APS's customers.

7 **VII. Proposed 2013 Budget**

8 In its 2011 Compliance Report, filed on March 30, 2012, APS noted that  
9 additional funds existed for the Commission to offset the 2013 budget. Those funds  
10 include \$3.4 million of production tax credits from operational AZ Sun projects and  
11 \$11.1 million of unallocated program costs.<sup>8</sup> APS proposes to use the \$3.4 million in tax  
12 credits to offset the 2013 RES budget. To moderate future increases to the RES  
13 surcharge, APS proposes that the Commission use \$1 million of the unallocated program  
14 costs to offset the 2013 RES budget, and reserve the remaining funds to offset the 2014  
15 budget. Assuming the Commission accepts this proposal, the Plan contains 2013 budgets  
16 as follows: a 2013 budget of \$92.8 million under DE Option One and a 2013 budget of  
17 \$102.4 million under DE Option Two.

18 The 2013 RES Plan also estimates budgets for the next five years. As the  
19 Commission knows, APS's renewable-related requirements continue to increase. APS  
20 laid the foundation to meet those requirements by entering into PPAs and other program  
21 commitments. The cost of those commitments will culminate in sharp increases over the  
22 next several years as the Solana Generating Station, among others, becomes operational.

23 APS continues to evaluate opportunities to mitigate these abrupt jumps, such as  
24 shifting above-market PPA costs into APS's Power Supply Adjustor. In light of  
25 Decision No. 73183, APS is also considering whether and how to recalibrate the  
26 proportion of RES costs borne by residential and non-residential customers.<sup>9</sup> APS will  
27

28 <sup>8</sup> See APS 2011 Compliance Report, Docket No. E-01345A-10-0262 (March 30, 2012).

<sup>9</sup> See Decision No. 73183, Settlement Agreement, ¶ 8.4.

1 propose a method for mitigating future program cost increases in its October 2012  
2 update.

### 3 **VIII. Conclusion**

4 Three key facts underpin Arizona Public Service Company's 2013 RES Plan.  
5 First, third parties occupy an overwhelming majority of the renewable capacity built  
6 under APS's RES program. Third parties own 83% of APS's renewable energy portfolio  
7 and they build 100% of all APS-owned projects. Second, APS is safely beyond  
8 compliance on all metrics. Regarding DE specifically, approved commitments take APS  
9 to compliance through 2015 for residential DE and 2020 for non-residential DE. Third,  
10 market conditions have allowed DE incentives to plummet, and more changes are on the  
11 way. This 2013 RES Plan reflects the maturation of the renewable market and provides  
12 the Commission with options for moving forward.

13 For the foregoing reasons, APS requests that the Commission:

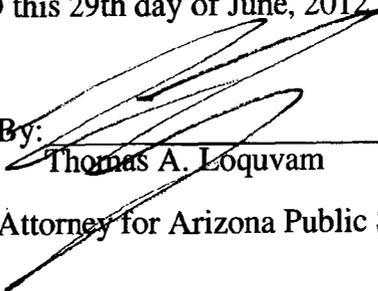
- 14 1. Approve the APS 2013 RES Implementation Plan;
- 15 2. Approve either DE Option One or DE Option Two, as discussed in the Plan, and  
16 the associated REAC-1 Adjustment Schedule;
- 17 3. Approve APS's transition to demonstrating compliance with DE requirements  
18 through tracking and recording DE production as discussed in the Plan;
- 19 4. Approve a 2013 RES budget that (i) supports the Commission's selection of  
20 either DE Option One or DE Option Two; (ii) supports mandatory participation  
21 by PV installers in APS's Qualified Solar Installer program; (iii) supports training  
22 for representatives from Authorities Having Jurisdiction; (iv) supports APS's  
23 ongoing Commercialization and Integration initiatives; (v) supports APS's  
24 administration and pursuit of the Innovative Renewable Energy Projects  
25 initiative; and (vi) supports continuing ArizonaGoesSolar.org;
- 26 5. Approve the administrative changes to the 2012 third-party Schools and  
27 Government Program discussed in the Plan;

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6. Approve a lifetime PBI commitment for the 2012 Schools and Government program that (i) is in the amount of \$31.5 million; or (ii) allocates undesignated funds from the 2008 DE RFP to the 2012 Schools and Government Program and is in the amount of \$8 million; and
7. Approve the administrative changes to the DEAP discussed in the Plan.

RESPECTFULLY SUBMITTED this 29th day of June, 2012

By: 

Thomas A. Loquvam

Attorney for Arizona Public Service Company

ORIGINAL and thirteen (13) copies  
of the foregoing filed this 29th day of  
June, 2012, with:

Docket Control  
ARIZONA CORPORATION COMMISSION  
1200 West Washington Street  
Phoenix, Arizona 85007

**Exhibit A**

**APS Renewable Energy Standard  
Implementation Plan 2013-2017**

aps

**Renewable Energy Standard  
Implementation Plan 2013 – 2017**

June 29, 2012

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## **EXHIBITS AND ATTACHMENTS**

Exhibit 1A: APS RES Implementation Plan 2013 Overview

Exhibit 1B: APS 2013 - 2017 RES Program Summary

Exhibit 1C: Energy Contributions to RES by Resource Group

Exhibit 1D: Residential Customer Sited Distributed Energy

Exhibit 1E: Non-Residential Customer Sited Distributed Energy

Exhibit 2A: 2013 RES IP Summary Budget

Exhibit 3A: APS Existing and Targeted Generation (MWh)

Exhibit 3B: APS Existing and Targeted Generation Capacity (MW)

Exhibit 3C: APS Renewable Existing and Targeted Generation RES Costs (in \$M's)

Exhibit 3D: Third Party APS IP Renewable Generation RES Costs (\$/MWh)

Exhibit 3E: AZ Sun Program Revenue Requirements (in \$M's)

Exhibit 4A: APS Customer Sited Distributed Energy Programs (MWh)

Exhibit 4B: APS Customer Sited Distributed Energy Incentive Program Costs (in \$M's)

Exhibit 4C: PBI Commitments (In \$000's)

## **i. Executive Summary**

The Company's 2013-2017 Renewable Energy Standard (RES) Implementation Plan (Plan) continues Arizona Public Service's (APS) commitment to renewable energy and to meeting its future renewable energy targets, which are estimated to more than double the amount of RES-required energy by 2015. As part of last year's Plan approval, the Arizona Corporation Commission (Commission) provided APS with direction on how best to meet this renewable energy milestone. The 2013 Plan does not seek approval of any new programs; it is intended to maintain a course that meets compliance, provides options to customers, and seeks only the incremental funding to meet approved commitments. As seen in Figure 1 (page 2), through 2015, third-party sources will own 83 percent of the renewable resources in APS's service territory while APS will own 17 percent.

### ***Renewable Generation***

APS's 2013-2017 Renewable Generation (RG) project deployment continues programs previously approved by the Commission to fulfill the Company's renewable energy requirements. Within 2013, APS expects 329 megawatts (MW) of new RG resources to become operational, ending the year with 736 MW of total installed and contracted RG resources.

Of the expected 329 MW of new RG resources expected to become operational in 2013, 280 MW are from third-party owned Power Purchase Agreements (PPAs) and 49 MW are from the APS-owned AZ Sun Program.

In its 2012 Plan, APS described the projected energy program mix required to fulfill the Company's 2015 obligations and noted in a subsequent filing to the Commission<sup>1</sup> that any third-party Distributed Energy (DE) program growth beyond APS's 2012 Plan proposal would be offset by reducing the amount of energy that would be procured through third-party PPAs such as the Small Generator Standard Offer Program (Small Gen). Decision No. 72737 required the Company to obtain 168.75 MW from third-party sources. This Decision also included a robust DE incentive budget which resulted in a significant number of DE systems in 2012, therefore precluding the need for additional third-party resources, including PPAs. Consequently, a third Request for Proposal (RFP) under the Small Gen program is currently in deferment. In 2013 the Company will reassess the 2012 DE incentive program's contribution to the APS renewable energy portfolio, which will determine the need to reinstate or cancel the final Small Gen RFP.

### *Community Solar Program*

As part of APS's plan to meet the energy requirement established in Decision No. 71448, the Commission approved 25 MW of APS-owned solar photovoltaic (PV)

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<sup>1</sup> November 4, 2011 letter sent to the Commission, which discussed the allocation of 150 MW of APS's 2009 Settlement energy needs between third-party DE projects and PPA contracts.

systems for the Company's Community Solar program (Program).<sup>2</sup> Under this program, APS plans to build three to seven projects totaling 25 MW at various locations in APS's service territory. APS will employ a competitive third-party RFP process to ensure these resources are developed in the most cost-effective manner. Program participants would pay a voluntary solar premium on their bill to support renewable energy throughout Arizona. Funds from the Program would be accounted for as a revenue credit to the RES adjustor. This revenue credit will lower the overall cost of the RES to all customers.

The Community Solar projects will be blended into the existing Green Choice program. Customers participating in Green Choice can choose to support Community Solar by subscribing at a self-selected level.

### ***Distributed Energy Programs***

#### *Schools and Government Program*

As approved in Decision No. 72737 as part of the Company's 2012 Plan, the 2012 Schools and Government Program will add 25 MW of new capacity, with 18.75 MW designated to third-party ownership and 6.25 MW to APS ownership.

APS proposes setting the incentive cap for the 2012 Schools and Government Program consistent with the original 2011 Schools and Government Program schedule, which is \$0.106/kWh for a 15-year Production Based Incentive (PBI) and \$0.096/kWh for a 20-year PBI.

At the proposed incentive cap, APS projects that the 18.75 MW of third-party projects will require a total lifetime PBI commitment of \$31.5 million.<sup>3</sup> The Company's DE RFP program was completed with a total of approximately \$23.5 million<sup>4</sup> of undesignated lifetime authorization, and APS proposes to reallocate this authorization to partially offset the lifetime authorization needed for the 2012 Schools and Government Program. As a result, the increase in PBI lifetime commitment authorization would be the difference of approximately \$8 million.

The 6.25 MW of APS-owned projects are projected to be in-service by late 2013. The 2013 budget includes \$1.7 million in revenue requirements associated with these projects.

#### *2013 Distributed Energy Incentive Program Options*

By the end of 2012, APS projects that installed DE will put APS approximately in compliance with its non-residential DE requirements through 2017 and its residential DE requirements through 2015. Accordingly, a purely compliance-based budget for APS would not include any new DE cash incentive offerings in 2013, nor would it include any new PPA or utility-owned generation beyond what the Commission

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<sup>2</sup> Decision No. 72737.

<sup>3</sup> APS's program budget assumes the PBI caps detailed above as well as the 40 percent project cost cap.

<sup>4</sup> 2011 Compliance Report Table 10, page 20.

approved through the 2012 Plan. In discussions, however, stakeholders have indicated an interest in additional DE incentives beyond the RES requirements that maintain program support at levels similar to 2012 market activity.

APS is proposing two options for the Commission's consideration: Option 1 proposes no new DE incentives in 2013 and requests moving to a track and record system in which energy, instead of Renewable Energy Credits (RECs), is counted towards the RES requirement.<sup>5</sup> Option 2 proposes a beyond-compliance cash incentive offering that funds a similar level of program activity in 2013 as seen in 2012 (but with reduced incentive budgets due to declining incentive rates per kWh) and suggests that 2013 be the final year of DE cash incentives. Under Option 2, APS also proposes moving to a track and record system.

*Option 1 - No New DE Cash Incentives*

Under Option 1, no new DE cash incentives would be made available in 2013 beyond existing program approvals. Through Option 1, APS would continue to administer over \$765 million in existing PBI lifetime commitment legacy costs across multiple programs from prior Plan years. As a result, even without new cash incentives, APS still requires a fixed funding level for ongoing program implementation and administration needs in 2013 and later years.

APS requests the Commission's permission to demonstrate compliance with the DE portion of the RES requirement by tracking and recording DE production. Moving to a track and record system is consistent with the current RES rules which base compliance on energy produced as a percentage of the overall retail kWh sold.

Under APS's proposed track and record system, any new DE production interconnected within the Company's service territory would be counted towards the requirement independent of REC ownership. Consistent with the methodology approved in Decision No. 72737, any system installed after January 1 will be reported on an annualized basis.

*Option 2 - New Cash Incentives to Approximate 2012 Market Activity*

Option 2 allows for a similar level of standard program activity as approved for 2012, but with a reduced budget to account for declining incentive levels.

Under Option 2, the residential program would require a total incentive budget of \$9.0 million in 2013 and would allow up to approximately 40 MW of new project commitments.

The 2013 non-residential incentive under Option 2 would depend upon the amount of support the Commission deems prudent. APS proposes that the non-residential

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<sup>5</sup> Pursuant to Decision No. 72737, APS was required to consider in its 2013 Plan the issue of a low or zero incentive future in which DE customers were "unwilling to provide Renewable Energy Credits (RECs) to Arizona Public Service Company."

incentives be defined in incremental blocks of 5 MW, and the Commission can determine the appropriate level of support by choosing the number of 5 MW blocks to fund. Four blocks, or 20 MW, would approximately equal the approved 2012 non-residential program. Additionally, in order to spread non-residential incentive funding evenly throughout the year, each 5 MW incentive block will be considered as its own separate competitive project bidding nomination cycle. Both medium and large commercial projects would be combined into a single bidding pool to request incentives for up to 750 kW of a project's capacity. Under this non-residential incentive proposal, APS would lower the 2013 project nomination bid cap to \$0.07/kWh in the 2013 program.

Small commercial Up-Front Incentive (UFI) projects would have a separate \$400,000 incentive budget for 2013 and would add approximately 1 MW of projects.<sup>6</sup>

If the Commission decides to offer new DE cash incentives in 2013, APS suggests that 2013 be the final year of new cash incentive offerings. Further, APS proposes to implement the track and record system for DE interconnections described under Option 1. APS already plans to put such an energy tracking system in place internally early in 2013 to comply with production metering requirements.

Additional items in the Company's 2013-2017 Plan include:

- The Company is proposing administrative changes to the Distributed Energy Administration Plan (DEAP).
  - Redefine small projects as those that seek UFIs at or below \$75,000;
  - Eliminate off-grid incentives as well as the 15-year declining block solar water heating (SWH)/space heating/space cooling PBI incentives;
  - Extend the construction timeline for multi-family, Energy Star-rated housing projects from 180 days to 365 days, consistent with commercial timelines;
  - Use a stakeholder process for future changes to the DEAP;
  - Allow APS to remit the incentive paid directly to the installer for owned systems and the lessor for leased systems; and
  - If a customer changes a solar installer or dealer during the entire process, the customer must reapply for an incentive as if doing so for the first time.
- APS proposes that the Qualified Solar Installer (QSI) program become mandatory for all PV installers who install systems on APS's distribution system.
- APS plans to supplement installer education by hosting training for Authorities Having Jurisdiction and other key stakeholders to support high-quality PV and solar thermal system installations and inspections.

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<sup>6</sup> Small commercial UFI projects would have a \$0.40/watt incentive cap; the same level that residential incentives are expected to reach at the start of 2013.

- In coordination with other Arizona utilities that each post information about the current status of their incentive programs, APS plans to continue making its updates to the ArizonaGoesSolar.org website in 2013.
- Pursuant to the Commission's order in Decision 72737, APS is currently developing an updated deployment schedule for the placement of production meters on previously installed residential and small non-residential grid-tied PV systems for which customers received a UFI incentive payment. APS estimates that the necessary updates to its Customer Information System (CIS) to support this effort will be operational in February 2013.
- APS's Commercialization & Integration (C&I) plans will focus on Flagstaff Community Power Project ("Flagstaff") related renewable energy initiatives that reliably integrate renewable resources into the Company's electrical transmission and distribution grid. Subsequently, funding support will ensure that the deployment, commercialization, and incorporation of renewable resources will be done safely and efficiently, and that APS and its customers will receive the maximum benefit these unique resources have to offer.

The budget for APS's 2013 Implementation Plan consists primarily of funding for current commitments including PBI legacy payments, support for continuing programs, revenue requirements, and implementation of previously authorized programs. Based on Option 1, the RES adjustor would be set to collect \$92.8 million, with a residential cap of \$3.84 per month. Based on Option 2, the RES adjustor would be set to collect \$102.4 million, with a residential cap of \$4.27 per month. The adjustor under both Options assumes two offsets to reduce the overall budget: 1) a Production Tax Credit of \$3.4 million; and 2) a portion of the under-spend identified in the Company's 2011 RES Compliance Report.<sup>7</sup>

With the steady increase of APS's renewable energy portfolio to meet the RES and Settlement requirements, the Company is evaluating ways to mitigate an increasing RES adjustor throughout the entire period of the Plan (2013 through 2017). Such mechanisms include reallocating available funds to future years and shifting above-market PPA costs into APS's Power Supply Adjustor. Further, the Company is considering whether and how to recalibrate the proportion of RES costs among residential and non-residential customers.<sup>8</sup>

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<sup>7</sup> In APS's 2011 RES Compliance Report, the Company identified \$11.1 million of unallocated RES funds. APS is proposing to allocate approximately \$1 million in 2013 and the remaining funds in 2014.

<sup>8</sup> As set forth in paragraph 8.4 of Decision No. 73183.

## **I. Introduction**

APS is now on a multi-year implementation path to fulfill its RES energy needs and its 2009 Settlement Agreement requirement based upon the Arizona Corporation Commission's ("Commission") approval of APS's 2012 Plan.<sup>9</sup> Subsequently, the 2013-2017 Plan continues with the deployment of previously approved programs but the Company projects that it does not currently require any new programs or cash incentives above what was approved in the 2012 Plan. APS expects to have already met its 2013 RES compliance for both its overall retail sales and DE requirements going into the beginning of 2013. APS projects that by year-end 2012, approximately 5.7 percent of its retail sales will be provided by renewable resources. At that point, non-residential DE will approximately be in compliance through 2017 and residential DE will approximately be in compliance through 2015. Given this, any new programs or incentives above what has already been approved by the Commission would push APS further beyond compliance.

Figure 1 (see page 2) shows APS's expected renewable portfolio ownership mix in 2015 and the components of the 300 MW gap energy defined in the Company's approved 2012 Plan. As seen in the figure, third party installers and developers own a considerable majority of all renewable resources within APS's portfolio. Under approved program expectations, third parties will own approximately 83 percent of all resources in 2015 and APS will own 17 percent.

### **A. Renewable Energy Requirements**

#### **1. 2013-2017 Renewable Energy Standard Requirement**

The Arizona RES was established in August 2007, and requires APS to file an Implementation Plan (Plan) each year for review and approval by the Commission.<sup>10</sup> The Plan describes the Company's strategy to meet the requirements of the RES for the next five calendar years, identifying the eligible technologies, the expected schedule for the resource incorporation on a year-by-year basis, and the kilowatts (kW) and kilowatt-hours (kWh) expected to be added to the APS portfolio by the incorporation of those resources. Further, the RES provides that implementation of the approved Plan by the utility shall serve to measure the utility's compliance with the RES.

APS has prepared this Plan for the five year period 2013-2017 in compliance with the RES Rules. The RES requires that affected utilities satisfy an annual renewable energy requirement by providing a percentage of their electric retail sales from renewable resources. The required percentage for the current implementation period begins at four percent in 2013 and increases to seven percent in 2017. That

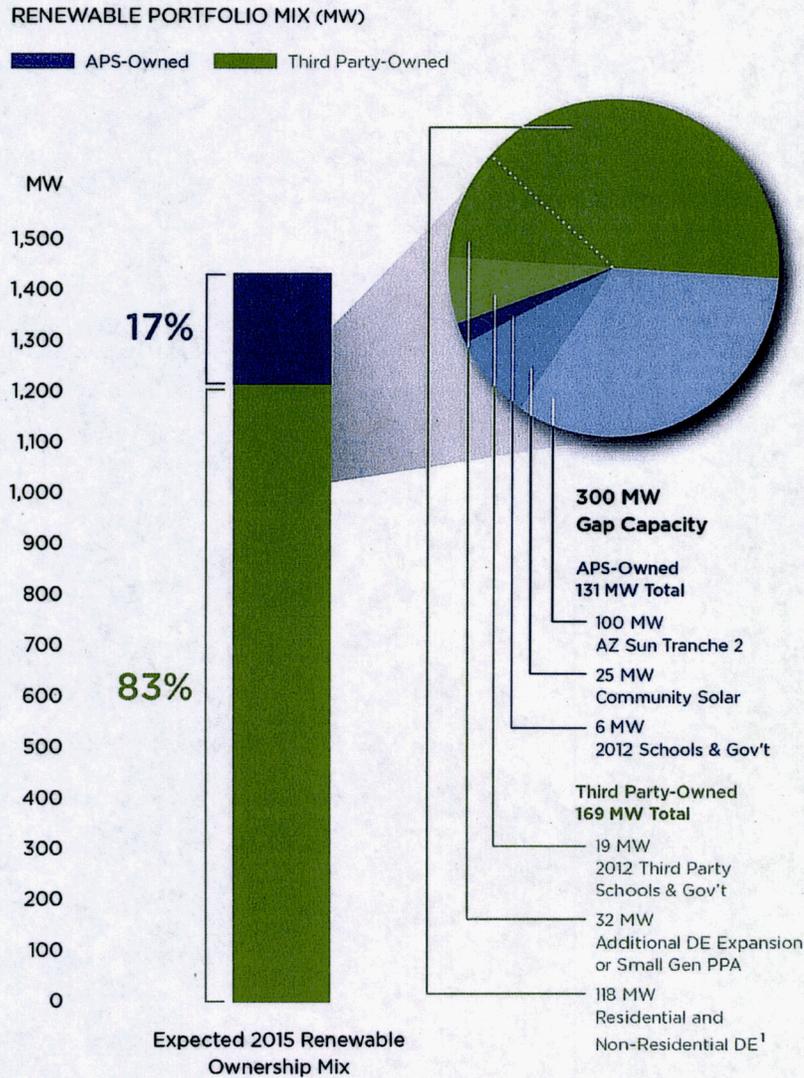
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<sup>9</sup> Decision No. 72737.

<sup>10</sup> A.A.C. R14-2-1801 et. seq.

minimum percentage increases to 15 percent of the utility's total retail sales by the year 2025.

**Figure 1: Renewable Portfolio and Ownership**



<sup>1</sup> Assumes expected capacity based on maintaining current market volume.

The RES rules define renewable resources as: 1) technologies that displace conventional energy resources that would otherwise be used to provide electricity to the utility's customers; and 2) DE, a renewable resource application installed at the customer premises and generally used to displace customer energy consumption. As part of the RES, the energy generated or displaced by DE is applied towards the percentage of the utility's distributed renewable energy requirement. For both RG and DE, kWh derived from renewable resources for purposes of compliance with the

RES are tracked as Renewable Energy Credits (RECs), where one kWh equals one REC.<sup>11</sup>

## 2. 2009 Settlement Agreement Requirement

The Company's 2009 Settlement<sup>12</sup> adopted provisions in addition to the requirements of the RES. The Settlement required, among other provisions, that "APS shall make its best efforts to acquire new renewable energy resources with annual generation or savings of 1,700,000 megawatt-hours (MWh) to be in-service by December 31, 2015".<sup>13</sup> It further states that "these new resources shall be in addition to existing resources or commitments as of the end of 2008...".<sup>14</sup> By complying with these requirements, APS expects to achieve production that will more than double its 2015 RES requirement of five percent of its retail sales, based on current forecasts.

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<sup>11</sup> "Renewable Energy Credit" means the unit created to track kWh derived from an Eligible Renewable Energy Resource or kWh equivalent of Conventional Energy Resources displaced by Distributed Renewable Energy Resources. A.A.C. R14-2-1801(N).

<sup>12</sup> Decision No. 71448 (December 30, 2009).

<sup>13</sup> Decision No. 71448 (December 30, 2009), Paragraph 15.1.

<sup>14</sup> Decision No. 71448 (December 30, 2009), Paragraph 15.1. The total energy requirement by 2015 is 3.4 GWh of renewable resources.

## **II. Renewable Generation Programs**

Renewable Generation resources within the APS portfolio are generally larger-scale renewable resources connected on the utility side of the meter and which serve the energy demand of all APS customers. These resources fulfill the Company's energy needs as filed in its 2012 Integrated Resource Plan<sup>15</sup> and are applied to APS's overall requirements. APS's 2013-2017 RG project deployment continues programs previously approved by the Commission to fulfill the Company's RES and 2009 Settlement Agreement requirements. No new RG programs are currently needed to meet the 2013 RES compliance requirement, and per the 2012 Plan,<sup>16</sup> the implementation of previously approved programs will keep the Company on track to meet its 2009 Settlement energy needs. Within 2013, APS expects 329 MW of new RG resources to become operational, ending the year with 736 MW of total installed and contracted RG resources with an expected production of 1,600 gigawatt-hours (GWh)<sup>17</sup> in 2013.

APS is required to include estimated pricing information related to RG projects. Consistent with every Plan, APS has included a redacted version of the information in Exhibits 3C and 3D and is providing un-redacted pricing information directly to Commission staff.

### **A. Third-Party Ownership Projects**

#### **1. Power Purchase Agreements**

The cost of third-party renewable energy PPA contracts includes two components: 1) Costs associated with comparable conventional generation, which are collected consistent with the accounting rules related to APS's Power Supply Adjustor (PSA); and 2) Above-market costs (if such exist), which are those costs above the cost of comparable conventional generation.<sup>18</sup> All renewable resource costs are described in terms of dollars per MWh above APS's comparable conventional generation cost.

For 2013, APS expects to begin taking delivery of energy from the following third-party RG projects:

- The Solana Generating Station is a 250 MW Concentrating Solar Power (CSP) plant with a six hour thermal storage capability. The facility is expected to begin providing test generation energy in May 2013 and to formally reach service by

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<sup>15</sup> Docket No. E-0000A-11-0113, filed in compliance with Ariz. Admin. Code R14-2-703.

<sup>16</sup> Docket No. E-01345A-11-0264.

<sup>17</sup> Net of Green Choice program sales, which are not counted towards RES compliance.

<sup>18</sup> A.A.C. R14-2-1801(K) defines Market Cost of Comparable Conventional Generation.

July 2013.<sup>19</sup> Solana is expected to produce approximately 392,000 MWh during a partial operation year in 2013 and approximately 903,000 MWh during its first full year in-service in 2014.

- A solar plant in the Tonopah area is a 15 MW PV project. The facility will produce approximately 39,500 MWh annually and is expected to be placed in-service in December, 2013. The facility is anticipated to begin construction in March 2013.
- An additional power plant in the Maricopa County area is a 15 MW PV project which will be located in Gila Bend, Arizona. The facility will produce approximately 42,640 MWh annually and is expected to be placed in-service in December 2013. The facility is anticipated to begin construction in March, 2013.

In 2008, APS proposed conducting a series of annual solicitations as part of its Small Generator Standard Offer Program ("Small Gen"), which was designed for smaller RG projects from 2 MW up to 15 MW with a more expedited development schedule. The projects identified would contribute to APS achieving its 2015 energy requirements.

In its 2012 Plan, APS described the projected energy program mix required to fulfill the Company's 2015 obligations and noted in a subsequent filing to the Commission<sup>20</sup> that any third-party DE growth beyond APS's 2012 Plan proposal would be offset by reducing the amount of energy that would be procured through third-party PPAs such as the Small Gen program. The Commission ordered APS to obtain 168.75 MW from third party sources (see Figure 1, pg 1). Because the Commission included a robust DE incentive budget, DE uptake has thus far precluded the need for any other type of third party source, including PPAs. Consequently, a third RFP under the Small Gen program is currently in deferment. In 2013 the Company will reassess the 2012 DE incentive program's contribution to the APS renewable energy portfolio, which will determine the need to reinstate or cancel the final Small Gen RFP.

## **B. Utility-owned Projects**

### **1. AZ Sun Program**

The AZ Sun Program is a 200 MW program approved by the Commission on March 17, 2010 and again on January 18, 2012.<sup>21</sup> Third party developers build every MW in the AZ Sun program. APS is on track to have all AZ Sun projects installed by the end of 2015.

The following list in Figure 2 represents the status of all AZ Sun projects as of the date of this filing:

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<sup>19</sup> Test generation energy for Solana is counted for overall RES compliance purposes and will be sold to APS at 50 percent of its normal contracted rate until the facility reaches its commercial operation date (COD) and begins formal production.

<sup>20</sup> November 4, 2011 letter sent to the Commission, which discussed the allocation of 150 MW of APS's 2009 Settlement energy needs between third-party DE projects and PPA contracts.

<sup>21</sup> Decision No. 71502 and Decision No. 72737, respectively.

**Figure 2: AZ Sun Deployment**

**AZ SUN PROJECT TIMELINE**

<b>Resource</b>	<b>RFP Date</b>	<b>In-Service Date</b>	<b>Capacity (MW)</b>
<b>IN OPERATION</b>			
Paloma	-	Sep 2011	17
Cotton Center	-	Oct 2011	17
Hyder	-	Nov 2011/Feb 2012	16
<b>CONTRACTED OR IN PLANNING</b>			
Chino Valley <sup>1</sup>	Complete	Dec 2012	19
Foothills Phase I <sup>1</sup>	Complete	Mar 2013	17
Foothills Phase II <sup>1</sup>	Complete	Dec 2013	18
Hyder II <sup>2</sup>	Complete	Dec 2013	14
Future AZ Sun Project 1	Q3 2012	Jun 2014	32
Future AZ Sun Project 2	2013	2015	50

**Notes:**

<sup>1</sup>Currently under contract.

<sup>2</sup>As of the date of the Plan's filing, RFP solicitations have been issued and pre-contract development is ongoing.

**2. Community Solar**

Decision No. 72737 approved 25 MW of APS-owned solar PV systems for the Company's Community Solar program. The Decision asked APS to describe the program in this Plan and install resources in 2014 and 2015.

To fulfill this commitment, APS plans to build three to seven similarly-sized projects at various locations in APS's service territory, totaling 25 MW. APS will employ a competitive third-party RFP process to develop these resources cost-effectively. Program participants would pay a voluntary solar premium on their bill to support renewable energy throughout Arizona (the "Program"). Funds from the Program would be accounted for as a revenue credit to the RES adjustor. This revenue credit will lower the overall cost of the RES to all customers. A schedule for expected revenue requirements is included in Exhibit 3C.

The Community Solar projects will be blended into the existing Green Choice program and APS will build support for the Community Solar projects through Green Choice. Leveraging existing IT programming and the brand equity of the Green Choice program will help keep the costs to execute Community Solar as low as possible. Participating customers will continue to subscribe at a self-selected level to support locally-based Community Solar projects that APS will own and operate, in addition to APS's portfolio of renewable energy PPAs.

### **III. Distributed Energy Programs**

#### **A. Customer-Sited Projects**

The programs discussed below have been previously approved by the Commission in prior Plans and include updated program administration and deployment schedule expectations for 2013 through 2017.

##### **1. 2008 Distributed Energy Request For Proposal (DE RFP)**

Two of the three contracts awarded under APS's completed DE RFP program were fully installed by the end of 2011.<sup>22</sup> The Customer Aggregation Model contract approved in the 2010 RES Implementation Plan<sup>23</sup> will enter the third and final year in which SunPower will phase-in an aggregated collection of DE projects with a contract requirement to execute 25,000 MWh worth of Credit Purchase Agreements (CPAs) each year with a contract requirement of 75,000 MWh at full deployment by 2014. As of the date of the Plan's filing, SunPower had met its two year target by executing CPAs for over 59,000 MWhs. The systems installed under this contract are expected to produce over 50,000 MWh of energy in 2013, and SunPower remains on track to execute additional CPAs in 2013 to deliver the full 75,000 MWh by 2014.

The Commission granted APS a lifetime commitment authorization of \$250 million for the DE RFP projects<sup>24</sup>, \$25 million of which was designated towards the Innovative Renewable Energy Projects solicitation (see section III.A.3). The DE RFP program was completed under budget. A total of approximately \$23.5 million<sup>25</sup> of undesigned lifetime authorization remains after the program's completion. The next section of the Plan discusses APS's proposal to reallocate this remaining authorization to the approved third-party 2012 Schools and Government Program.

##### **2. Schools and Government Program**

###### *2011 Schools and Government*

The 2011-approved Schools and Government Program required APS to achieve 50,000 MWh of consumption or energy offset at publically-funded K-12 school facilities or charter schools receiving public funding.<sup>26</sup> Further, funding was provided for a target of up to an additional 12,000 MWh from government facilities by January 31, 2014.<sup>27</sup> APS expects that by the end of 2012 nomination cycles it will have commitments for projects that, once commissioned, will allow APS to achieve its 50,000 MWh schools requirement. Any unallocated lifetime commitments are

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<sup>22</sup> The Deer Valley School District project and the Bagdad project were each completed in 2011.

<sup>23</sup> Decision No. 71459.

<sup>24</sup> Decision No. 71459.

<sup>25</sup> 2011 Compliance Report Table 10, page 20.

<sup>26</sup> Approved in Decision Nos. 72022 (December 10, 2010) and 72174 (February 11, 2011).

<sup>27</sup> *Id.*

projected to be fully reserved by projects by the end of its fifth nomination cycle in October, 2012.<sup>28</sup>

#### *2012 Schools and Government*

As approved in Decision No. 72737 as part of the Company's 2012 Plan, the 2012-approved Schools and Government Program will add 25 MW of new capacity, with 18.75 MW designated to third-party ownership and 6.25 MW to APS ownership.

Similarly to the initial program, the third-party portion of the 2012 program will be comprised of six bi-monthly nomination cycles that will begin in the nomination cycle immediately following the completion of the 50,000 MWh energy target for the 2011 Schools program. The anticipated start date for the 2012 approved Schools and Government program is currently November 2012. If the sixth nomination period from the 2011 Schools and Government program is necessary to fill the initial program's 50,000 MWh target, then the 2012 Schools and Government program's nomination cycles would begin in January 2013. Bids placed prior to the Commission's action on this Plan would be tentatively awarded, but would be subject to the Commission's approval of the Plan before they would be finalized.

The first cycle will include 3.75 MW of available project capacity for competitive project bidding and each of the five subsequent cycles will be capped at 3 MW. Historically, the nomination periods for PBI projects were capped at a lifetime commitment authorization. However, for the 2012 Schools and Government Program, APS proposes to implement a capacity cap to ensure the approved program capacity is evenly distributed throughout six nomination periods. Under the proposed program administration, the incentive bid cap for competitive project proposals will incur the same bid cap reduction as seen in the 2011 Schools and Government program and will be set to \$.106/kWh for a 15-year PBI and \$.096/kWh for a 20-year PBI cap.

For the 2012 program, 25 MW of capacity was authorized without a definitive, corresponding lifetime authorization. APS projects that the 18.75 MW of third-party project commitments will require a total lifetime PBI commitment of \$31.5 million.<sup>29</sup> The Company's DE RFP program was completed with a total of approximately \$23.5 million<sup>30</sup> of undesignated lifetime authorization, and APS proposes to reallocate this authorization to partially offset the lifetime authorization needed for the 2012 Schools and Government Program. As a result, the increase in PBI lifetime commitment authorization would only total \$8 million.

The 6.25 MW of APS-owned projects are projected to be in-service by late 2013. The 2013 budget includes \$1.7 million in revenue requirements associated with these projects.

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<sup>28</sup> APS expects to achieve its 50,000 MWh target for schools at the end of the fifth nomination period in 2012.

<sup>29</sup> APS's program budget assumes the PBI caps detailed above as well as the 40 percent project cost cap.

<sup>30</sup> 2011 Compliance Report Table 10, page 20.

### 3. Innovative Renewable Energy Projects

APS is currently evaluating Request for Information (RFI) proposals<sup>31</sup> on new renewable technologies. The proposed technologies are not yet cost competitive in the market but demonstrate a potential value proposition at customer sites and may prove to be economically viable in time. APS's 2011 Plan shifted \$25 million from the DE RFP lifetime authorization into this program. If the technology proposals received through the RFI have value for APS, the Company anticipates that it could proceed with a RFP for selected technologies in the first half of 2013 for possible project implementation in the second half of 2013 or the beginning of 2014. Associated budget support of \$75,000 in 2013 is limited to RFP development and administration.

#### **B. 2013 Distributed Energy Incentive Program Options**

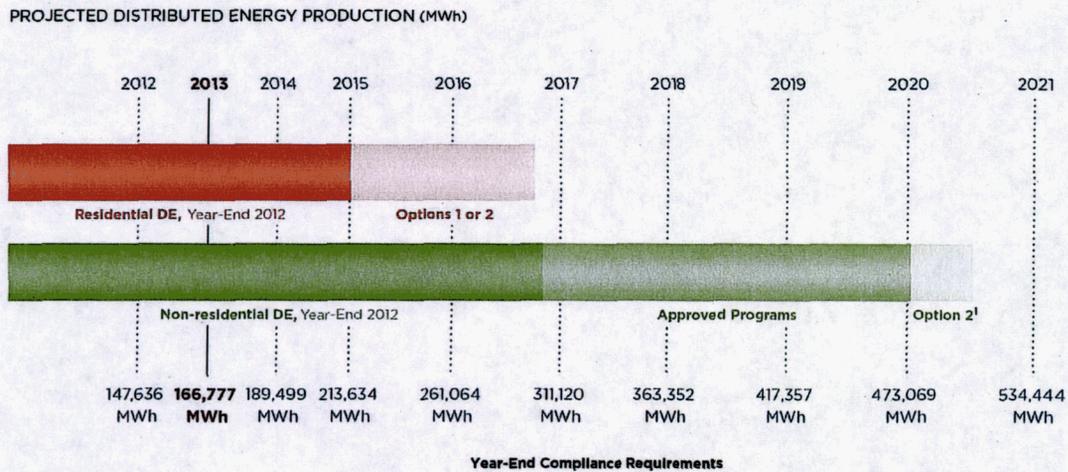
APS has continued to see significant demand within its DE program in 2012 as well as on-schedule deployment of PPA and utility-owned RG projects. By the start of 2013, APS projects its installed resources and program commitments will put the Company in compliance with its non-residential DE requirements approximately through 2017 and its residential DE requirements approximately through 2015. Consequently, a purely compliance-based budget for APS would not include a new DE cash incentive offering in 2013, nor would it include any new PPA or utility-owned generation beyond what the Commission approved through the 2012 Plan. APS's basic need to achieve compliance with its 2009 Settlement energy obligations is continued budget support in alignment with program expectations (including PBI legacy costs, revenue requirements, rate approval, and associated implementation and administration budgets).

In discussions, however, stakeholders have indicated an interest in additional DE incentives beyond the RES that maintain program support at levels similar to 2012 market activity. Given the over-compliance, the Company recognizes this is a policy decision for the Commission. Therefore, APS is proposing two options for the Commission's consideration: Option 1 proposes no new DE cash incentives in 2013. Pursuant to Decision No. 72737, APS also describes in the subsequent section its transition to a post-incentive budget RES administration plan. Option 2 proposes a beyond-compliance incentive offering that funds a similar level of program activity as seen in 2012 (but with reduced incentive budgets due to declining incentive rates per kWh).

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<sup>31</sup> APS technical staff will be evaluating RFI proposals through the third quarter of 2012.

**Figure 3: Distributed Energy Compliance**



<sup>1</sup> Option 1 projects compliance through 2020.

### 1. Option 1 – No New DE Cash Incentives

As shown in Figure 3, APS is on target to reach its 2015 Settlement requirements and will exceed the DE RES requirements for the next several years. Under Option 1 no new residential or non-residential DE incentive funds would be made available in 2013 beyond existing program approvals. Through Option 1, APS would continue to administer a total of over \$765 million in existing PBI lifetime commitment legacy costs across multiple programs from prior Plan years. As a result, even without new incentives APS still requires a fixed funding level for ongoing program implementation and administration needs in 2013 and later years.

On January 18, 2012, Decision No. 72737 required APS to consider in its 2013 Plan the issue of a low or zero incentive future in which distributed energy customers were “unwilling to provide Renewable Energy Credits (RECs) to Arizona Public Service Company.”<sup>32</sup> Despite declining incentive rates, high DE market growth in recent years signals a maturing DE industry with strong consumer demand and low costs. Newer rooftop solar business and financing models often do not require upfront cash investment from customers. As a result, more individuals and businesses can install distributed renewable energy systems with minimal and even zero utility-provided incentives.<sup>33</sup> Embedded incentives in APS’s rates, (i.e. net metering) continue to make solar installations feasible for customers absent a cash incentive.

<sup>32</sup> Decision No. 72737, pg 3.

<sup>33</sup> In 2011 and 2012, several dozen distributed solar projects were interconnected into APS’s service territory without applying for incentives.

APS requests authorization to demonstrate compliance with the DE portion of the RES requirement by tracking and recording DE production.

Under APS's proposed track and record system, any new DE production interconnected within the Company's service territory would be counted towards the requirement independent of REC ownership.

If a track and record system is adopted for 2013, any DE system placed into service beginning on or after January 1 but prior to production meter availability would be reported on an annualized basis for the year based on the average production of APS's metered systems. Production meters would still be required to be deployed on new DE systems and they would serve as a core tracking mechanism for DE energy production to be reported by APS. The Company would continue to require interconnection agreements for all new systems connected into the APS electric grid. APS proposes to implement a track and record system whether the Commission chooses Option 1 or Option 2.

Since APS will already be putting a track and record system in place in early 2013 to support its production meter efforts, shifting to use this method for compliance purposes would be a relatively straightforward transition.

Additionally, the Commission may also wish to select Option 1 by phasing out cash incentives for APS's residential and non-residential standard PV programs, while continuing the \$3 million incentive for the non-PV technologies program described below in Option 2 (which includes SWH). This would, in effect, sunset the core component of the DE incentive program which has installed energy well beyond compliance and whose technologies have benefited from a strong reduction in market prices, while preserving a baseline incentive level for technologies that may still require additional support. APS would also request moving to the track and record system in 2013 under this scenario. If the Commission decides to offer a new DE incentive budget in 2013, then APS suggests that 2013 be the final year of new incentive offerings.

## 2. Option 2 – Offer New Cash Incentives to Approximate 2012 Market Activity

As an alternative to Option 1, the following option provides new residential and non-residential program incentives to be administered in 2013. The incentives allow for a similar level of standard program activity as approved for 2012, but with a reduced budget to account for declining incentive levels. The non-residential component also provides flexibility for the Commission to determine the level of incentive support it deems prudent. If the Commission selects this option, APS suggests 2013 be the final year of new incentive budget offerings. Further, APS proposes to also implement the track and record system for DE interconnections described under Option 1.

### Residential Incentive Program

Under Option 2, the residential program would require a total incentive budget of \$9.0 million in 2013 and would allow up to approximately 40 MW of new project commitments.

The standard PV incentive program would operate within a \$5.3 million incentive budget and would begin 2013 at the same level as the program ends under the 2012 step-down mechanism.<sup>34</sup> Incentives would then decline throughout 2013 using a similar triggering guideline as ordered in the Company's 2012 Plan.<sup>35</sup> Figure 4 shows how market demand triggers each incentive step-down as a certain percentage of the year's budget has been allocated. If there is an increased rate of applications, a more aggressive step-down path is achieved. With a more moderate level of applications, a less aggressive step is triggered to support DE growth in line with the market. The Company forecasts that approximately 40 MW of residential PV incentives would be reserved in 2013.

**Figure 4: Residential incentive step-down**

Percent of Budget to Trigger Step-Down	Rules for Incentive Reductions	Incentive Rate (\$/watt)
Beginning Incentive	The beginning incentive will be set equal to the effective rate at the end of 2012.	\$0.20
25%	If the step-down is triggered the incentive will drop by \$0.05/watt.	\$0.15
75%	If the step-down is triggered on or before September 30, 2013, the incentive will drop by \$0.10.	\$0.05
	If the step-down is triggered on or after September 30, 2013, the incentive will drop by \$0.05.	\$0.10

APS also proposes to maintain the non-PV technologies category under this option. A total of \$3 million in incentive funds would be administered for all non-PV technologies, including SWH. Incentives would remain at their current 2012 levels with the exception of SWH incentives, which would decline from \$0.50/kWh equivalent in energy savings in 2012 to \$0.45/kWh equivalent in energy savings in 2013.

A final incentive category for the residential incentive program includes a continuation of APS's Energy Star Plus Solar Homes ("Home Builder") program totaling \$700,000. The incentive level would be adjusted from \$0.85/watt in 2012 down to \$0.30/Watt. Once the Home Builder incentive allotment is exhausted, interested homebuilders would still be eligible to apply for incentive reservations through the standard PV program.

<sup>34</sup> At the time of this filing and for the purposes of budgeting for the 2013 Plan, APS projects the residential PV incentive will be at \$0.20/watt at the end of 2012.

<sup>35</sup> Decision No. 72737 (January 18, 2012).

### *Non-Residential Incentive Program*

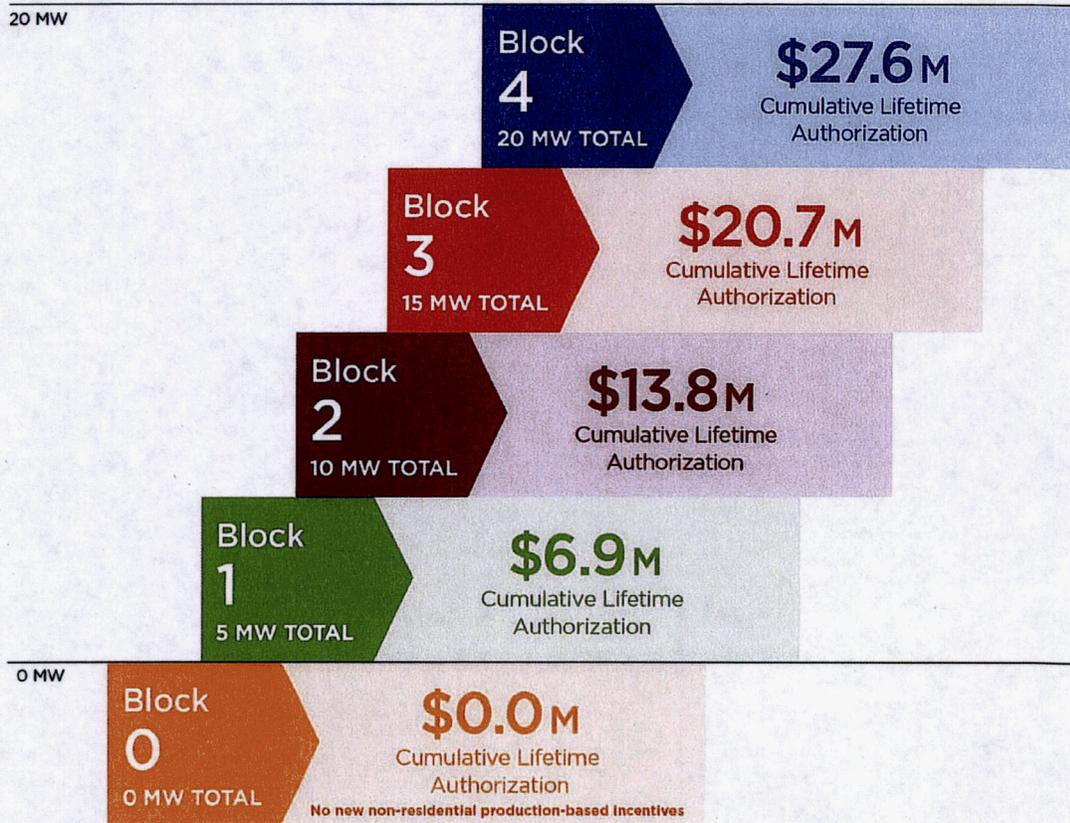
The 2013 non-residential incentive under Option 2 would depend upon the amount of support the Commission deems prudent. APS proposes that the non-residential incentives be defined in incremental blocks of 5 MW, and the Commission can determine the appropriate level of support by choosing the number of 5 MW blocks to fund.

In Figure 5, APS shows a series of 5 MW incentive blocks for the 2013 non-residential program. Under this option, the Commission could choose from zero up to four incentive blocks. Four blocks, or 20 MW, would approximately equal the approved 2012 non-residential program. Depending upon the Commission's support, the non-residential incentive blocks provide a simple decision-making tool which shows the new non-residential capacity to be added and a corresponding cumulative PBI lifetime authorization budget associated with the total capacity.

Additionally, in order to spread non-residential incentive funding evenly throughout the year, each 5 MW incentive block will be considered as its own separate competitive project bidding nomination cycle which would be administered during 2013. For example, a selection of two blocks would result in two nomination periods during the year, a total of 10 MW of new incentives (2 blocks x 5 MW each), and \$13.8 million in new total PBI lifetime authorization (2 blocks x \$6.9 million lifetime PBI funds each). Alternatively, a selection of three blocks would result in three nomination periods throughout the year for a total of 15 MW and \$20.7 million in new total PBI lifetime authorization.

**Figure 5: Non-residential PBI Incentive “Blocks”**

NON-RESIDENTIAL DISTRIBUTED ENERGY PRODUCTION-BASED INCENTIVE BLOCKS<sup>1</sup>



<sup>1</sup>Assumes a \$0.070/kWh PBI incentive rate cap per block. \$6.9 M lifetime authorization per block.

Under the non-residential standard program incentive proposal, APS would lower the 2013 project nomination bid cap in the 2012 standard program to \$0.07/kWh in the 2013 program.<sup>36</sup>

Due to the 5 MW capacity limit offered in each nomination period, in order to allow multiple projects to reserve incentives in each bidding cycle, APS proposes combining medium and large commercial projects into the same bidding group. Projects would be eligible to receive incentives for up to 750 kWac of a project’s proposed capacity or 40 percent of the total project cost, whichever is lower.

Small commercial UFI projects would have a separate \$400,000 incentive budget for 2013, at an incentive cap of \$0.40/kW, and would add approximately 1 MW of projects. In accordance with proposed updates to the DEAP in the section below,

<sup>36</sup> In 2012, the non-residential standard program bid caps were \$0.08/kWh for large commercial projects, \$0.082/kWh for medium commercial projects, and \$0.084/kWh for small commercial projects.

small commercial projects would be eligible to receive incentives up to \$75,000 or 40 percent of the total project cost, whichever is lower.

### **C. Program Administration**

#### **1. Distributed Energy Administration Plan Updates**

The DEAP is a master program administration guideline and APS posts its contents on its public website and to which the Company, industry stakeholders, and customers must adhere. Although the DEAP is not a required component of the Plan, APS will submit an informational filing with the updated version of the DEAP within 30 days after the Commission's decision on the 2013 Plan is released. In addition, APS asks that future changes to the DEAP be made through an industry stakeholder process.

The following changes to the DEAP are called out separately and requested for approval as part of this Plan:

- Small projects would be redefined throughout the DEAP as projects which request up-front incentive payouts not to exceed \$75,000.
- Extend the construction timeline for multi-family housing projects from 180 days (current) to 365 days (proposed), provided that the multi-housing project is Energy Star rated.
- Modify language so that incentive payments shall be made directly to the installer (for owned systems) or lessor (for leased systems).
- Add clarification that if a customer changes installer or dealer, the customer must reapply for an incentive.
- Eliminate off-grid incentives as well as the 15-year declining block SWH/solar space heating/solar space cooling PBI incentives due to limited participation.

#### **2. Security Deposits**

Decision No. 72737 (January 18, 2012) ordered APS to implement an industry a security deposit proposal and present to the Commission in this Plan the need for any subsequent adjustments. APS has fully implemented the measure and as of the time of this filing has no additional recommendations to the security deposit process. During stakeholder discussions, industry stakeholders commented that it would be helpful to link the recipient of the deposit to the person that actually paid the deposit, and this has been reflected in the DEAP's requested changes above.

#### **3. Educational Outreach**

##### *Qualified Solar Installer (QSI)*

APS has received positive feedback from industry stakeholders and incentive program customers regarding the quality of installers participating in the Qualified

Solar Installer and Qualified Solar Water Heater Installer program ("QSI", collectively). The QSI program is designed to raise the bar for Arizona installers by providing education that satisfies installers' course requirements needed to sit for the North American Board of Certified Energy Practitioners (NABCEP) entry-level exam, as well as up-to-date information on APS program administration requirements. Additionally, prospective customers can search on [aps.com](http://aps.com)<sup>37</sup> for QSI certified installers when weighing who to work with for installing a renewable energy system.

Due to the success of the program, beginning in 2013 APS proposes making annual QSI program completion a requirement for DE PV installers who wish to participate in the Company's incentive program or who otherwise interconnect a project into APS's system. Even when incentives are no longer available, it will be important to ensure the installer community is well-versed on solar PV and SWH system interconnection needs, as well as to ensure the safety and reliability of solar system installations for customers, installers, and APS field employees. APS has approximately 200 PV and SWH installers currently participating in the Company's incentive program, 61 of which (46 PV and 15 SWH installers) currently hold an annual certification in the QSI program. Moving to a mandatory QSI program for PV installers would require extra classes and increasing class sizes to keep costs low in 2013. In order to provide QSI training to support an expected increase in participation in the most cost-efficient manner, APS will offer a combination of classroom sessions and online training for participating stakeholders. In addition, installers holding NABCEP certification can 'test-out' of most QSI classes and they are listed as a QSI installer. The total QSI program, including the expansion to accommodate the expected increase in program participation will require a budget of \$300,500.

In 2013, APS plans to supplement installer education by hosting training for Authorities Having Jurisdiction and other key stakeholders to support high-quality PV and solar thermal system installations and inspections. These training sessions will ensure that stakeholders are well prepared to inspect a/c and d/c system components, and that they understand APS' compliance check standards. The training session proposal is \$50,000 in the 2013 budget.

*ArizonaGoesSolar.org Website*

In coordination with other Arizona utilities that each post information about the current status of their incentive programs, APS plans to continue making its updates to the [ArizonaGoesSolar.org](http://ArizonaGoesSolar.org) website in 2013. Customers and installers can monitor up-to-date changes in APS program incentive levels and other program details. Continued support for the website will cost \$15,000 in 2013 and is included in the DE Administration budget.<sup>38</sup>

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<sup>37</sup> The QSI list is available at: <http://www.aps.com/findsolar>

<sup>38</sup> Consistent with Decision No. 72737.

#### 4. Customer Production Meter Deployment

Pursuant to the Commission's order in Decision 72737, APS is currently developing an updated deployment schedule for the placement of production meters on previously installed residential and small non-residential grid-tied PV systems for which customers received a UFI incentive payment. The first phase of the process is currently underway to make necessary technological and program changes to the CIS to accommodate a non-billing meter at the customer's site. Deployment of the meters will begin following completion of the CIS changes, currently estimated for February 2013.

To accommodate the 2009 Settlement requirements<sup>39</sup>, production meter deployment expectations have been accelerated with the intent to have all production meters installed by the end of 2014. Installer notification and customer education outreach will be timed to correspond with production meter deployment, beginning in 2013.

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<sup>39</sup> Decision No. 73183.

## **IV. Renewable Commercialization & Integration (C&I)**

APS plans to focus its renewable energy C&I initiatives towards reliably integrating renewable resources into the Company's electrical transmission and distribution grid. Subsequently, funding support will ensure that the deployment, commercialization, and incorporation of renewable resources will be done safely, reliably, and that APS and its customers will receive the maximum benefit these unique resources have to offer. For 2013, APS will prioritize ongoing projects and technical support which are tied to bringing the Company's RES and 2009 Settlement requirements moving forward. Because APS's 2009 Settlement obligation has accelerated the incorporation of a diverse mix of renewable resources into APS's service territory, the Company faces a corresponding need to address the growing impacts experienced through real-time intermittency and variability in support of customer demand.

APS's renewable C&I budget for 2013 takes into account the Commission's prior interest in holding RES C&I expenses to a necessary baseline. As a result, APS's 2013 C&I efforts no longer focus on renewable research and development projects, but instead target essential grid integration and technology deployment efforts with an emphasis on extracting value from existing multi-year studies and continued collaborative partnerships.

### **A. C&I Projects**

1. High Penetrations of Distributed Resources and Impacts on the Flagstaff Distribution System (HPSD)

APS was initially awarded funding from the Department of Energy in 2010 to study the impacts of high penetrations of renewable resources on the electric distribution grid and to develop tools to support the reliability of the utility's distribution system under these conditions. APS has advanced to the third of five phases in the multi-year project (spanning 2010 through its expected completion in 2014), which is being completed along with additional ancillary study projects in association with the Flagstaff Community Power Project. As part of the ongoing evaluations, APS is assessing the the short circuit impact and islanding effects of PV systems on various distribution feeder configurations, which is essential for reliability concerns within high penetration segments. The project has received ongoing funding commitments from the DOE to proportionally subsidize the cost of phase three, which will lead into the final phases of the HPSD effort. In 2013, APS requests \$125,000 for HPSD and \$75,000 for the associated short circuit and islanding assessment.

2. Flagstaff Energy Storage

In late 2010, APS initiated a distribution level energy storage project to begin providing APS an understanding of the underlying challenges to operating and controlling an energy storage system connected to the APS grid. Phase 1 of the

project has resulted in the successful installation of a 500kW lithium-ion battery storage unit at APS' Elden Substation in Flagstaff in the first quarter of 2012. The system is currently energized, undergoing capacity tests, and will be evaluated in various modes of operation with coinciding early data collection and analysis. The battery system's operational capabilities and dispatch modes will continue to be tested at the Elden Substation until Phase 2 commences in the second quarter of 2013. At that point, the battery system is planned for relocation to the Doney Park Renewable Energy Site in Flagstaff. The system will be modeled by APS and ASU while it operates at its new site along with PV systems deployed on the same electric distribution feeder. APS will focus on how dispatchable energy storage can reduce the effect of short-term variability issues associated with solar PV generation by providing power quality regulation, the ability to store and shift energy delivery to smooth-out upward and downward spikes in demand load profiles, and to determine battery system benefits, costs, and control characteristics. This project will cost \$75,000 in 2013.

### 3. Solar Forecasting and Flagstaff Integration

Using knowledge gained from initial solar variability studies in 2009, 2011, and 2012, as well as the Company's Community Power Project in Flagstaff, in 2013 APS will leverage a partnership with other utilities and industry entities to address the need for proper solar energy forecasting tools. One of the most critical and largely unsolved components of cost-effectively incorporating high levels of PV into the Company's resource mix is optimizing resource scheduling through accurate solar forecasting tools. Day-ahead, real-time, and other resource planning necessities become inherently complex when including a high penetration of variable renewable resources, and operators and customers will both benefit from the combined input of other peer utilities similarly seeking to make progress and drive down solar integration costs. This Flagstaff integration project requires \$125,000 included in the 2013 budget.

### 4. Combined Solar, Plug-In Hybrid Electric Vehicles, Energy Storage Study

In 2012, APS began leveraging the Chase Field solar system along with the addition of small commercial scale energy storage and future plug-in hybrid electric vehicle charging stations to study the synergy and value streams for the charging of electric vehicles from distributed solar renewable resources. This study will provide insights into the value of management strategies for these combined resources and advancing technologies, including impacts resulting from solar PV, battery storage, EV chargers on local grid, and development of cyber-secured remote monitoring and control. In 2013 APS plans to collect model, validate and analyze the system for integration into smart grid planning and deployment efforts. The study requires \$50,000 of budget support in 2013.

## V. 2013 Renewable Energy Standard Implementation Plan Budget

The budget for APS's 2013 Plan consists primarily of funding for current commitments including PBI legacy payments, support for continuing programs, revenue requirements, and implementation of previously authorized programs. APS believes that the funding request for either of the two proposed incentive options is sufficient for the Company to meet its near-term renewable energy requirements. If the Commission selects the option to offer new DE incentives, the non-residential incentive line item modeled in Exhibit 2A signifies the impact of the full 20 MW of possible non-residential incentive capacity. This total would decrease proportionately if the Commission decides to select fewer than four non-residential incentive blocks.

On May 24, 2012<sup>40</sup>, the Commission resolved APS's 2011 Rate Case with Decision No. 73183. That Decision impacted the RES program in important ways. First, the Commission reaffirmed that APS can recover, through the RES adjustor, the revenue requirements associated with those APS renewable energy-related capital investments made in compliance with Decision No. 71448.<sup>41</sup> APS may do so until it is specifically authorized to recover those costs in base rates or another adjustor.<sup>42</sup> The Commission has approved several APS-owned capital investments for purposes of compliance with Decision No. 71448, including the AZ Sun program, the Schools and Government Program, and the Community Solar Program. With the Commission's guidance through multiple Decisions (and punctuated most recently in the Commission's May 2012 Decision), APS now projects it is on track with sufficient Commission-approved capital investments to meet compliance with Decision No. 71448. Second, Decision No. 73138 moved into rate base all renewable energy projects closed to plant in service as of March 31, 2012.<sup>43</sup> The revenue requirements associated with those projects will no longer be recovered through the RES adjustor. Instead, APS will now recover those revenue requirements through base rates effective July 1, 2012.<sup>44</sup>

In 2012, the RES adjustor was authorized to collect \$87.7 million. The resulting residential adjustor cap was set to \$3.84 for 2012. On July 1, 2012 the adjustor will be reset in accordance with the Plan of Administration to reflect Decision No. 73183. This decision resulted in a mid-year change that removed \$21.7 million from the needed 2012 adjustor collections under the RES budget and temporarily lowered the customer class caps for the remainder of 2012.

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<sup>40</sup> Decision No. 73183; Docket No. E-01345A-11-0224.

<sup>41</sup> Decision No. 73183, Settlement Agreement, paragraph 8.2.

<sup>42</sup> *Id.*

<sup>43</sup> Decision No. 73183, Settlement Agreement, paragraph 8.1.

<sup>44</sup> *Id.*

As planned resources are placed into service to support the Company's annual RES requirement as well as its 2009 Settlement Agreement target, APS expects the total budget for PBI and other DE legacy costs, PPA projects, and APS-owned projects will increase in 2014 and 2015 before declining in 2016 and 2017.<sup>45</sup> The total five year projected gross cost for the 2013-2017 Plan is \$712.4 million, not including any funding offsets which may occur.

In an effort to mitigate the impact to customer bills from the RES adjustor surcharge, APS has sought to keep the residential adjustor flat in the Company's Option 1 budget request compared to 2012 and as close to the 2012 level as feasible in Option 2 with the new incentive proposal. With the adjustments detailed below from the Production Tax Credit (PTC) and reallocation of existing program funds, the 2013 adjustor cap in the base budget is \$3.84. APS will continue to evaluate opportunities to moderate the effects of incremental budget costs during budgets in 2014-2017 as well. This evaluation includes the annual reallocation of dollars not spent in the current year being used to offset future costs, annual PTC claims, shifting costs from the RES to APS's Power Supply Adjustor, and reallocating the proportion of RES costs borne by residential and commercial customers. The funding shown in Exhibit 1A is net of the two financial offsets described below. The Company will discuss additional options for moderating future RES surcharge cost impacts as part of the Commission's open meeting prior to taking action on the 2013 Plan.

*Production Tax Credit (PTC)* – Through APS's ownership of its AZ Sun projects, the Company has applied for and expects to receive tax credits from the Arizona state PTC program in each year of the Plan.<sup>46</sup> PTC credits have already been approved for the Company's Paloma, Cotton Center, and Hyder plant, which were placed in-service in 2011. APS anticipates submitting another PTC application once the Chino Valley project reaches its expected in-service date of December 2012, although it is uncertain whether additional funds will remain available for allocation within Arizona's PTC program budget by that date.

The Company's expected PTC during this Plan's five-year horizon are shown in Figure 6. The actual PTC claimed will vary each year depending on the actual energy production realized by each eligible project compared to its forecasted annual production, as well as an annually declining credit per MWh produced. The tax credit claimed in a budget year is based upon actual production recorded in the previous year. APS proposes to use the \$3.4 million in PTC to offset the 2013 RES budget.

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<sup>45</sup> This assumes a mid-2016 rate case adjudication to sweep revenue requirements from the RES budget into base rates. This assumption is subject to change, as no determinations beyond the 2012 Settlement's four year stay-out provision (Decision No. 73138) have been made regarding when APS would file for its next rate case to take effect.

<sup>46</sup> 2010 Senate Bill 1254 established Arizona's Production Tax Credit.

**Figure 6 – Estimated PTC Eligibility**

<u>Arizona Production Tax Credit</u>	
<u>Year</u>	<u>Estimated Tax Credit</u>
2013	\$3.4 million
2014	\$3.4 million
2015	\$3.2 million
2016	\$3.2 million
2017	\$2.5 million

*Reallocation of existing program funds* – In its 2011 RES Compliance Report filed March 30, 2012, APS identified \$11.1 million in under-spent program revenue that it would true-up as future RES budget offsets. In consideration of the impact to the increasing adjustor in 2014, APS proposes reallocating \$1 million of these funds to offset the 2013 budget and the remaining funds to offset the 2014 budget. By applying these funds in 2014, this will help offset some of the expected budgetary increases in the RES adjustor. Any additional budget under-spend from the 2012 work plan will be noted before the end of the year prior to the Commission’s action on the 2013 Plan.

**EXHIBIT 1**

**RES Plan and Program Summary**

## APS Renewable Energy Standard Implementation Plan for 2013-2017

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Exhibit 1A summarizes the 2013 RES Implementation Plan objectives and outcomes.

Exhibit 1B outlines the annual APS renewable energy targets by renewable generation and distributed energy, shows anticipated 2013 production under the Company's two Distributed Energy options, and summarizes the proposed budget along with the proposed RES Adjustor kWh charges and caps.

Exhibit 1C is a graphic representation of the renewable generation and distributed energy components of the RES portfolio for 2013 through 2017.

Exhibit 1D is a detailed graphic representation of the residential distributed energy component of the RES portfolio for 2013 through 2017.

Exhibit 1E is a detailed graphic representation of the non-residential distributed energy component of the RES portfolio for 2013 through 2017.

### Exhibit 1A: APS RES Implementation Plan 2013 Overview

#### 2013 RES IP Objectives

> Funding necessary for existing program and contract commitments to achieve compliance with the 2013 RES requirements and 2009 Settlement Agreement.

	RES Requirement (in MWh)	Option 1 MWh	Option 2 MWh
Total RG Production	778,293	1,748,542	1,748,542
DE Production:			
Residential DE	166,777	292,591	292,591
Non-residential DE	133,422	311,290	315,290
Wholesale DE	33,355	33,355	33,355
Total DE Production	333,554	637,236	641,236
Less Green Choice Sales		(150,000)	(150,000)
<b>2013 RES Budget</b>	<b>1,111,847</b>	<b>2,235,778</b>	<b>2,239,778</b>

	\$M	\$M	\$M
Renewable Generation		54.6	54.6
Customer Sited Distributed Energy		34.7	34.7
Non-Incentive DE Program Costs		7.4	7.4
Commercialization and Integration		0.5	0.5
Residential DE		-	9.0
Non-residential DE		-	0.6
<b>Total RES Budget</b>		<b>97.2</b>	<b>106.8</b>

	\$M	\$M	\$M
2013 Arizona Production Tax Credit			
Available unallocated program revenue <sup>1</sup>		(3.4)	(3.4)
Total Adjustments		(1.0)	(1.0)
Portion of RES budget funded through the RES Adjustor		(4.4)	(4.4)
<b>Adjusted 2013 RES Adjustor Rate Schedule &amp; Monthly Caps</b>		<b>92.8</b>	<b>102.4</b>

	2012 RES Adjustor <sup>2</sup>	\$/bill	\$/bill
per kWh	0.009588	0.009608	0.010663
Residential customer cap	3.84	3.84	4.27
Non-residential (under 3 MW) customer cap	142.44	142.74	158.42
Non-residential (3 MW and over) customer cap	427.33	428.22	475.25

**Notes:**

<sup>1</sup> Includes a portion of available funding reallocation as described in the Company's 2013 RES IP.

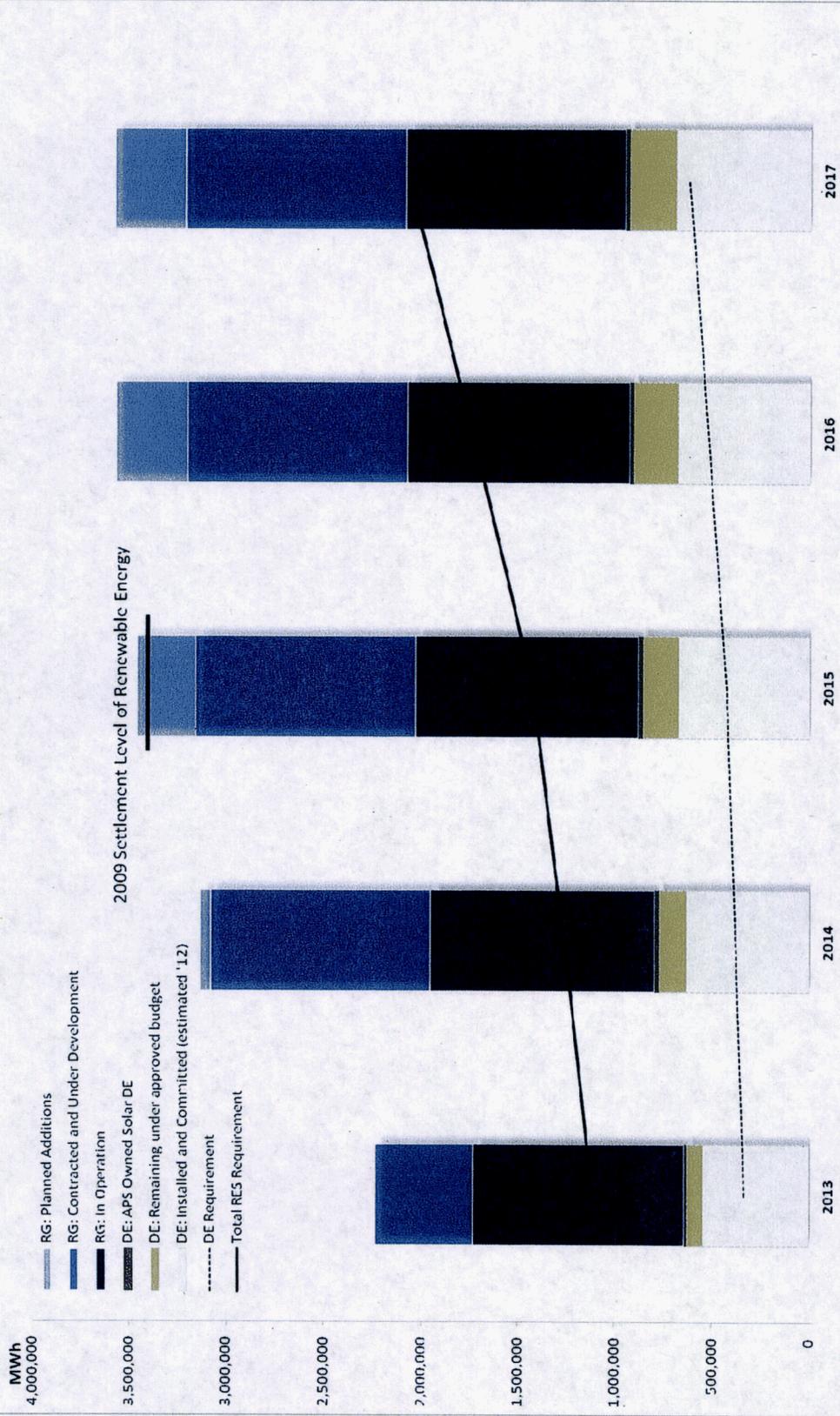
<sup>2</sup> RES Adjustor level January 1 through July 1, 2012 based on the portion of the 2012 program budget recovered through the RES Adjustor (\$87.0M).

**Exhibit 1B: APS 2013 - 2017 RES Program Summary**

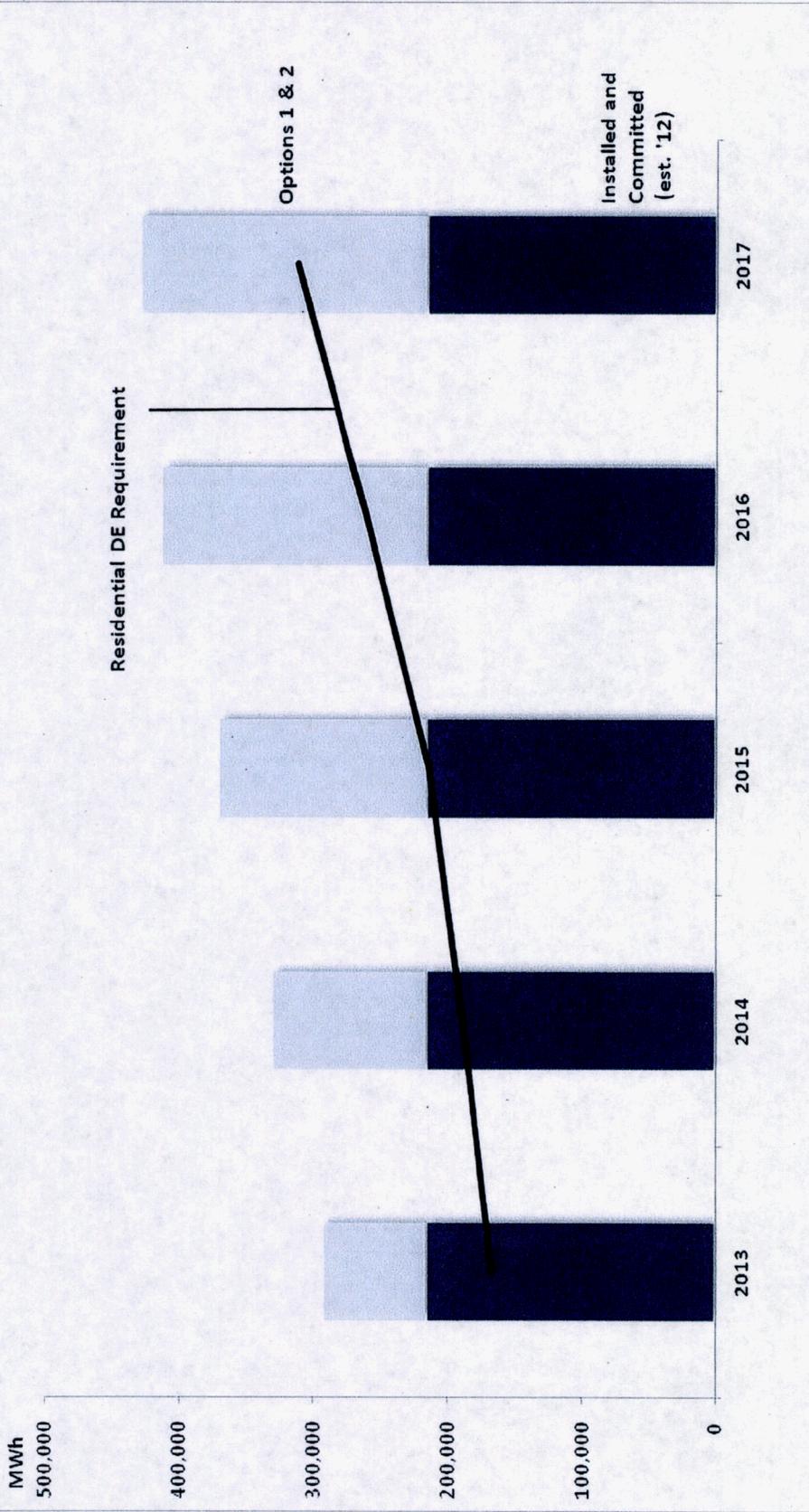
Line No.	2013	2014	2015	2016	2017
1	27,796,171	28,073,925	28,484,576	29,007,133	29,630,479
2	4.00%	4.50%	5.00%	6.00%	7.00%
3	1,111,847	1,263,327	1,424,229	1,740,428	2,074,134
4					
5					
6	778,293	884,329	996,960	1,218,300	1,451,893
7					
8					
9	333,554	378,998	427,269	522,128	622,241
10	166,777	189,499	213,634	261,064	311,121
11	133,422	151,599	170,908	208,851	248,896
12	33,355	37,900	42,727	52,213	62,224
13					
14					
15	778,293	884,329	996,960	1,218,300	1,451,893
16					
17	1,748,542	2,491,627	2,728,184	2,785,852	2,768,681
18	150,000	150,000	150,000	150,000	150,000
19	1,598,542	2,341,627	2,578,184	2,635,852	2,618,681
20	820,249	1,457,298	1,581,224	1,417,552	1,166,788
21					
22					
23	333,554	378,998	427,269	522,128	622,241
24					
25	526,716	611,745	648,340	647,654	646,973
26	77,165	114,394	153,925	195,963	212,025
27	81,165	140,894	185,425	227,463	243,525
28	33,355	37,900	42,727	52,213	62,224
29	637,236	764,039	844,992	895,830	921,222
30	641,236	790,539	876,492	927,330	952,722
31					
32					
33					
34	307,682	411,541	449,223	405,202	330,481
35					
36					
37					
38	54.6	100.1	125.7	101.3	65.4
39	42.1	57.5	57.9	54.1	51.2
40	0.5	0.5	0.5	0.5	0.5
41	97.2	158.1	184.1	155.9	117.1
42					
43	97.2	158.1	184.1	155.9	117.1
44	9.6	1.8	2.1	2.1	2.1
45	106.8	159.9	186.2	158.0	119.2

**Notes:**  
 1 Green Choice MWh sales (Rate Schedules GPS-1, GPS-2, GPS-3) are not counted towards RES compliance, and revenues collected are credited to the Renewable Generation budget (in compliance with Decision No. 70313). Does not include program growth due to the proposed Community Solar initiative.  
 2 Amount of DE expected to be in service at the end of 2012.  
 3 Distributed Energy Option 1 reflects no new DE incentives.  
 4 Distributed Energy Option 2 offers new incentives to approximately match 2012 market activity.  
 5 Includes DE component of the Snowflake White Mountain Power project, based on the amount of wholesale DE allowed in a given year.  
 6 Assumes Option 2.  
 7 Assumes rate case adjudication in July 2016 for all Utility Owned Generation (UOG) assets.

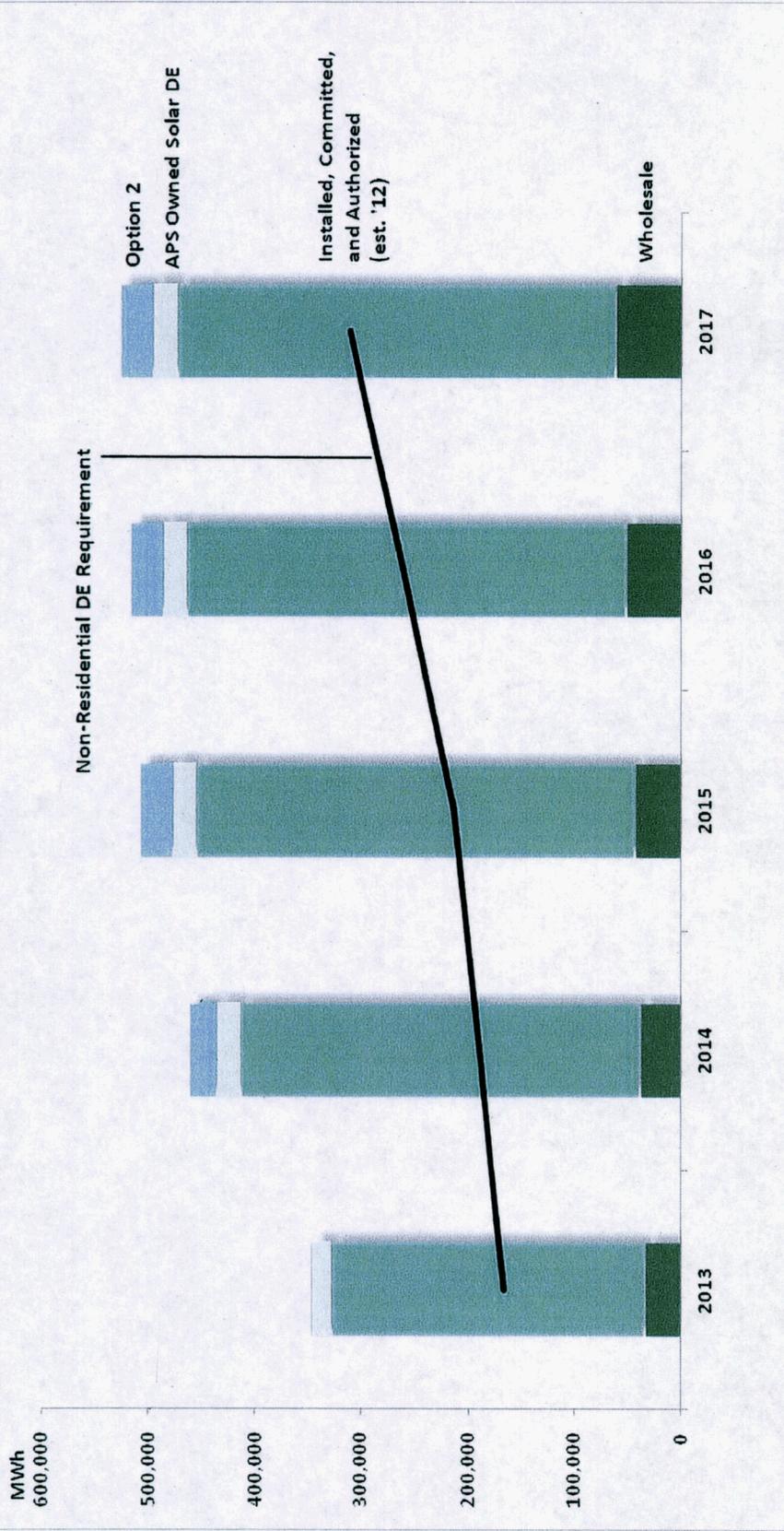
**Exhibit 1C: Energy Contributions to RES By Resource Group**



# Exhibit 1D: Residential Customer Sited Distributed Energy



**Exhibit 1E: Non-Residential Customer Sited Distributed Energy**



## Exhibit 2

### RES Budget Detail

**APS Renewable Energy Standard Implementation Plan for 2013-2017**

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Exhibit 2A details the proposed RES budget for the 2013 through 2017 program by line item for both renewable generation and distributed energy.

**Exhibit 2A: 2013 RES IP Summary Budget**

Line No.	2013	2014	2015	2016	2017	Total
<b>Renewable Generation</b>						
<b>Renewable Generation Contracts and Operation and Maintenance</b>						
1						
2						
3	\$ 53.6	\$ 99.7	\$ 125.3	\$ 100.9	\$ 65.0	\$ 444.5
4	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 1.5
5	\$ 1.6	\$ 1.6	\$ 1.6	\$ 1.6	\$ 1.6	\$ 8.0
6	\$ 55.5	\$ 101.6	\$ 127.2	\$ 102.8	\$ 66.9	\$ 454.0
7						
<b>Offsets</b>						
8						
9	\$ (0.9)	\$ (1.5)	\$ (1.5)	\$ (1.5)	\$ (1.5)	\$ (6.9)
10						
11	\$ 54.6	\$ 100.1	\$ 125.7	\$ 101.3	\$ 65.4	\$ 447.1
12						
<b>Customer Sited Distributed Energy</b>						
<b>Existing Contracts and Commitments</b>						
13						
14						
15	7.6	9.9	9.8	9.1	9.0	\$ 45.4
16	-	1.3	1.3	1.3	1.3	5.2
17	17.8	26.3	25.9	25.9	25.9	121.8
18	2.3	5.6	6.9	6.9	6.9	28.6
19	6.8	7.0	6.3	3.0	-	23.1
20	0.2	0.4	0.5	0.7	0.8	2.6
21	\$ 34.7	\$ 50.5	\$ 50.7	\$ 46.9	\$ 43.9	\$ 226.7
22						
<b>Non-Incentive Distributed Energy Costs</b>						
23						
24	\$ 0.4	\$ 0.3	\$ 0.3	\$ 0.3	\$ 0.3	\$ 1.6
25	\$ 5.7	\$ 5.8	\$ 6.0	\$ 6.0	\$ 6.1	29.6
26	\$ 0.9	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.5	2.9
27	\$ 0.4	\$ 0.4	\$ 0.4	\$ 0.4	\$ 0.4	2.0
28	\$ 7.4	\$ 7.0	\$ 7.2	\$ 7.2	\$ 7.3	36.1
29						
30	\$ 42.1	\$ 57.5	\$ 57.9	\$ 54.1	\$ 51.2	\$ 262.8
31						
32	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.5	\$ 0.5	2.5
33						
34	\$ 97.2	\$ 158.1	\$ 184.1	\$ 155.9	\$ 117.1	\$ 712.4
35						
<b>Total RES Budget <sup>6</sup></b>						
36						
37	\$ 97.2	\$ 158.1	\$ 184.1	\$ 155.9	\$ 117.1	\$ 712.4
38	\$ 9.6	\$ 1.8	\$ 2.1	\$ 2.1	\$ 2.1	\$ 17.7
39	\$ 106.8	\$ 159.9	\$ 186.2	\$ 158.0	\$ 119.2	\$ 730.1
40						

**Notes:**

- <sup>1</sup> Assumes rate case adjudication in July 2016 for all Utility Owned Generation (UOG) assets.
- <sup>2</sup> Third-party owned component of the 2011 and 2012 School and Government Programs.
- <sup>3</sup> UOG component of the 2011 and 2012 School and Government Programs.
- <sup>4</sup> Consistent with Decision No. 72737, the budget associated with updating the Company's website content has been included in the DE Administration budget.
- <sup>5</sup> Includes revenue requirements, customer notification and installation costs for production metering as required by Decision No. 72737.
- <sup>6</sup> Does not include proposed funding adjustments.

## Exhibit 3

### Renewable Generation

**APS Renewable Energy Standard Implementation Plan for 2013-2017**

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Exhibit 3A details the expected energy contribution from existing and planned renewable generation projects.

Exhibit 3B details the expected capacity contribution from existing and planned renewable generation projects.

Exhibit 3C details the estimated RES cost for each existing and planned renewable generation project. REDACTED.

Exhibit 3D details the estimated cost per MWh for each existing and planned renewable generation project. REDACTED.

Exhibit 3E details the AZ Sun Program revenue requirements.

**Exhibit 3A: APS Existing and Targeted Generation (MWh)**

Line No.	2013	2014	2015	2016	2017	Total	Line No.
<b>Existing Contracts and APS Resources:</b>							
<b>Solar:</b>							
1	15,937	15,937	15,937	15,937	15,937	79,685	1
2	10,411	10,359	10,307	10,255	10,204	51,536	2
3	25,314	25,061	24,810	24,562	24,317	124,064	3
4	35,070	34,789	34,511	34,235	33,961	172,566	4
5	-	42,642	42,429	42,341	42,006	169,418	5
6	1,997	39,513	39,235	39,010	38,680	158,435	6
7	41,531	41,241	40,952	40,665	40,381	204,770	7
8	40,466	40,263	40,062	39,862	39,662	200,315	8
9	45,798	45,569	45,341	45,114	44,889	226,711	9
10	46,417	46,185	45,954	45,724	45,496	229,776	10
11	1,968	36,956	36,772	36,696	36,405	148,797	11
12	45,922	112,041	111,480	111,272	110,368	491,083	12
13	391,921	903,349	903,349	903,349	903,349	4,005,317	13
14	702,752	1,393,905	1,391,139	1,389,022	1,385,655	6,262,473	14
15							15
16							16
17							17
18	269,239	269,239	269,239	269,939	269,239	1,346,895	18
19	299,592	299,592	299,592	299,592	299,592	1,497,960	19
20	282,163	282,163	282,163	282,931	282,163	1,411,583	20
21	850,994	850,994	850,994	852,462	850,994	4,256,436	21
22							22
23							23
24	73,264	73,264	73,264	73,465	73,264	366,521	24
25	73,264	73,264	73,264	73,465	73,264	366,521	25
26							26
27							27
28	78,172	73,627	68,800	59,616	49,303	329,518	28
29	20,800	20,800	20,800	20,857	20,800	104,057	29
30	22,560	22,560	22,560	22,622	22,560	112,862	30
31	121,532	116,987	112,160	103,095	92,663	546,437	31
32							32
33	1,749,542	2,435,150	2,427,557	2,418,044	2,402,576	11,431,869	33
34							34
35							35
36		4,600	60,531	70,093	69,528	204,752	36
37			70,000	70,000	70,000	210,000	37
38		51,877	89,038	88,593	88,150	317,658	38
39			81,058	139,122	138,427	358,607	39
40		56,477	300,627	367,808	366,105	1,091,017	40
41							41
42	1,748,542	2,491,627	2,728,184	2,785,852	2,768,681	12,522,886	42
43							43
<b>Wind:</b>							
18	269,239	269,239	269,239	269,939	269,239	1,346,895	18
19	299,592	299,592	299,592	299,592	299,592	1,497,960	19
20	282,163	282,163	282,163	282,931	282,163	1,411,583	20
21	850,994	850,994	850,994	852,462	850,994	4,256,436	21
22							22
23							23
24	73,264	73,264	73,264	73,465	73,264	366,521	24
25	73,264	73,264	73,264	73,465	73,264	366,521	25
26							26
27							27
28	78,172	73,627	68,800	59,616	49,303	329,518	28
29	20,800	20,800	20,800	20,857	20,800	104,057	29
30	22,560	22,560	22,560	22,622	22,560	112,862	30
31	121,532	116,987	112,160	103,095	92,663	546,437	31
32							32
33	1,749,542	2,435,150	2,427,557	2,418,044	2,402,576	11,431,869	33
34							34
35							35
36		4,600	60,531	70,093	69,528	204,752	36
37			70,000	70,000	70,000	210,000	37
38		51,877	89,038	88,593	88,150	317,658	38
39			81,058	139,122	138,427	358,607	39
40		56,477	300,627	367,808	366,105	1,091,017	40
41							41
42	1,748,542	2,491,627	2,728,184	2,785,852	2,768,681	12,522,886	42
43							43
<b>Geothermal:</b>							
24	73,264	73,264	73,264	73,465	73,264	366,521	24
25	73,264	73,264	73,264	73,465	73,264	366,521	25
26							26
27							27
28	78,172	73,627	68,800	59,616	49,303	329,518	28
29	20,800	20,800	20,800	20,857	20,800	104,057	29
30	22,560	22,560	22,560	22,622	22,560	112,862	30
31	121,532	116,987	112,160	103,095	92,663	546,437	31
32							32
33	1,749,542	2,435,150	2,427,557	2,418,044	2,402,576	11,431,869	33
34							34
35							35
36		4,600	60,531	70,093	69,528	204,752	36
37			70,000	70,000	70,000	210,000	37
38		51,877	89,038	88,593	88,150	317,658	38
39			81,058	139,122	138,427	358,607	39
40		56,477	300,627	367,808	366,105	1,091,017	40
41							41
42	1,748,542	2,491,627	2,728,184	2,785,852	2,768,681	12,522,886	42
43							43
<b>Biomass/Biogas:</b>							
28	78,172	73,627	68,800	59,616	49,303	329,518	28
29	20,800	20,800	20,800	20,857	20,800	104,057	29
30	22,560	22,560	22,560	22,622	22,560	112,862	30
31	121,532	116,987	112,160	103,095	92,663	546,437	31
32							32
33	1,749,542	2,435,150	2,427,557	2,418,044	2,402,576	11,431,869	33
34							34
35							35
36		4,600	60,531	70,093	69,528	204,752	36
37			70,000	70,000	70,000	210,000	37
38		51,877	89,038	88,593	88,150	317,658	38
39			81,058	139,122	138,427	358,607	39
40		56,477	300,627	367,808	366,105	1,091,017	40
41							41
42	1,748,542	2,491,627	2,728,184	2,785,852	2,768,681	12,522,886	42
43							43

**Notes:**

- <sup>1</sup> Includes the REC multiplier for in-state solar installation prior to 12/31/2005 per Decision No. 69127. For purposes of consistency in this exhibit, RECs are counted as energy.
- <sup>2</sup> As noted in Exhibit 1B, this project is split between Renewable Generation (RG) and Distributed Energy (DE).
- <sup>3</sup> Assumes deployment of the Community Solar program in 2014 and 2015.
- <sup>4</sup> Variable based on DE growth as described in the Company's 2013 RES IP.
- <sup>5</sup> Assumes incremental deployment of AZ Sun program in 2013-2015. Additional detail on the AZ Sun program is provided in Exhibit 3E.

**Exhibit 3B: APS Existing and Targeted Generation Capacity (MW)**

Line No.	2013	2014	2015	2016	2017	Line No.
<b>Existing Contracts and APS Resources:</b>						
<b>Solar:</b>						
1	5	5	5	5	5	1
2	4	4	4	4	4	2
3	10	10	10	10	10	3
4	14	14	14	14	14	4
5	-	15	15	15	15	5
6	15	14	14	14	14	6
7	17	17	17	17	17	7
8	16	16	16	16	16	8
9	17	17	17	17	17	9
10	19	19	19	19	19	10
11	14	14	14	14	14	11
12	35	35	35	35	35	12
13	250	250	250	250	250	13
14	416	430	430	430	430	14
15						15
16						16
17						17
18						18
19						19
20						20
21						21
22						22
23						23
24						24
25						25
26						26
27						27
28						28
29						29
30						30
31						31
32						32
33						33
34						34
35						35
36						36
37						37
38						38
39						39
40						40
41						41
42						42
43						43
<b>Wind:</b>						
1	90	90	90	90	90	1
2	100	100	100	100	100	2
3	99	99	99	99	99	3
4	289	289	289	289	289	4
5						5
6						6
7						7
8						8
9						9
10						10
11						11
12						12
13						13
14						14
15						15
16						16
17						17
18						18
19						19
20						20
21						21
22						22
23						23
24						24
25						25
26						26
27						27
28						28
29						29
30						30
31						31
32						32
33						33
34						34
35						35
36						36
37						37
38						38
39						39
40						40
41						41
42						42
43						43
<b>Geothermal:</b>						
1	10	10	10	10	10	1
2	10	10	10	10	10	2
3						3
4						4
5						5
6						6
7						7
8						8
9						9
10						10
11						11
12						12
13						13
14						14
15						15
16						16
17						17
18						18
19						19
20						20
21						21
22						22
23						23
24						24
25						25
26						26
27						27
28						28
29						29
30						30
31						31
32						32
33						33
34						34
35						35
36						36
37						37
38						38
39						39
40						40
41						41
42						42
43						43
<b>Biomass/Biogas:</b>						
1	15	15	15	15	15	1
2	3	3	3	3	3	2
3	3	3	3	3	3	3
4	21	21	21	21	21	4
5						5
6						6
7						7
8						8
9						9
10						10
11						11
12						12
13						13
14						14
15						15
16						16
17						17
18						18
19						19
20						20
21						21
22						22
23						23
24						24
25						25
26						26
27						27
28						28
29						29
30						30
31						31
32						32
33						33
34						34
35						35
36						36
37						37
38						38
39						39
40						40
41						41
42						42
43						43
<b>Targeted Additions:</b>						
1	8	8	25	25	25	1
2	-	-	32	32	32	2
3	32	32	32	32	32	3
4	-	-	50	50	50	4
5						5
6						6
7						7
8						8
9						9
10						10
11						11
12						12
13						13
14						14
15						15
16						16
17						17
18						18
19						19
20						20
21						21
22						22
23						23
24						24
25						25
26						26
27						27
28						28
29						29
30						30
31						31
32						32
33						33
34						34
35						35
36						36
37						37
38						38
39						39
40						40
41						41
42						42
43						43
<b>Subtotal - Contracted Projects</b>						
	736	750	750	750	747	
<b>Targeted Additions:</b>						
1	-	8	25	25	25	1
2	-	-	32	32	32	2
3	-	32	32	32	32	3
4	-	-	50	50	50	4
5						5
6						6
7						7
8						8
9						9
10						10
11						11
12						12
13						13
14						14
15						15
16						16
17						17
18						18
19						19
20						20
21						21
22						22
23						23
24						24
25						25
26						26
27						27</

Competitively Confidential

Exhibit 3C: APS Renewable Existing and Targeted Generation RES Costs (in \$M's)

Line No.	2013	2014	2015	2016	2017	Total
1	<b>Existing Contracts and APS Resources:</b>					
2	<b>Solar:</b>					
3	Photovoltaic Sites <sup>1</sup>					
4	2009 Small Generation: Ajo					
5	2009 Small Generation: Prescott					
6	2010 Small Generation: Tonopah					
7	2011 Small Generation: Maricopa County					
8	2011 Small Generation: Tonopah II					
9	Paloma <sup>2</sup>					
10	Hyder I <sup>2</sup>					
11	Cotton Center <sup>2</sup>					
12	Chino Valley <sup>2</sup>					
13	Hyder II <sup>2</sup>					
14	Foothills I/II <sup>2</sup>					
15	Solana CSP					
16	<b>Total Solar</b>					
17	<b>Wind:</b>					
18	Aragonne Mesa					
19	High Lonesome					
20	Perrin Ranch					
21	<b>Total Wind</b>					
22	<b>Geothermal:</b>					
23	CE Turbo					
24	<b>Total Geothermal</b>					
25	<b>Biomass/Biogas:</b>					
26	Snowflake White Mountain Power <sup>3</sup>					
27	Sexton Glendale Landfill					
28	2010 Small Generation: Surprise Landfill					
29	<b>Total Biomass/Biogas</b>					
30	<b>Subtotal - Contracted Projects</b>					
31	<b>Targeted Additions:</b>					
32	Community Solar <sup>4</sup>					
33	Future Small Generation RFP <sup>5</sup>					
34	AZ Sun Future Project 2.6					
35	AZ Sun Future Project 2.6					
36	<b>Subtotal - Targeted Additions</b>					
37	<b>Total Renewable Generation</b> \$ 53.6 \$ 99.7 \$ 125.3 \$ 100.9 \$ 65.0 \$ 444.5					
38						
39						
40						
41						
42						
43						

Notes:  
<sup>1</sup> Project is APS owned and was funded by customers under the Environmental Portfolio Standard. There is no recurring contract cost to be funded by the RES.  
<sup>2</sup> For details of the AZ Sun program see Exhibit 3E. Assumes rate case adjudication in July 2016.  
<sup>3</sup> As noted in Exhibit 1B, this project is split between Renewable Generation (RG) and Distributed Energy (DE).  
<sup>4</sup> Assumes deployment of the Community Solar program in 2014 and 2015.  
<sup>5</sup> Variable based on DE growth as described in the Company's 2013 RES IP.  
<sup>6</sup> Assumes incremental deployment of AZ Sun program in 2013-2015. Additional detail on the AZ Sun program is provided in Exhibit 3E.

**Exhibit 3D: Third Party APS IP Renewable Generation RES Costs (\$/MWh)**

Line No.	2013	2014	2015	2016	2017	Line No.
1	<b>Existing Contracts:</b> <b>Solar:</b> 2009 Small Generation: Ajo 2009 Small Generation: Prescott 2010 Small Generation: Tonopah 2011 Small Generation: Maricopa County 2011 Small Generation: Tonopah II Solana CSP					1
2						2
3						3
4						4
5						5
6						6
7						7
8	<b>Wind:</b> Aragonne Mesa High Lonesome Perrin Ranch					8
9						9
10						10
11						11
12	<b>Geothermal:</b> CE Turbo					12
13						13
14	<b>Biomass/Biogas:</b> Snowflake White Mountain Power <sup>1</sup> Sexton Glendale Landfill 2010 Small Generation: Surprise Landfill					14
15						15
16						16
17						17
18						18
19	19					
20	20					
21	21					

**Notes:**

<sup>1</sup> As noted in Exhibit 1B, this project is split between Renewable Generation (RG) and Distributed Energy (DE).

**Exhibit 3E: AZ Sun Program Revenue Requirements (in \$M's) <sup>1,2</sup>**

	<b>MW</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016<sup>3</sup></b>	<b>2017</b>
Paloma	17	\$ -	-	\$ -	-	\$ -
Hyder I	16	-	-	-	-	-
Cotton Center	17	-	-	-	-	-
Hyder II	14	-	6.4	5.8	2.7	-
Chino Valley	19	12.1	8.8	8.1	3.9	-
Foothills I/II	35	9.6	15.8	14.3	6.7	-
AZ Sun Future Project	32	-	7.4	13.8	6.6	-
AZ Sun Future Project	50	-	-	11.6	11.1	-
<b>RES Cost Total</b>	<b>200</b>	<b>\$ 21.7</b>	<b>\$ 38.4</b>	<b>\$ 53.6</b>	<b>\$ 31.0</b>	<b>\$ -</b>

**Notes:**

- <sup>1</sup> Assumes \$25,000 MW-yr O&M cost.
- <sup>2</sup> Assumes a total depreciable life of 30 years.
- <sup>3</sup> Assumes rate case adjudication in July 2016.

## Exhibit 4

### Customer-Sited Distributed Energy

**APS Renewable Energy Standard Implementation Plan for 2013-2107**

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Exhibit 4A details the estimated energy contribution from existing and planned distributed generation projects under both Company proposed DE options.

Exhibit 4B details the annual incentive budget by residential and non-residential classifications under both Company proposed DE options.

Exhibit 4C details the estimated total cost of the APS Production-Based Incentive program for the 2013 through 2017 timeframe including proposed cumulative lifetime authorizations.

**Exhibit 4A: APS Customer Sited Distributed Energy Programs (MWh)**

Line No.	Residential	2013	2014	2015	2016	2017	Total	Line No.
1	Current Energy Production <sup>1</sup>	214,524	214,524	214,524	214,524	214,524	1,072,620	1
2	Community Power Project	902	902	902	902	902	4,510	2
3	<b>Total Residential</b>	<b>215,426</b>	<b>215,426</b>	<b>215,426</b>	<b>215,426</b>	<b>215,426</b>	<b>1,077,130</b>	3
4	Total Residential DE Target	166,777	189,499	213,634	261,064	311,120		4
5	<b>Non-Residential</b>							5
6								6
7								7
8	<b>Existing Contractual Commitments:</b>							8
9	Customer Owned Resources:							9
10	Current Up-Front Incentives	33,617	33,617	33,617	33,617	33,617	168,085	10
11	Production-based Incentives <sup>2</sup>	178,314	178,314	178,314	178,314	178,314	891,570	11
12	2008 Distributed Energy RFP	63,880	100,092	120,656	119,970	119,289	523,887	12
13	Schools and Government PBI	18,791	50,921	66,952	66,952	66,952	270,568	13
14	Innovative Technologies	-	12,000	12,000	12,000	12,000	48,000	14
15	Wholesale DE <sup>3</sup>	33,355	37,900	42,727	52,213	62,224	228,419	15
16	Customer Owned Subtotal	327,957	412,844	454,266	463,066	472,396	2,130,529	16
17	Utility Owned Resources:							17
18	APS Schools and Government	16,688	21,375	21,375	21,375	21,375	102,188	18
19	Utility Owned Subtotal	16,688	21,375	21,375	21,375	21,375	102,188	19
20	<b>Total Non-Residential</b>	<b>344,645</b>	<b>434,219</b>	<b>475,641</b>	<b>484,441</b>	<b>493,771</b>	<b>2,232,717</b>	20
21	Total Non-Residential DE Target	166,777	189,499	213,634	261,064	311,120		21
22								22
23	<b>Base Total Customer Sited Distributed Energy (MWh)</b>	<b>560,071</b>	<b>649,645</b>	<b>691,067</b>	<b>699,867</b>	<b>709,197</b>	<b>3,309,847</b>	23
24								24
25								25
26	<b>Total Distributed Energy Production</b>							26
27	<b>Option 1</b>							27
28	Residential DE <sup>4</sup>	77,165	114,394	153,925	195,963	212,025	753,472	28
29	Small Non-Residential DE	-	-	-	-	-	-	29
30	Med/Large Non-Residential DE	-	-	-	-	-	-	30
31	<b>Base with Option 1</b>	<b>637,236</b>	<b>764,039</b>	<b>844,992</b>	<b>895,830</b>	<b>921,222</b>	<b>4,063,319</b>	31
32	<b>Option 2</b>							32
33	Residential DE	77,165	114,394	153,925	195,963	212,025	753,472	33
34	Small Non-Residential DE	1,500	1,500	1,500	1,500	1,500	7,500	34
35	Med/Large Non-Residential DE	2,500	25,000	30,000	30,000	30,000	117,500	35
	<b>Base with Option 2</b>	<b>641,236</b>	<b>790,539</b>	<b>876,492</b>	<b>927,330</b>	<b>952,722</b>	<b>4,188,319</b>	

**Notes:**

- <sup>1</sup> Estimated total energy resulting from incentives paid through 2012.
- <sup>2</sup> Existing standard PBI program commitments up to the \$423 million lifetime authorization approved in Commission Decisions No. 71254, 71459, 72022, and 72737.
- <sup>3</sup> As noted in Exhibit 1B, this project is split between Renewable Generation (RG) and Distributed Energy (DE).
- <sup>4</sup> Represents residential systems that will be installed and interconnected without an incentive.

**Exhibit 4B: APS Customer Sited Distributed Energy Incentive Program Costs (in \$M's)**

Line No.	Residential	2013	2014	2015	2016	2017	Total	Line No.
1								1
2	<b>Non-Residential</b>							2
3								3
4								4
5								5
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23								23
24								24
25								25
26								26

See Options Below

**Existing Contractual Commitments:**

Production-based Incentives (Existing) <sup>1</sup>	\$ 17.8	\$ 26.3	\$ 25.9	\$ 25.9	\$ 25.9	\$ 25.9	\$ 121.8
2008 Distributed Energy RFP	\$ 7.6	\$ 9.9	\$ 9.8	\$ 9.1	\$ 9.0	\$ 9.0	\$ 45.4
Innovative Technologies <sup>2</sup>	\$ -	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 1.3	\$ 5.2
Wholesale DE <sup>3</sup>	\$ 0.2	\$ 0.4	\$ 0.5	\$ 0.7	\$ 0.8	\$ 0.8	\$ 2.6
<b>Total Current Commitments</b>	<b>\$ 25.6</b>	<b>\$ 37.9</b>	<b>\$ 37.5</b>	<b>\$ 37.0</b>	<b>\$ 37.0</b>	<b>\$ 37.0</b>	<b>\$ 175.0</b>

**Community Based Distributed Energy:**

Schools and Gov't Rev Requirement	6.8	7.0	6.3	3.0	-	-	23.1
Schools and Gov't Incentives	2.3	5.6	6.9	6.9	6.9	6.9	28.6
<b>Total Community Based Distributed Energy Program</b>	<b>\$ 9.1</b>	<b>\$ 12.6</b>	<b>\$ 13.2</b>	<b>\$ 9.9</b>	<b>\$ 6.9</b>	<b>\$ 6.9</b>	<b>\$ 51.7</b>
<b>Total Non-Residential</b>	<b>\$ 34.7</b>	<b>\$ 50.5</b>	<b>\$ 50.7</b>	<b>\$ 46.9</b>	<b>\$ 43.9</b>	<b>\$ 43.9</b>	<b>\$ 226.7</b>

**Base Total Customer Sited Distributed Energy Incentive**

	\$ 34.7	\$ 50.5	\$ 50.7	\$ 46.9	\$ 43.9	\$ 43.9	\$ 226.7
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**Total Distributed Energy Cost**

<b>Option 1</b>							
No Additional Incentives	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Base with Option 1</b>	<b>\$ 34.7</b>	<b>\$ 50.5</b>	<b>\$ 50.7</b>	<b>\$ 46.9</b>	<b>\$ 43.9</b>	<b>\$ 43.9</b>	<b>\$ 226.7</b>
<b>Option 2</b>							
Residential DE	\$ 9.0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9.0
Small Non-Residential DE	\$ 0.4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.4
Large Non-Residential DE	\$ 0.2	\$ 1.8	\$ 2.1	\$ 2.1	\$ 2.1	\$ 2.1	\$ 8.3
<b>Base with Option 2</b>	<b>\$ 44.3</b>	<b>\$ 52.3</b>	<b>\$ 52.8</b>	<b>\$ 49.0</b>	<b>\$ 46.0</b>	<b>\$ 46.0</b>	<b>\$ 244.4</b>

**Notes:**

- <sup>1</sup> Forecast based on existing standard PBI program commitments up to the \$423 million lifetime authorization approved in Commission Decisions No. 71254, 71459, 72022, and 72737.
- <sup>2</sup> Utilizes \$25M of authorization originally granted under the DE RFP \$250M lifetime authorization.
- <sup>3</sup> Includes Snowflake White Mountain Power that is split between Renewable Generation and DE. The split is based on the amount of the wholesale component in a given year.

**Exhibit 4C: PBI Commitments (In \$000's)**

Line No	2013	2014	2015	2016	2017	Line No
1						1
2						2
3						3
4						4
5						5
6						6
7						7
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9						9
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23						23
24						24
25						25
26						26
27						27

Line No	2013	2014	2015	2016	2017	Line No
1						1
2						2
3						3
4						4
5						5
6						6
7						7
8						8
9						9
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26						26
27						27

**Notes:**

- 1 The Innovative Technologies RFP utilized \$25M of the originally authorized \$250M of the DE RFP.
- 2 Standard PBI program lifetime authorizations approved in Commission Decisions No. 71254, 71459, 72022, and 72737.
- 3 Reflects \$8.0M additional lifetime authorization for the 2012 Schools and Government program and assumes Option 2 non-residential DE which adds an additional \$27.6M of lifetime commitments.

**Exhibit B**

**APS Renewable Energy Standard  
Implementation Plan  
Summary**

## Summary to APS's 2013 Renewable Energy Standard Implementation Plan

Arizona Public Service Company's ("APS" or "Company") 2013-2017 Renewable Energy Standard (RES) Implementation Plan (Plan) continues APS's commitment to renewable energy and to meeting its future renewable energy targets, which are estimated to more than double the amount of RES-required energy by 2015. As part of last year's Plan approval,<sup>1</sup> the Arizona Corporation Commission (the "Commission") provided APS with direction on how best to meet this renewable energy milestone. The 2013 Plan does not seek approval of any new programs; it is intended to maintain a course that meets compliance and only seeks the incremental funding to meet these approved commitments. Through 2015, third-party sources will own 83 percent of the renewable resources in APS's service territory while APS will own 17 percent.

Decision No. 72737 approved 25 MW of APS-owned solar photovoltaic (PV) systems for the Company's Community Solar program.<sup>2</sup> Under this program, APS plans to build three to seven projects at various locations in APS's service territory and to employ a competitive third-party RFP process. Program participants would pay a voluntary solar premium on their bill and will continue to subscribe at a self-selected level to support locally-based Community Solar projects that APS will own and operate, in addition to APS's portfolio of renewable energy PPAs. Funds from the Program would be applied as a credit to the general RES fund and will ultimately lower the overall RES costs for all APS customers. The Community Solar projects will be blended into the existing Green Choice program and APS will build support for the Community Solar projects through Green Choice.

The approved 2012 Schools and Government Program<sup>3</sup> will add 25 MW of new capacity, with 18.75 MW designated to third-party ownership and 6.25 MW to APS ownership. APS proposes an incentive cap consistent with the original 2011 Schools and Government Program schedule, which is \$0.106/kWh for a 15-year Production Based Incentive (PBI) and \$0.096/kWh for a 20-year PBI. At this cap, the third-party systems are projected to require a total lifetime PBI commitment of \$31.5 million. APS proposes to reallocate \$23.5 million of unused authorization from its DE RFP program so the Commission will only need to approve \$8 million in additional lifetime PBI for the program. The APS-owned projects are projected to be in-service by late 2013 and will have \$1.7 million in revenue requirements for 2013.

DE uptake from the incentive budget included in Decision No. 72737 has thus far precluded the need for a third Request for Proposal (RFP) under the Small Generation program, but in 2013 the Company will reassess its renewable energy portfolio and determine the need to reinstate or cancel the final Small Gen RFP.

By the end of 2012, APS projects that installed DE will put APS approximately in compliance with its non-residential DE requirements through 2017 and its residential DE requirements through 2015. Accordingly, a purely compliance-based budget for APS would not include any new DE cash incentive offerings in 2013, nor would it include any new PPA or utility-owned generation beyond what the Commission approved through the 2012 Plan. In discussions, however, stakeholders have indicated an interest in additional DE incentives beyond the RES that maintain program support at levels similar to 2012 market activity. Given the over-compliance, the Company recognizes this is a

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<sup>1</sup> Decision No. 72737.

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

## Summary to APS's 2013 Renewable Energy Standard Implementation Plan

policy decision for the Commission. Therefore, APS is proposing two options for the Commission's consideration:

- **Option 1** proposes no new DE cash incentives in 2013 and requests authorization to demonstrate compliance with the DE portion of the RES requirement by tracking and recording DE production.<sup>4</sup>
- **Option 2** proposes a beyond-compliance incentive budget that funds a similar level of program activity in 2013 as seen in 2012, requests that APS begin its track and record compliance once new DE is added without use of a cash incentive, and suggests that 2013 be the final year of DE cash incentives. The Option 2 proposal includes the following incentives:
  - Residential program incentives of \$9.0 million; up to approximately 40 MW of new projects
  - APS proposes that the Commission select from 0 MW to 20 MW for the non-residential standard production-based incentive (PBI) program through a series of 5 MW blocks. Each 5 MW block requires an incremental \$6.9 million lifetime PBI commitment and represents an additional nomination cycle as well as a \$0.07/kWh project bid cap
  - Small commercial Up-Front Incentive (UFI) incentives of \$400,000 at a \$0.40/kWh project bid cap; would add approximately 1 MW of new projects

Additional items in the Company's 2013-2017 Plan include:

- APS estimates that necessary IT updates will be complete February 2013 to support the deployment of production meters on previously installed residential and small non-residential grid-tied PV systems for which customers received a UFI incentive payment.
- APS proposes that the Qualified Solar Installer (QSI) program become mandatory for all PV installers who install systems on APS's distribution system.
- APS plans to host training for Authorities Having Jurisdiction and other key stakeholders to support high-quality PV and solar thermal system installations and inspections.
- In coordination with other Arizona utilities APS plans to continue making posting incentive program updates to the ArizonaGoesSolar.org website in 2013.
- APS's Commercialization & Integration plans will focus on Flagstaff Community Power Project-related renewable energy initiatives that reliably integrate renewable resources into the Company's electrical transmission and distribution grid.
- Administrative changes proposed to the Distributed Energy Administration Plan (DEAP) include:
  - Redefine small projects as those that seek UFIs at or below \$75,000;
  - Eliminate off-grid incentives as well as the 15-year declining block solar water heating (SWH)/space heating/space cooling PBI incentives.
  - Extend the construction timeline for multi-family housing, Energy Star-rated projects from 180 days to 365 days, consistent with commercial timelines;
  - Use a stakeholder process for future changes to the DEAP;

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<sup>4</sup> Pursuant to Decision No. 72737, APS was required to consider in its 2013 Plan the issue of a low or zero incentive future in which DE customers were "unwilling to provide Renewable Energy Credits (RECs) to Arizona Public Service Company."

## Summary to APS's 2013 Renewable Energy Standard Implementation Plan

- Allow APS to remit the incentive paid directly to the installer for owned systems and the lessor for leased systems; and
- If a customer changes a solar installer or dealer during the entire process, the customer must reapply for an incentive as if doing so for the first time.

The budget for APS's 2013 Implementation Plan consists primarily of funding for current commitments including PBI legacy payments, support for continuing programs, revenue requirements, and implementation of previously authorized programs. Based on Option 1, the RES adjustor would be set to collect \$92.8 million, or a residential cap of \$3.84 per month. Based on Option 2, the RES adjustor would be set to collect \$102.4 million, or a residential cap of \$4.27 per month. The adjustor under both Options assumes two offsets to reduce the overall budget, 1) a Production Tax Credit of \$3.4 million;<sup>5</sup> and 2) a portion of the under-spend identified in the Company's 2011 RES Compliance Report.<sup>6</sup> The Company is evaluating additional ways to mitigate an increasing RES adjustor throughout subsequent years, including reallocating under spent funds to future years, shifting above-market PPA costs into APS's Power Supply Adjustor, and considering whether and how to recalibrate the proportion of RES costs among residential and non-residential customers.<sup>7</sup>

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<sup>5</sup> APS has applied for and received these Production Tax Credits from the state for its AZ Sun facilities that are currently in-service. (Paloma, Cotton Center and Hyder).

<sup>6</sup> In APS's 2011 RES Compliance Report, the Company identified \$11.1 million of unallocated RES funds. APS is proposing to allocate \$1.0 million in 2013 and the remaining funds in 2014 (\$10.1 million).

<sup>7</sup> Decision No. 73183, paragraph 8.4.

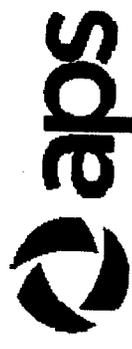
**Exhibit C**

**APS Renewable Energy Standard  
Implementation Plan  
Power Point Summary**

**Arizona Public Service Company**

**2013-2017 Renewable Energy Standard  
Implementation Plan**

**June 29, 2012**

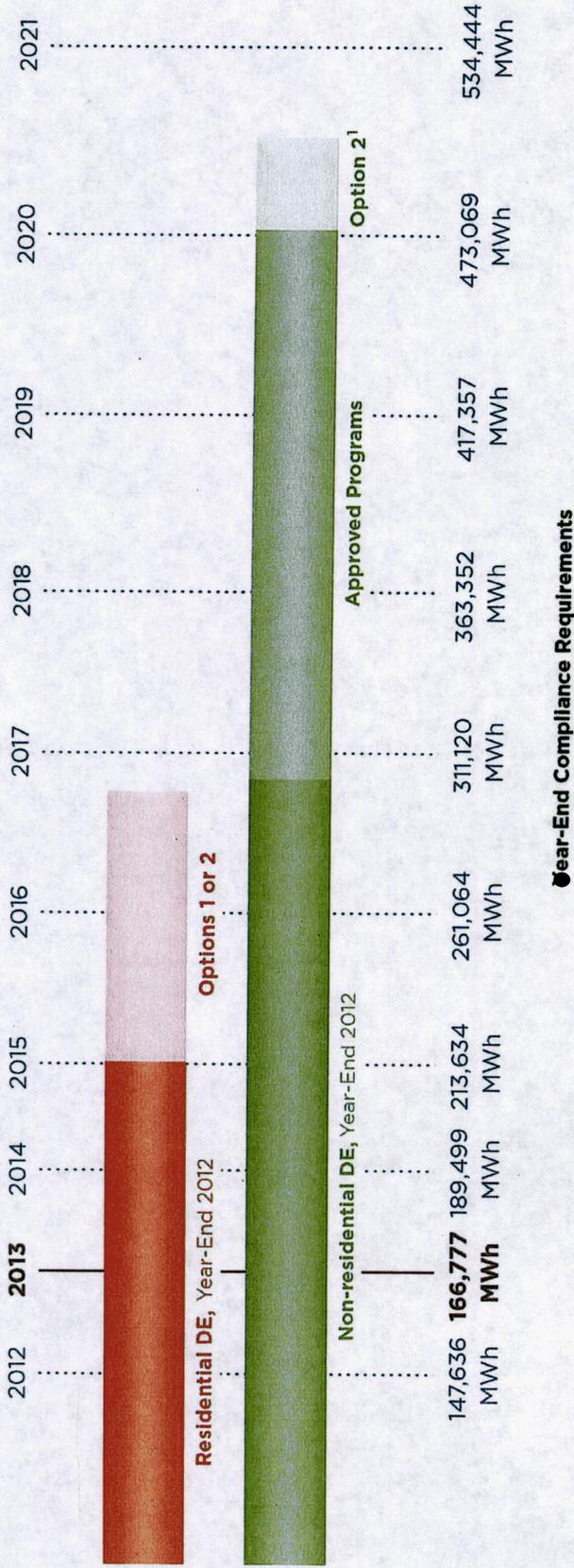


## **2013 Implementation Plan Overview**

- 2013 DE Options for Commission consideration
- Updates on previously approved programs
- Maintain path to meet 2015 requirements
- Implementation and Administration updates and modifications, including Distributed Energy Administration Plan (DEAP)
- 2013 RES Budget

# Projected DE Compliance

PROJECTED DISTRIBUTED ENERGY PRODUCTION (MWh)



<sup>1</sup> Option 1 projects compliance through 2020.

- Based on DE systems expected to be installed by year-end 2012, APS will be in compliance with its residential DE requirement through 2015 and its non-residential DE requirement through 2017.

## **2013 DE Options for Commission Consideration**

- **Background**
  - Approved DE commitments ensure APS complies with its non-residential DE requirement through 2020 and its residential requirement through 2015.
  - Stakeholders have indicated an interest in additional DE incentives that maintain market activity similar to 2012 program
  - Although APS may not need additional incentives to reach compliance in 2013, the Commission may choose to continue with some additional level of incentive funding. Therefore, APS is proposing two options for the Commission's consideration:

**Option 1 – No New DE Cash Incentives**

**Option 2 – DE Cash Incentives Similar to 2012 market activity**



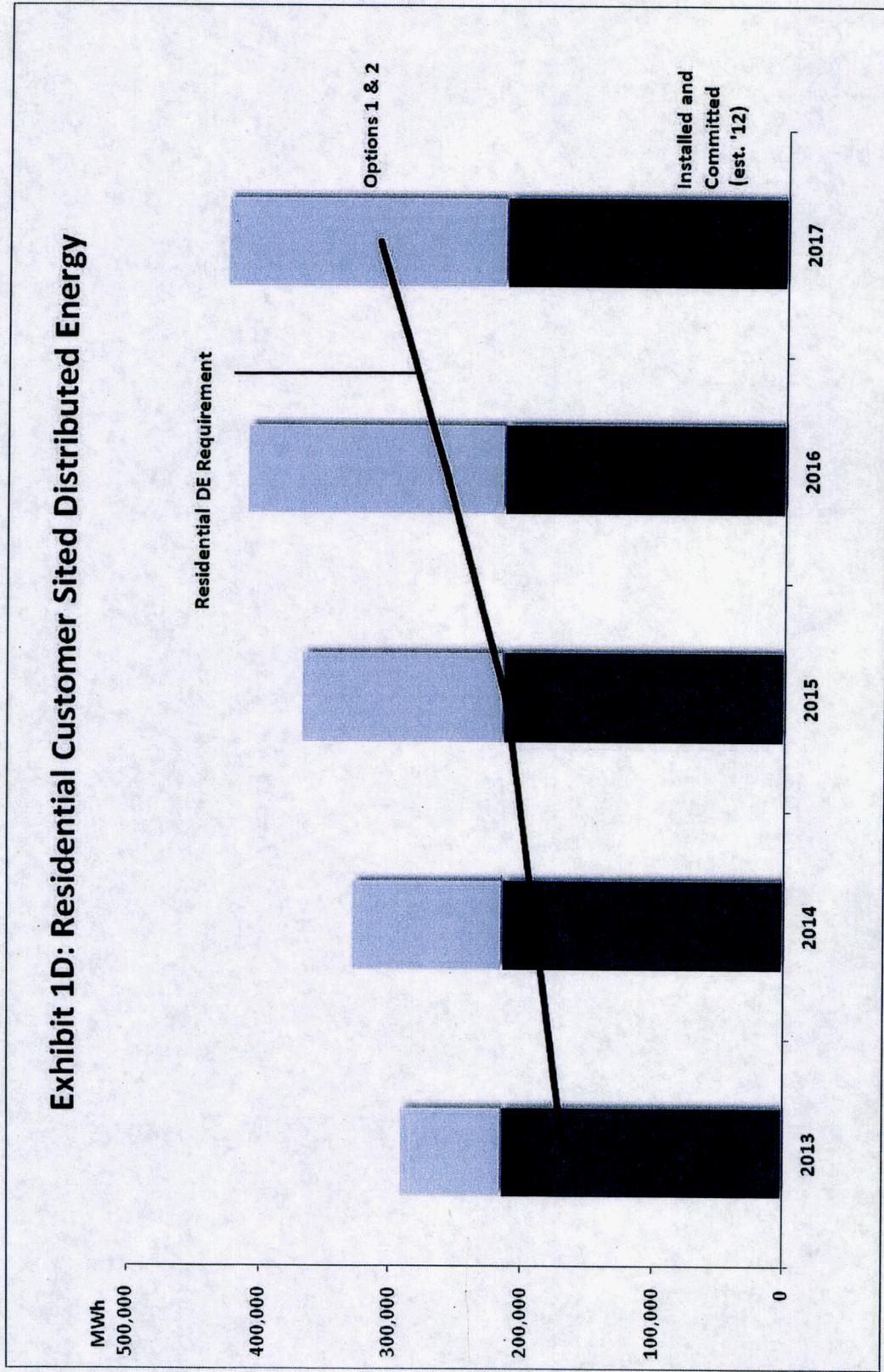
## **Option 1: No New DE Cash Incentives**

- Proposes no new DE cash incentives in 2013
- Requests moving to a track and record system for compliance in 2013
  - Allows APS to demonstrate compliance with the DE requirements by tracking and recording DE kWh production

## Option 2: Residential DE Cash Incentives

- Proposes \$9.0M incentive budget for residential program
    - \$5.3M for standard PV program; up to approximately 40 MW of new projects
      - o Step-down similar to 2012:
- | Percent of Budget to Trigger Step-Down | Rules for Incentive Reductions  | Incentive Rate (\$/watt) |
|--|---|--------------------------|
| Beginning Incentive                    | The beginning incentive will be set equal to the effective rate at the end of 2012.   | \$0.20                   |
| 25%                                    | If the step-down is triggered the incentive will drop by \$0.05/watt.   | \$0.15                   |
| 75%                                    | If the step-down is triggered on or before September 30, 2013, the incentive will drop by \$0.10.<br>If the step-down is triggered on or after September 30, 2013, the incentive will drop by \$0.05. | \$0.05                   |
|  |   | \$0.10                   |
- \$3.0M for non-PV technologies, including SWH
    - o Incentive cap for SWH declines from \$0.50 to \$0.45/kWh equivalent, all other technologies stay at same level
  - \$700K for Home Builder program
    - o Incentive adjusted from \$0.85/watt down to \$0.30/watt
  - Proposes shifting to track and record compliance system as described in Option 1
  - If selected, APS suggests 2013 be final year for DE cash incentives

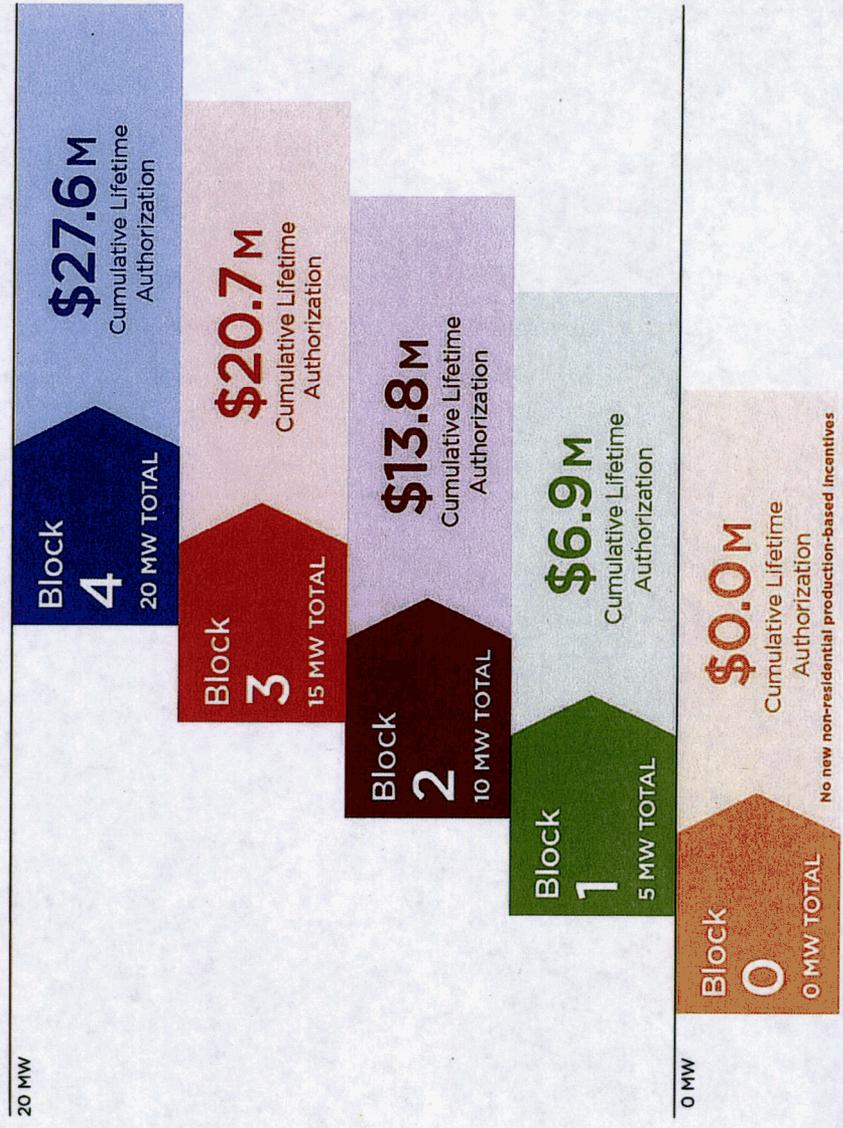
# Five-Year Residential DE Options



# Option 2 (cont'd): Non-Residential DE Cash Incentives

- Non-Residential PBI
  - Commission may choose 0-20 MW in 5 MW increments
  - Each block equals 5 MW capacity, \$6.9M additional PBI authorization, and 1 additional nomination cycle
- Non-Residential UFI
  - \$400,000 budget, \$0.40/kWh incentive cap, 1MW new project capacity

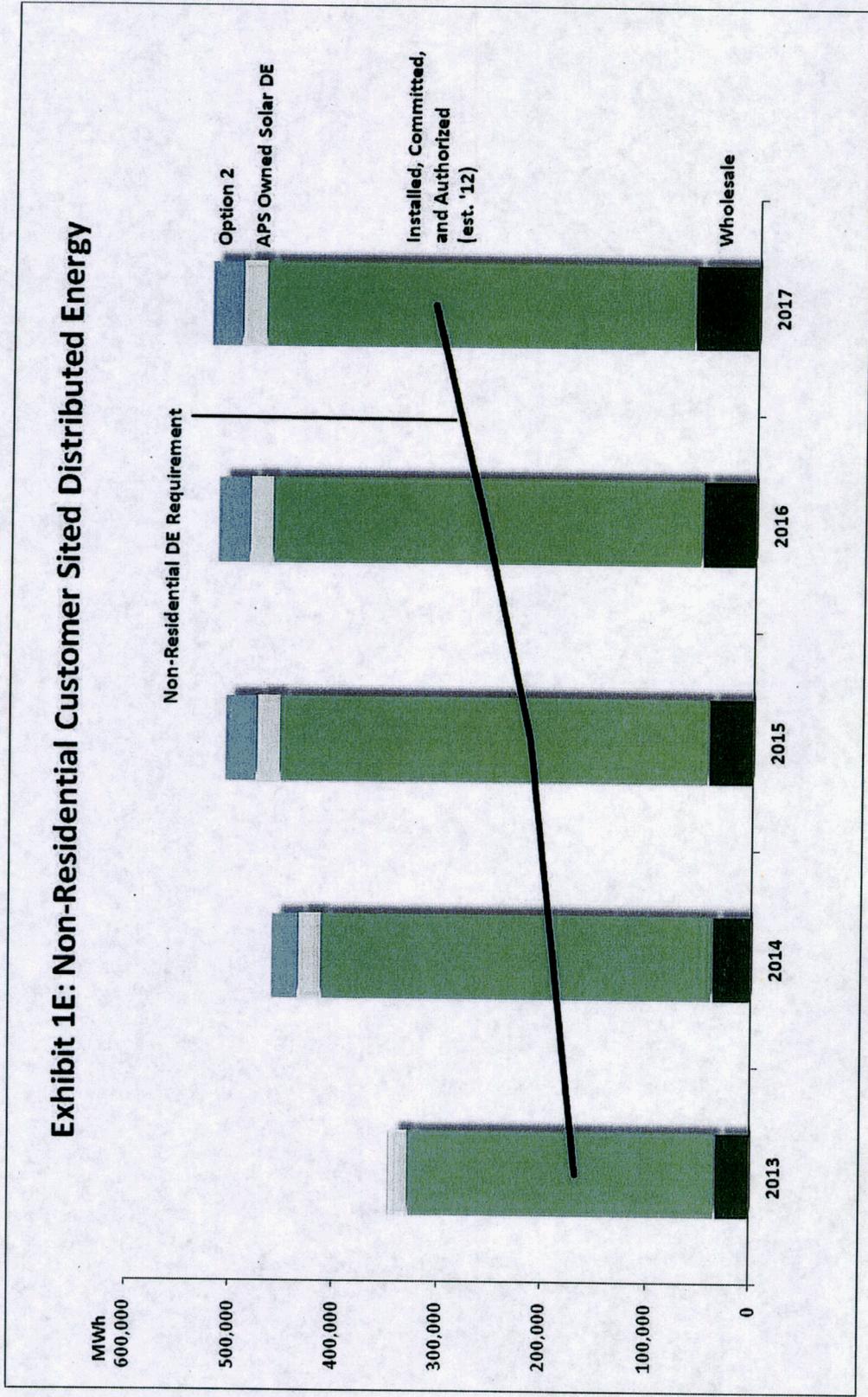
NON-RESIDENTIAL DISTRIBUTED ENERGY PRODUCTION-BASED INCENTIVE BLOCKS<sup>1</sup>



<sup>1</sup>Assumes a \$0.070/kWh PBI incentive rate cap per block, \$6.9 M lifetime authorization per block.



# Five-Year Non-Residential DE Options



## **2012 Schools and Government Program**

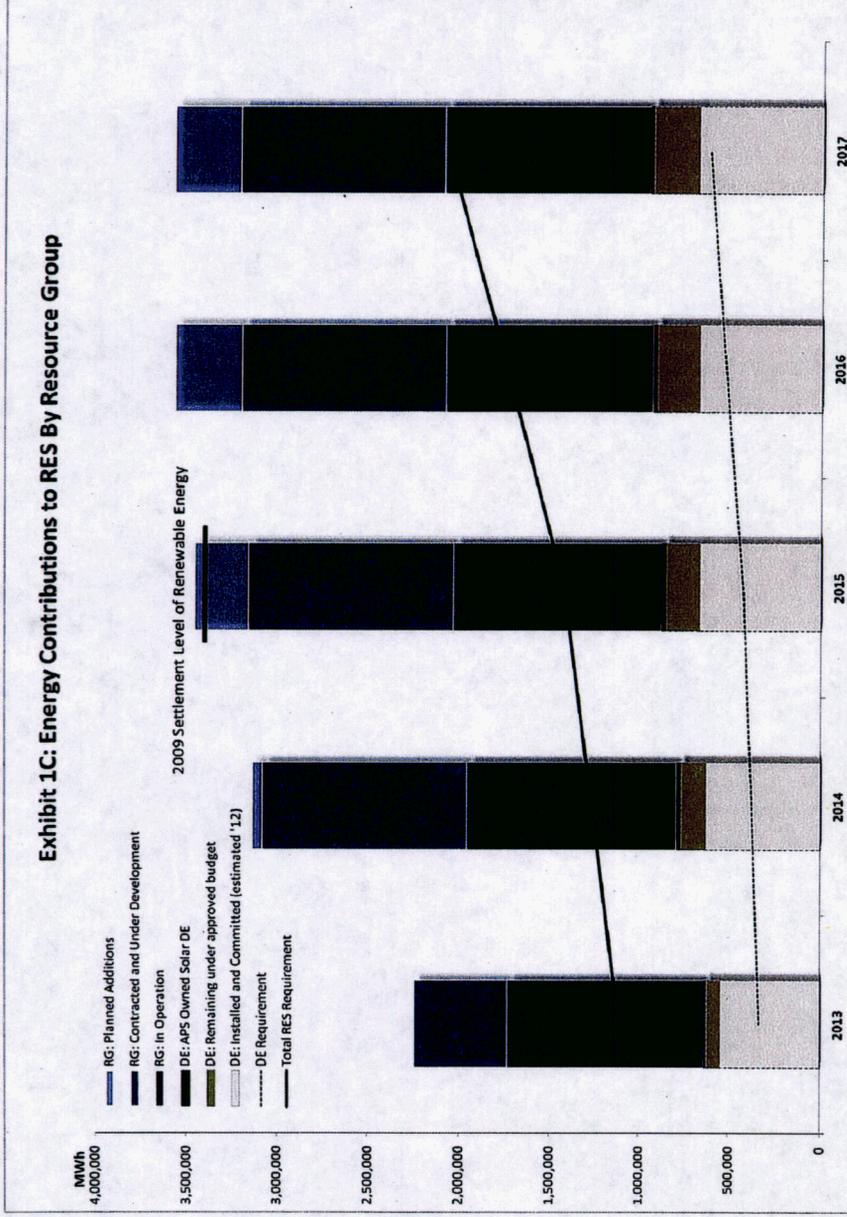
- **25 MW program approved in 2012 Plan**
  - 18.75 MW (Third Party-owned), 6.25 MW (APS-owned)
- **Incentive cap reduced to be consistent with 2011 Schools and Government Program schedule**
- \$0.106/kWh for a 15-year Production Based Incentive (PBI) and \$0.096/kWh for a 20-year PBI
- **\$31.5 million total PBI lifetime commitment needed for third-party projects**
- APS proposes reallocating \$23.5 million of unused authorization from its DE RFP program, therefore requesting \$8 million in additional lifetime PBI authorization

## **Community Solar**

- 25 MW program approved in 2012 Plan
  - APS plans to build three to seven projects across APS's service territory; will employ a competitive RFP process for third-party turn-key development
  - Program participants will pay a voluntary solar premium on their bill and will continue to subscribe at a self-selected level
  - Program revenues will be applied as a credit to the general RES fund and will ultimately lower the overall RES costs for all APS customers
  - Community Solar projects will be blended into the existing Green Choice program



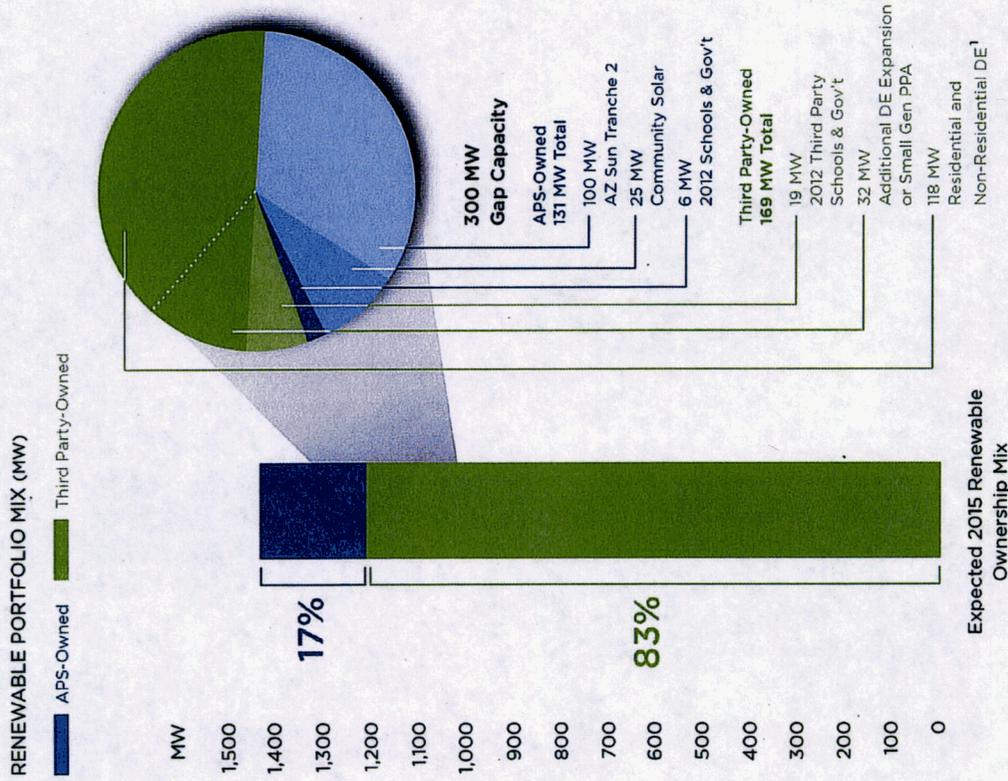
# RES Requirement and Settlement Compliance



- Based on currently approved programs, APS expects to more than double the amount of renewable energy required by the RES rules in 2015

# Renewable Portfolio through 2015

- Third-party installers and developers will own 83% of all renewable resources in 2015
- The Small Generation Request For Proposal (RFP) in deferment, pending DE energy market activity
- 329 MW of Renewable Generation expected to come online in 2013
  - 280 MW from PPAs, 49 MW from AZ Sun



<sup>1</sup> Assumes expected capacity based on maintaining current market volume.

## **2013 Program Updates:**

- APS estimates necessary IT updates for production meter deployment will be complete February 2013
  - All PV customers who received a grid-tied UFI incentive payment will receive a production meter by the end of 2015
- Security deposit requirement successfully in place for DE systems incentive recipients

## **2013 Proposed Administrative Changes:**

- APS proposes that the Qualified Solar Installer (QSI) program become mandatory for all installers who install PV systems on APS's distribution system

### **DEAP changes:**

- Redefine small UFI projects as those seek up to \$75,000 total cash incentive;
- Eliminate off-grid incentives and 15-year declining block solar water heating (SWH)/space heating/space cooling PBI incentives;
- Extend construction timeline for multi-family housing, Energy Star-rated projects from 180 days to 365 days (consistent with commercial timelines);
- Use a stakeholder process for future changes to the DEAP;
- Modify language so that incentive payments shall be made directly to the installer (for owned systems) or lessor (for leased systems)
- If a customer changes a solar installer or dealer, the customer must reapply for an incentive

## **2013 RES Budget**

- \$92.8m RES adjustor collections under Option 1
  - Residential cap is level with 2012 = \$3.84/month
- \$102.4m RES adjustor collections under Option 2
  - Residential cap = \$4.27/month
- Both options assume offsets of \$4.4m
  - Production Tax Credit\* = \$3.4 million
  - RES under-spend = \$1 million
- APS is evaluating additional ways to mitigate future adjustor increases, including:
  - Reallocating the remainder of under-spent funds to 2014
  - Shifting above-market PPA costs into the Power Supply Adjustor
  - Potential to recalibrate proportion of RES costs among different customer classes

\*APS has applied for and received these Production Tax Credits from the state for its AZ Sun facilities that are currently in-service. (Paloma, Cotton Center and Hyder)



**Exhibit D**

**Adjustment Schedule REAC-1  
Renewable Energy Standard  
Proposed Option 1**

**Clean and Redlined Versions**



**ADJUSTMENT SCHEDULE REAC-1  
RENEWABLE ENERGY STANDARD**

APPLICATION

The Renewable Energy Standard Adjustment Schedule ("REAC") shall apply to all retail Standard Offer or Direct Access service. All provisions of the customer's current applicable rate schedule will apply in addition to adjustment schedule REAC-1. This schedule shall recover the revenue requirements from the Renewable Energy Standard that are not otherwise recovered in base rates. The kWh charge and monthly surcharge limits shall be revised annually, as necessary, as approved by the Arizona Corporation Commission ("Commission"). Any new charges and surcharge limits will be applied in billing cycle 1 in the January revenue month, or as otherwise ordered by the Commission, and will not be prorated. Details regarding the administration of this Adjustor can be found in A.A.C. R14-2-1808. Adjustment schedules REAC-1 and DSMAC-1 may be combined on the customer's bill and shown on the "Environmental Benefits Surcharge" line.

As provided in Arizona Corporation Commission decision 73183, customers who receive an incentive under the Renewable Energy Standard and install their system after July 1, 2012 will pay the applicable monthly surcharge limit. This provision shall be effective in billing cycle 1 after APS reprograms its billing system to accomplish this, or with the March 2013 billing, whichever is sooner.

RATES

The bill shall be calculated at the following rates:

All kWh	\$0.009608	per kWh
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SURCHARGE LIMITS

The monthly total of the Renewable Energy Standard Adjustment Charge shall not exceed the following limits:

Residential Customers	\$3.84	per service per month
Non-residential Customers	\$142.74	per service per month
Non-residential Customers with demand of 3,000 kW or higher per month for three consecutive months	\$428.22	per service per month



**ADJUSTMENT SCHEDULE REAC-1  
RENEWABLE ENERGY STANDARD**

APPLICATION

The Renewable Energy Standard Adjustment Schedule ("REAC") shall apply to all retail Standard Offer or Direct Access service. All provisions of the customer's current applicable rate schedule will apply in addition to adjustment schedule REAC-1. This schedule shall recover the revenue requirements from the Renewable Energy Standard that are not otherwise recovered in base rates. The kWh charge and monthly surcharge limits shall be revised annually, as necessary, as approved by the Arizona Corporation Commission ("Commission"). Any new charges and surcharge limits will be applied in billing cycle 1 in the January revenue month, or as otherwise ordered by the Commission, and will not be prorated. Details regarding the administration of this Adjustor can be found in A.A.C. R14-2-1808. Adjustment schedules REAC-1 and DSMAC-1 may be combined on the customer's bill and shown on the "Environmental Benefits Surcharge" line.

As provided in Arizona Corporation Commission decision 73183, customers who receive an incentive under the Renewable Energy Standard and install their system after July 1, 2012 will pay the applicable monthly surcharge limit. This provision shall be effective in billing cycle 1 after APS reprograms its billing system to accomplish this, or with the March 2013 billing, whichever is sooner.

RATES

The bill shall be calculated at the following rates:

All kWh	\$ <del>0.0069620</del> .009608	per kWh
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SURCHARGE LIMITS

The monthly total of the Renewable Energy Standard Adjustment Charge shall not exceed the following limits:

Residential Customers	\$ <del>2.783</del> .84	per service per month
Non-residential Customers	\$ <del>103.44142</del> .74	per service per month
Non-residential Customers with demand of 3,000 kW or higher per month for three consecutive months	\$ <del>310.33428</del> .22	per service per month

ARIZONA PUBLIC SERVICE COMPANY  
Phoenix, Arizona  
Filed by: David J. Rumolo  
Title: Manager, Regulation and Pricing  
Original Effective Date: May 1, 2008

A.C.C. No. 5805XXXX  
Canceling A.C.C. No. 57945805  
Adjustment Schedule REAC-1  
Revision No. 62  
Effective: July 1, 2012XXXX

**Exhibit E**

**Adjustment Schedule REAC-1  
Renewable Energy Standard  
Proposed Option 2**

**Clean and Redlined Versions**



**ADJUSTMENT SCHEDULE REAC-1  
RENEWABLE ENERGY STANDARD**

APPLICATION

The Renewable Energy Standard Adjustment Schedule ("REAC") shall apply to all retail Standard Offer or Direct Access service. All provisions of the customer's current applicable rate schedule will apply in addition to adjustment schedule REAC-1. This schedule shall recover the revenue requirements from the Renewable Energy Standard that are not otherwise recovered in base rates. The kWh charge and monthly surcharge limits shall be revised annually, as necessary, as approved by the Arizona Corporation Commission ("Commission"). Any new charges and surcharge limits will be applied in billing cycle 1 in the January revenue month, or as otherwise ordered by the Commission, and will not be prorated. Details regarding the administration of this Adjustor can be found in A.A.C. R14-2-1808. Adjustment schedules REAC-1 and DSMAC-1 may be combined on the customer's bill and shown on the "Environmental Benefits Surcharge" line.

As provided in Arizona Corporation Commission decision 73183, customers who receive an incentive under the Renewable Energy Standard and install their system after July 1, 2012 will pay the applicable monthly surcharge limit. This provision shall be effective in billing cycle 1 after APS reprograms its billing system to accomplish this, or with the March 2013 billing, whichever is sooner.

RATES

The bill shall be calculated at the following rates:

All kWh	\$0.010663	per kWh
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SURCHARGE LIMITS

The monthly total of the Renewable Energy Standard Adjustment Charge shall not exceed the following limits:

Residential Customers	\$4.27	per service per month
Non-residential Customers	\$158.42	per service per month
Non-residential Customers with demand of 3,000 kW or higher per month for three consecutive months	\$475.25	per service per month



**ADJUSTMENT SCHEDULE REAC-1  
RENEWABLE ENERGY STANDARD**

**APPLICATION**

The Renewable Energy Standard Adjustment Schedule ("REAC") shall apply to all retail Standard Offer or Direct Access service. All provisions of the customer's current applicable rate schedule will apply in addition to adjustment schedule REAC-1. This schedule shall recover the revenue requirements from the Renewable Energy Standard that are not otherwise recovered in base rates. The kWh charge and monthly surcharge limits shall be revised annually, as necessary, as approved by the Arizona Corporation Commission ("Commission"). Any new charges and surcharge limits will be applied in billing cycle 1 in the January revenue month, or as otherwise ordered by the Commission, and will not be prorated. Details regarding the administration of this Adjustor can be found in A.A.C. R14-2-1808. Adjustment schedules REAC-1 and DSMAC-1 may be combined on the customer's bill and shown on the "Environmental Benefits Surcharge" line.

As provided in Arizona Corporation Commission decision 73183, customers who receive an incentive under the Renewable Energy Standard and install their system after July 1, 2012 will pay the applicable monthly surcharge limit. This provision shall be effective in billing cycle 1 after APS reprograms its billing system to accomplish this, or with the March 2013 billing, whichever is sooner.

**RATES**

The bill shall be calculated at the following rates:

All kWh	\$0.0069620.010663	per kWh
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**SURCHARGE LIMITS**

The monthly total of the Renewable Energy Standard Adjustment Charge shall not exceed the following limits:

Residential Customers	\$2.784.27	per service per month
Non-residential Customers	\$403.44158.42	per service per month
Non-residential Customers with demand of 3,000 kW or higher per month for three consecutive months	\$340.33475.25	per service per month