



0000130952

1 Deborah R. Scott, AZ Bar No. 012128
2 Thomas A. Loquvam, AZ Bar No. 024058
3 Pinnacle West Capital Corporation
4 400 North 5th Street, MS 8695
5 Phoenix, Arizona 85004
6 Tel: (602) 250-3616
7 Fax: (602) 250-3393
8 E-Mail: deb.scott@pinnaclewest.com
9 thomas.loquvam@pinnaclewest.com

ORIGINAL

RECEIVED

2011 NOV -4 A 8:02

AZ CORP COMMISSION
DOCKET CONTROL

6 Attorneys for Arizona Public Service Company

7

8

BEFORE THE ARIZONA CORPORATION COMMISSION

9

COMMISSIONERS

Arizona Corporation Commission

DOCKETED

10

GARY PIERCE, Chairman
BOB STUMP
SANDRA D. KENNEDY
PAUL NEWMAN
BRENDA BURNS

NOV 4 2011

11

12

DOCKETED BY

13

IN THE MATTER OF THE APPLICATION
OF ARIZONA PUBLIC SERVICE
COMPANY FOR APPROVAL OF ITS 2011
RENEWABLE ENERGY STANDARD
IMPLEMENTATION PLAN AND
REQUEST FOR RESET OF RENEWABLE
ENERGY ADJUSTOR.

DOCKET NOS. E-01345A-10-0262
E-01345A-10-0166

14

15

16

**COMMENTS IN SUPPORT OF
STAFF REPORT AND STATUS
UPDATE**

17

18

19

20

21

22

23

24

Arizona Public Service Company thanks Commission Staff for the hard work and thorough review of APS's proposals. APS supports either Staff Option and does not believe that any issues remain that merit an evidentiary hearing. APS files this document to (i) provide information regarding how much capacity APS would need from third-party purchased power agreements (PPAs) under Staff's Options; and (ii) update the Commission, Staff and Intervenors on the status of APS's 2011 Renewable Energy Standard (RES) Program.

25

26

27

28

I. APS Supports Both Staff Option A & B and Does Not Believe Any Outstanding Issue Requires an Evidentiary Hearing.

Both Staff Options provide a balanced renewable portfolio. Moreover, the Staff Report sheds sufficient light on all issues such that APS does not believe that an

1 evidentiary hearing would add significant value to the Commission's decision-making
2 process. Nonetheless, APS has received questions regarding capacity requirements from
3 PPAs under Staff's Options. APS's proposal originally involved supplying half of the
4 additional 300 MW APS needs to meet RES and settlement requirements with capacity
5 from third parties. The non-residential distributed proposals in Staff's Options,
6 however, will rearrange the allocation of this 150 MW by increasing the amount of
7 capacity derived from third-party DE and reducing the amount of capacity derived from
8 third-party PPAs. If the Commission approves Option A, APS estimates that it will need
9 approximately 50 MW of utility-scale renewable energy from PPAs between 2012 and
10 2015. By contrast, if the Commission approves Option B, APS estimates that it will
11 need approximately 100 MW of utility-scale renewable energy from PPAs between
12 2012 and 2015.

13 **II. An Independent Review of APS's DE Program Reveals a Healthy, Robust**
14 **Process, Accurate Numbers and Fair Management.**

15 Earlier this year, some in the industry expressed concern that reports regarding
16 APS's DE Program contained inconsistent, or possibly inaccurate, numbers, and that
17 program administration was inconsistent. In part as a response to these concerns, APS
18 retained Navigant Consulting, Inc. to independently review APS's DE Program.
19 Navigant completed its review on October 26, 2011 and Navigant's Independent Review
20 is attached as Attachment A. Navigant found that APS (i) follows its project selection
21 guidelines; (ii) grants deadline extensions in a fair, consistent manner; (iii) appropriately
22 reallocates funds from cancelled projects; and (iv) made payments in accordance with
23 the scheduled incentive amounts. With independent confirmation that APS accurately
24 reports numbers and fairly manages its DE Program, APS looks forward to continuing
25 its cooperation with Staff and the industry on how APS provides useful information for
26 all interested parties.
27
28

1 **III. APS Will Apply For The Renewable Production Tax Credit On Behalf Of Its**
2 **Customers.**

3 Arizona Revised Statute § 43-1083.02 establishes a Renewable Energy
4 Production Tax Credit (Credit) for Arizona taxpayers holding title to a qualified energy
5 generator of at least five megawatts generating capacity that first produces electricity
6 after December 31, 2010 and before January 1, 2021.

7 On behalf of its customers, APS intends to apply for the Credit in January 2012
8 for the Company's qualifying AZ Sun projects. Although the statute specifies the
9 amount of the credit per kWh available to eligible facilities, two factors limit the amount
10 of credit available. First, the amount of the annual Credit cannot exceed \$2 million per
11 facility. Second, the aggregate Credits provided under the statute cannot exceed \$20
12 million and the ADOR will authorize the Credits on a first-come, first-served basis.

13 Considering these parameters, APS expects to recognize a total Credit of
14 approximately \$5.1 million. APS is sufficiently confident in receiving this Credit and
15 intends to reduce the Company's RES surcharge in 2012 with the Credit. In the unlikely
16 event that the ADOR does not accept APS's applications, or the Credit amount is
17 different than anticipated, APS will adjust the 2013 RES budget as appropriate.

18 **IV. Update Regarding APS's 2011 RES Budget**

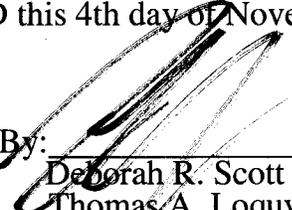
19 Consistent with updates in prior Implementation Plans, APS provides the
20 Commission, Staff and the industry this update regarding the status of the current RES
21 budget as the end of the calendar year approaches. Due to changes in the deployment
22 schedule for several projects included as part of the 2011 RES Program, APS collected
23 funds that it will not spend during 2011. These funds primarily fall under the following
24 three categories:

- 25 • Schools and Government Program. Because APS did not receive a final
26 order establishing the structure of its Schools and Government Program
27 until February 2011, APS will not spend money associated with revenue
28 requirements and third party incentives collected during 2011. The
program remains on track with its expected procurement targets.
Installations originally planned for the fourth quarter of 2011 will
largely occur in the first and second quarter of 2012.

- 1 • AZ Sun. As a result of project delays with the Luke Air Force Base
2 installation, APS adjusted its plan and was able to find, procure, and
3 develop a replacement project in 2011. However, due to timing and
4 other project differences, APS will not spend all of the already collected
5 revenue.
- 6 • DE Deployments. Changes in the development schedule for some third
7 party DE projects will result in unspent 2011 funds.

8 APS proposes to reduce the 2012 RES budget by using these collected funds, as
9 well as small amounts of unspent, miscellaneous funds, to fund the 2012 program. The
10 combination of the Credit and unspent 2011 funds could reduce the 2012 RES budget by
11 approximately \$12 million.

12 RESPECTFULLY SUBMITTED this 4th day of November, 2011.

13 By: 
14 Deborah R. Scott
15 Thomas A. Loquvam
16 Attorneys for Arizona Public Service Company

17 ORIGINAL and thirteen (13) copies
18 of the foregoing filed this 4th day of
19 November, 2011, with:

20 Docket Control
21 ARIZONA CORPORATION COMMISSION
22 1200 West Washington Street
23 Phoenix, Arizona 85007

24 COPY of the foregoing mailed/delivered this
25 4th day of November, 2011 to:

26 Janice Alward
27 Arizona Corporation Commission
28 1200 W. Washington St.
Phoenix, AZ 85007

Steve Olea
Arizona Corporation Commission
1200 W. Washington St.
Phoenix, AZ 85007

Lyn Farmer
Arizona Corporation Commission
1200 W. Washington St.
Phoenix, AZ 85007

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Court Rich
Rose Law Group
6613 N. Scottsdale Road, Suite 200
Scottsdale, AZ 85250

C. Webb Crockett
Fennemore Craig P.C.
3003 N. Central Ave., Suite 2600
Phoenix, AZ 85012-2913

Scott S. Wakefield
Ridenour, Hinton & Lewis, P.L.L.C
201 N. Central Ave., Suite 3300
Phoenix, AZ 85004-1052



Attachment A



Independent Review of the APS Distributed Energy Program

Presented to



Arizona Public Service

October 26, 2011

Presented by

Navigant Consulting, Inc.
1375 Walnut Street
Boulder CO 80302
303.728.2500

www.navigantconsulting.com



Table of Contents

1. Introduction and Summary 1

 1.1. Overview of Approach..... 1

 1.2. Overview of Navigant..... 1

 1.3. Summary of Findings 2

2. Approach 3

 2.1. Business Processes 3

 2.2. Data Collection 6

 2.2.1. Residential 6

 2.2.2. Non-Residential 7

 2.3. Data Verification 9

 2.3.1. Residential 9

 2.3.2. Non-Residential 13

3. Analysis and Results..... 17

 3.1. Issues 1 and 2: Project Selection and Granting of Extensions 17

 3.1.1. Residential Systems..... 17

 3.1.2. Non-Residential Systems 22

 3.2. Issues 3 and 4: Flow of Funds for Canceled and Completed Projects 27

4. Conclusions 29

1. Introduction and Summary

Arizona Public Service Company, Inc. ("APS") is a vertically-integrated electric utility that provides retail and wholesale electric service to most of the state of Arizona, with the major exceptions of about one-half of the Phoenix metropolitan area, the Tucson metropolitan area and Mohave County in northwestern Arizona.

In November 2006, the Arizona Corporation Commission (the "Commission") adopted new Renewable Energy Standard and Tariff rules ("the RES Rules").¹ The RES Rules require APS to procure 30 percent of its compliant renewable energy from distributed sources, with half the amount coming from residential systems and one half from non-residential, non-utility owned systems. APS subsequently developed and implemented a Distributed Energy (DE) program to meet those requirements. APS has retained Navigant Consulting Inc. ("Navigant") to an independent review of its DE program as a result recent of stakeholder concerns about the project selection process and flow of funds.

1.1. Overview of Approach

Navigant focused its independent review on four aspects of APS's administration of the program:

- Issue 1 – Has APS consistently followed its project selection guidelines?
- Issue 2 – Has APS been consistent in its approach to granting deadline extensions?
- Issue 3 - When reservations have been cancelled, were reserved funds placed back into accounts for new projects?
- Issue 4 - Were reported payments actually made?

To answer each of these questions, Navigant undertook the following approach:

- Develop understanding of the relevant business and program processes
- Collect information from APS
- Review a random sample of records to verify the accuracy of information provided by APS
- Analyze the information to answer the questions under study

1.2. Overview of Navigant

Navigant (NYSE: NCI; www.navigantconsulting.com) is an international consulting firm providing dispute, investigative, operational, risk management and financial advisory solutions to legal counsel, government agencies and companies experiencing regulatory or structural challenges. Among many offerings, our Energy Practice has provided electric supply procurement and generation development services to investor-owned utility

¹ Arizona Administrative Code ("A.A.C.") R14-2-1801 through -1816.

systems, local/state government organizations and large energy consumers for more than 20 years. Engagements have ranged from acting as independent evaluator/auditor of procurement, to preparation of RFPs and negotiation of power purchase agreements, to comprehensive operational, financial, and environmental due diligence on utility self-build and build-transfer projects.

Navigant and its employees are independent contractors providing professional services to APS and are not officers, employees, or agents of APS.

1.3. Summary of Findings

Navigant considered four aspects of APS's administration of the program. This section summarizes Navigant's findings with respect to each aspect.

Issue 1 – Has APS consistently followed its project selection guidelines?

- Residential Program – Navigant found no substantive issues related to project selection or rejection by installer, system size, or incentive amount.
- Non-residential Program – Navigant verified that selected projects met appropriate criteria and found no substantive issues related to project selection or rejection by installer, site host, or third-party owner.

Issue 2 – Has APS been consistent in its approach to granting deadline extensions?

- Residential Program – Navigant found no substantive issues related to inconsistent extensions by installer, system size, or incentive amount.
- Non-residential Program: Navigant found no substantive issues related to the granting of extensions by installer, system size, or incentive amount, and found that granted extensions were supported with APS documentation.

Issue 3 - When reservations have been cancelled, were reserved funds placed back into accounts for new projects?

- Navigant verified that APS is appropriately reallocating funds from cancelled projects back into the program budget to make them available for other approved projects.

Issue 4 - Were reported payments actually made?

- Navigant confirmed that APS is making payments in accordance with the scheduled incentive amounts recorded in program tracking databases.

2. Approach

Navigant's analysis focused on whether or not APS has administered its DE rebate program correctly, per applicable rules, between January 1, 2010 and September 30, 2011 (the most recent month with a complete data set). The applicable rules comprise:

- APS's Distributed Energy Administration Plan filed with the ACC July 1, 2009
- Rules specified for program applicants at www.aps.com

Navigant considered four aspects of APS's administration of the program:

- Issue 1 – Has APS consistently followed its project selection guidelines?
- Issue 2 – Has APS been consistent in its approach to granting deadline extensions?
- Issue 3 - When reservations have been cancelled, were reserved funds placed back into accounts for new projects?
- Issue 4 - Were reported payments actually made?

To answer each of these questions, Navigant undertook the following approach:

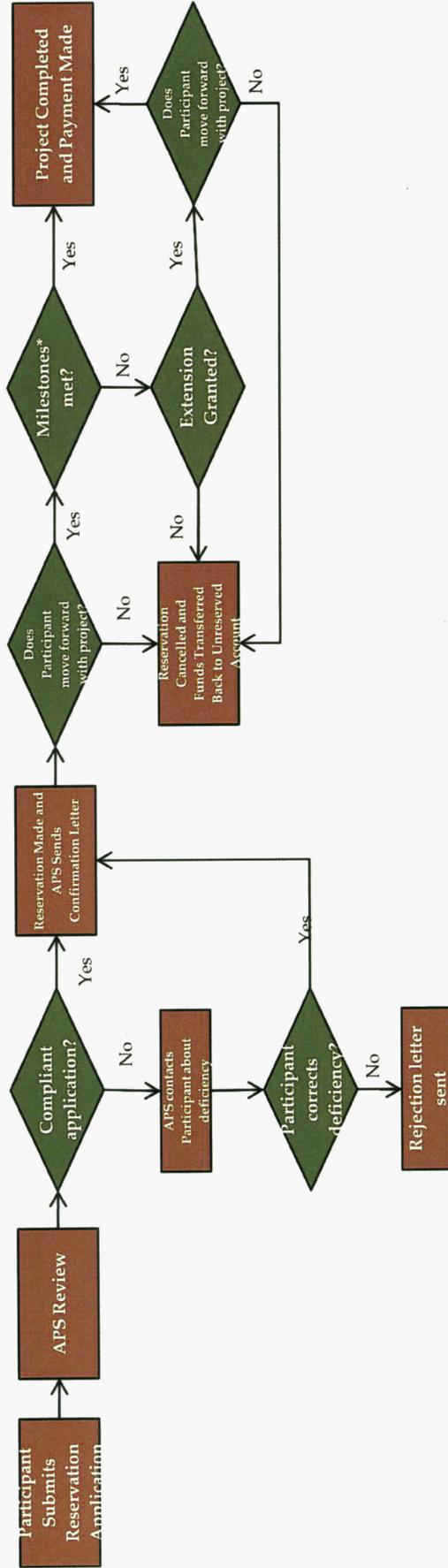
- Develop understanding of the relevant business and program processes
- Collect information from APS
- Review a random sample of records to verify the accuracy of information provided by APS
- Analyze the information to answer the questions under study

2.1. Business Processes

Within APS's DE program, residential and non-residential systems use different funding sources, administration protocols, and project tracking mechanisms. Thus, Navigant analyzed each sector separately. In addition, APS uses two general incentive structures within each sector, an Up-Front Incentive (UFI) and Performance-Based Incentive (PBI). The program process flow for each incentive category appears in Figure 1 (UFI) and Figure 2 (PBI) on the following pages.

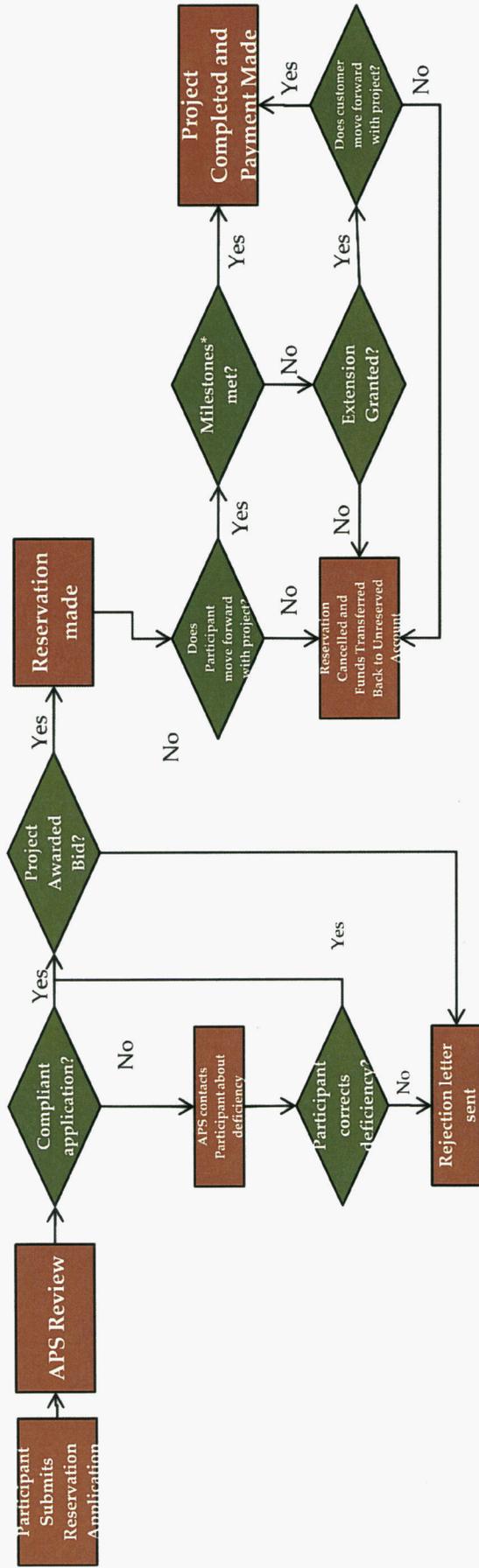
Residential customers can only apply for a UFI, while non-residential customers may apply for either a UFI or PBI depending on their proposed system size and the calculated lifetime incentive the project would receive if funded. Navigant's non-residential analysis focused on the PBI projects.

Figure 1. UFI Process Flow



Source: Navigant October, 2011

Figure 2. PBI Process Flow



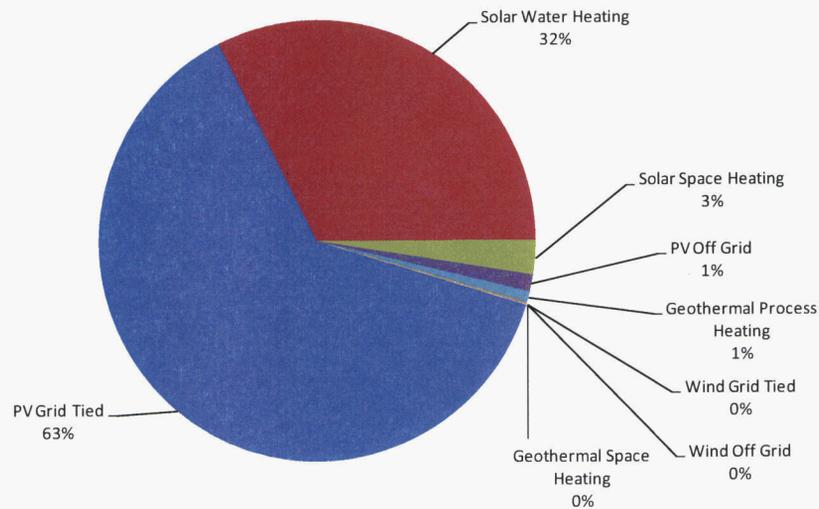
Source: Navigant October, 2011

2.2. Data Collection

2.2.1. Residential

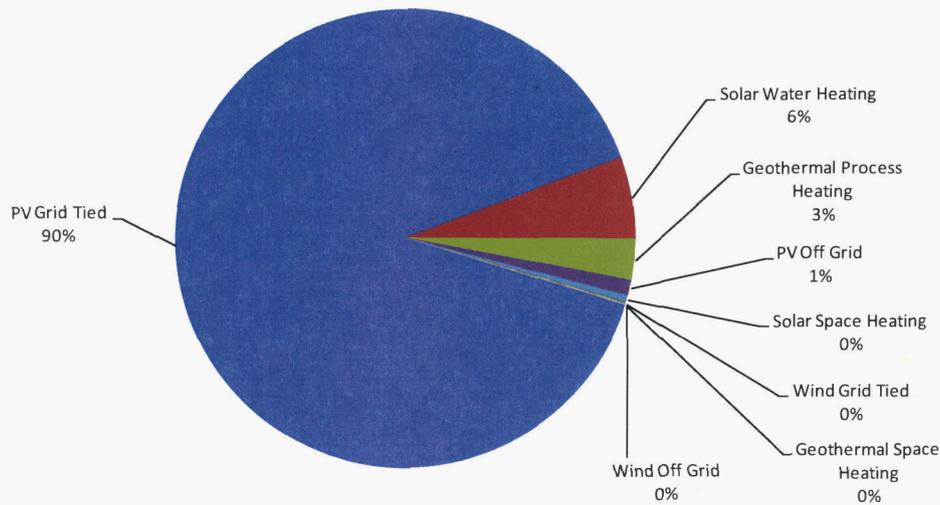
APS received 11,071 residential applications between January 1, 2010 and September 31, 2011, totaling ~\$94M in applications for reservations. The breakdown across technologies (known as "Reservation Type") by number of applications and reservation amount is shown in Figure 3 and Figure 4. Grid-tied photovoltaic ("PV") represents the majority of both the number of applications and incentive dollars requested.

Figure 3. Proportion of Applications Received by Reservation Type
(includes all applications, regardless of status)



Source: Navigant, October, 2011 based upon data provided by APS

Figure 4. Proportion of Incentive Dollars Applied for by Reservation Type
(includes all applications, regardless of status)



Source: Navigant, October, 2011 based upon data provided by APS

To analyze APS's application of project selection and extension processes, Navigant requested the following information on each project as it appears in APS's residential program tracking database:

- Reference Number
- Reservation Amount
- Reservation Type (Technology)
- Submit Date
- Reservation Approval Date
- Installer
- Cancel Reason
- Confirmation of Cancellation by APS
- Confirmation of Owner Cancellation
- Cancel Date
- Project Size
- Extension Date

APS provided Navigant with a spreadsheet containing the above requested data.

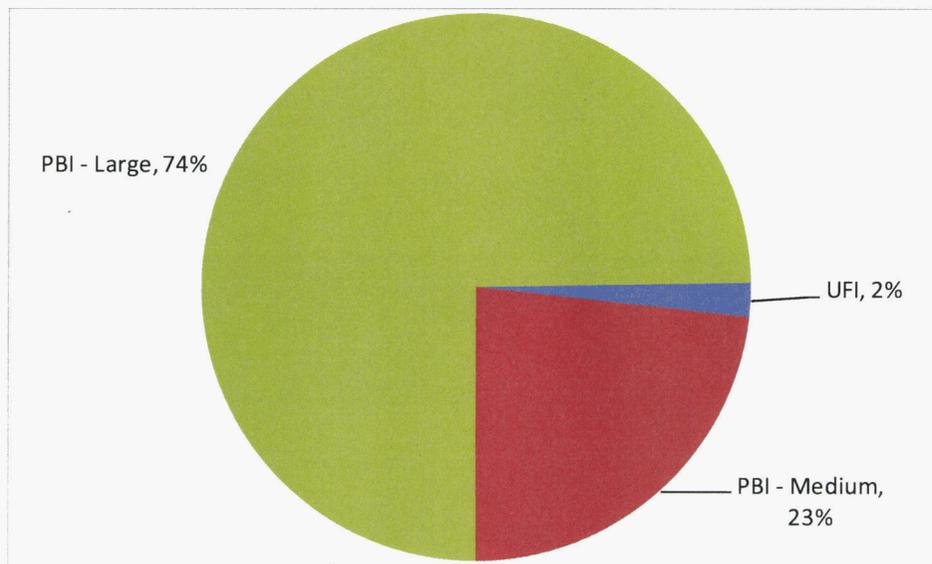
2.2.2. Non-Residential

APS's records related to the non-residential DE program comprise both PBI) and UFI tracking spreadsheets, as well as APS's DistGen database. Notably, the DistGen database contains only projects that have been awarded a funding reservation. It does not include those that have fallen short of competitive funding levels for the nomination periods for which they are eligible. In order to complete a comparative analysis across the largest

available population of application records, Navigant relied on APS's Excel-based tracking spreadsheets, which capture all applications regardless of funding status.

In total, these tracking spreadsheets comprised 555 PBI applications and 296 UFI applications submitted to APS between January 1, 2010 and September 31, 2011. While the numbers of applications falling into each incentive category lie within the same order of magnitude, comparing the relative budget allocations to each incentive category reveals a more polarized distribution. As shown in Figure 5, approximately 97 percent of non-residential program funds are allocated to PBI projects.

Figure 5. Share of Non-residential Program Budget by Incentive Type, 2010-2011



Source: APS Staff interview. October 12, 2011.

APS's non-residential DE program is based on a competitive bidding process wherein applicants bid the per-kWh incentive level their project requires to move forward. APS uses a standard equation that combines this proposed incentive level with other project characteristics (e.g., system size and projected annual kWh production) to calculate the PBI score used to evaluate the competitiveness of each project. As shown in Figure 5, APS further divides its PBIs budget into medium and large categories (23 and 74 percent of total funds, respectively) based on the relative size and calculated lifetime incentive amounts proposed by projects in each category. This prevents smaller PBI applicants from having to compete against those with much larger projects that can achieve greater economies of scale (and lower requested incentive levels).

Based on the large share of non-residential DE program funds allocated to the PBI category, this analysis focuses on that portion of the program. In addition, within the PBI category of the non-residential program, a large majority (95 percent) of the program funds applied for represent PV projects (see Table 1). Navigant subsequently narrowed its analysis to focus on these solar PV projects within the PBI category.

Table 1. Proportion of Program Incentive Dollars Applied for, by Technology, 2010-2011

Technology	% of Annual \$
Solar PV	94.95%
Solar Water Heating	3.19%
Solar Space Cooling	1.36%
Solar PV - Tracking	0.46%
Solar Pool Heating	0.04%
Grand Total	100%

Source: Navigant, October, 2011 based upon data provided by APS

As previously discussed, Navigant’s analysis relied on APS’s PBI tracking spreadsheets for projects for which applications were received between January 1, 2010, and September 30, 2011. Navigant’s analysis focused on the following pieces of information from the APS project tracking data. Additional information that Navigant requested and received from APS for projects is shown in parentheses.

- (Application Date)
- Reservation ID
- Incentive Category (i.e., PBI Medium or PBI Large)
- Project Name [Used to determine Site Host]
- Status
- Installer
- Third-party Owner
- System Size
- Proposed Incentive Level
- Annual \$ [proposed annual incentive payment]
- PBI Score
- Reservation Acceptance Letter Date
- Cancellation Date
- (Reason for Cancellation)
- Extension Granted

This data set provided the basis for Navigant’s statistical analysis of non-residential solar PV projects that applied for either medium or large PBI incentives. A total of 528 projects met these criteria.

2.3. Data Verification

2.3.1. Residential

Upon receiving the data from APS, Navigant sought to validate that data by analyzing and verifying a random sample from the overall population of project applications. Navigant characterized and sorted the data into several project profile categories based on combinations of the program application processes relevant to each project (e.g., approved

for a reservation, received an extension, completed, canceled). These project profiles appear in the first column of Table 2 and are intended to represent the five most likely sets of characteristics for projects that have applied to the program.

Table 2. Residential Sample Design²

Project Characteristics	Sample Size	Issue 1		Issue 2			Issue 3
		Application was Rejected	Application was Approved for a Reservation	Project Received Extension	Project Canceled by APS	Control: Project Completed Without Receiving Extension	Projects that Received Reservations and were Later Canceled
Application was Logged, but not Awarded a Reservation	5	5	NA	NA	NA	NA	NA
Approved for a Reservation Received an Extension Completed	2	NA	2	2	NA	NA	NA
Approved for a Reservation No Extension Completed	5	NA	5	NA	NA	5	NA
Approved for a Reservation Received an Extension Canceled by APS	3	NA	3	3	3	NA	3
Approved for a Reservation No Extension Canceled by APS	2	NA	2	NA	2	NA	2
TOTAL	17	5	12	5	5	5	5

Source: Navigant October, 2011

Note: According to APS staff, if a residential application is in fact “rejected” for eligibility or similar issues, APS categorizes the project as “Owner Cancelled.”

Each of these project profiles was then compared to the four issues under study for this analysis. Navigant identified the characteristics of projects that it would need to compare in order to address the consistency with which APS applied its program processes related to each of those four issues. As shown in the top two rows of

Table 2, Navigant sought to sample from each of the following groups of projects:

- Issue 1 (Selection): Projects with rejected applications; Projects with rejected applications
- Issue 2 (Extensions): Projects that received deadline extensions; Projects that were canceled by APS for missing deadlines; Projects that were complete without extensions
- Issue 3 (Funds from Canceled Projects): Projects that received reservations and were later canceled
- Issue 4 (Payment verification): Completed projects

² For projects that are rejected, APS records them as “owner cancelled” in its tracking system. For category “Application was Logged, but Not Awarded a Reservation”, Navigant drew from the population of projects with a status of “owner cancelled”.

Navigant conducted its sample design so that it could apply each sampled project to several areas of study.

Table 2 illustrates how the assigned sample for each project profile in the first column applies to each of the required sample categories. Under this shared sampling approach, the optimal sample size to achieve Navigant’s initial target sample (n=5) for each category was 17 projects.³

For the residential sector, Navigant also sought to achieve some level of representation from the different reservation types (e.g., technologies) in the program. Navigant stratified the population of project applications based on each reservation type’s proportional share of the total amount of incentive funds for which applications had been received during the period (shown previously in Figure 4). As shown in Table 3, Navigant applied the approximate share from the top three reservation types to its selected sample size to determine the number of sample applications that should come from each technology.

Table 3. Proportional Allocation of Sample across Reservation Types

Reservation Type	% of Program Funds	Recommended Proportion of Sample	Sample Target
PV Grid Tied	90%	90%	15
Solar Water Heat	6%	6%	1
Geothermal Process Heat	3%	4%	1
All Other Technologies	1%	0%	0
TOTAL	99%	100%	17

Source: Navigant, October, 2011 based upon data provided by APS

Navigant then requested source data (e.g., actual applications, copies of emails, etc.) from APS for the 17 sample projects, distributed across the reservation types and project profiles as shown in Table 4. Navigant used a random number generator to select the specific applications for further review from within each project population segment.

³ Navigant used a dynamic random sampling approach with an initial estimated coefficient of variation of 0.1. This required 4 samples for a 95% confidence interval with +/-10% precision.

Table 4. Breakdown of Sample Population

Project Characteristics	PV Grid Tied	Solar Water Heat	Geothermal Process Heat	TOTAL
Application was Logged, but not Awarded a Reservation*	5			5
Approved for a Reservation Received an Extension Completed	2			2
Approved for a Reservation No Extension Completed	4	1	1	6
Approved for a Reservation Received an Extension Canceled by APS	3			3
Approved for a Reservation No Extension Canceled by APS	1			1
TOTAL	15	1	1	17

Source: Navigant, October, 2011 based upon data provided by APS

Navigant worked with APS to gather the requested information for verification. APS's residential program application process relies entirely on electronic submissions from applicants; therefore, no hardcopy applications or forms were available for review and comparison to the data originally extracted by APS and delivered to Navigant. Instead, Navigant used the various verification methods shown in Table 5. During this review, Navigant found no inconsistencies between the extracted data set received from APS and the source material reviewed in the APS master program tracking database.

Table 5. Verification for Residential Project Data

Data Field	Verification Method
Reference Number, Reservation Amount, Submit Date, Reservation Approval Date, Installer, Project Size, Cancel Date, Cancel Reason	Navigant conducted a real-time, Web-enabled conference with APS staff and watched as APS conducted queries to pull the data from its Renewables Program Management (“RPM”) and Distributed Generation (“DistGen”) databases. These databases store the information from online applications.
Confirmation of Owner Cancellation	APS provided Navigant with either copies of emails from customers or installers, internal emails documenting APS phone calls with customers or installers, or records of entries into RPM or DistGen.
Confirmation of Cancellation by APS	APS provided an email sent to installers and customers, along with email tracking identification numbers for all the cancellations sent.
Extension Date, Extension Request, and Extension Confirmation	Prior to February of 2011, APS did not have a formal extension application process. Many extensions were applied for and confirmed via phone call. Thus, no paper trail was available. As proxy, APS provided screenshots of their customer management system and emails where possible. The data available verified the information in the extracted dataset that Navigant received.

Source: Navigant October, 2011

2.3.2. Non-Residential

Before using the data for its statistical analysis, Navigant sought to validate that data by verifying it against documentation from a random sample of the overall population of project applications. The team followed a similar process as that described for the residential program data verification. Navigant first characterized and sorted the data into several project profile categories based on combinations of the program application processes relevant to each project (e.g., approved for a reservation, received an extension, completed, canceled). These project profiles appear in the first column of Table 6 and are intended to represent the five most likely sets of characteristics for projects that have applied to the program.

Table 6. Non-Residential Sample Design

Project Profile	Sample Size	Issue 1		Issue 2			Issue 3	Issue 4
		Application was Rejected	Application was Approved for a Reservation	Project received extension	Project canceled by APS	Control: Project completed without receiving extension	Projects that Received Reservations and were Later Canceled	Complete Projects
Application was Logged, but not Awarded a Reservation	5	5	NA	NA	NA	NA	NA	NA
Approved for a Reservation Received an Extension Completed	4	NA	4	4	NA	NA	NA	4
Approved for a Reservation No Extension Completed	5	NA	5	NA	NA	5	NA	5
Approved for a Reservation Received an Extension Canceled by APS*	1	NA	1	1	1	NA	1	NA
Approved for a Reservation No Extension Canceled by APS	4	NA	4	NA	4	NA	4	NA
TOTAL	19	5	14	5	5	5	5	9

Source: Navigant analysis

*Note: Only two entries matched the criteria for the fourth project profile. Both were for the same owner/installer. As a result, Navigant shifted sample to other profiles.

Each of these project profiles was then compared to the four issues under study for this analysis. Navigant identified the characteristics of projects that it would need to compare in order to address the consistency with which APS applied its program processes related to each of those four issues. As shown in the top two row of Table 6, Navigant sought to sample from each of the following groups of projects:

- Issue 1 (Selection): Projects with rejected applications; Projects with rejected applications
- Issue 2 (Extensions): Projects that received deadline extensions; Projects that were canceled by APS for missing deadlines; Projects that were complete without extensions
- Issue 3 (Funds from Canceled Projects): Projects that received reservations and were later canceled
- Issue 4 (Payment verification): Completed projects

Navigant conducted its sample design so that it could apply each sampled project to several areas of study. Table 6 illustrates how the assigned sample for each project profile in the first column applies to each of the required sample categories. Under this shared sampling approach, the optimal sample size to achieve Navigant’s initial target sample (n=5) for each category was 19 projects.⁴

For the non-residential sector, Navigant also sought to achieve some level of representation from the two different PBI size categories. Navigant stratified the population of project applications based on each PBI category’s proportional share of the total amount of incentive funds for which applications had been received during the period (shown

⁴ Navigant used a dynamic random sampling approach with an initial estimated coefficient of variation of 0.1. This required 4 samples for a 95% confidence interval with +/-10% precision.

previously in Figure 5). As shown in Table 7, Navigant applied the approximate share from each incentive category to its selected sample size to determine the number of sample applications that should come from each PBI incentive category.

Table 7. Proportional Allocation of Sample across Incentive Categories

Strata	% of Program Funds	Recommended Proportion of Sample	Sample Target
UFI	2%	0%	0
PBI - Medium	23%	25%	5
PBI - Large	74%	75%	14
TOTAL	100%	100%	19

Source: Navigant October, 2011

Navigant then requested source data (e.g., hardcopy applications, contracts, copies of emails, etc.) from APS for the 19 sample projects, distributed across the incentive categories and project profiles as shown in Table 8. Navigant used a random number generator to select the specific applications for further review from within each project population segment.

Table 8. Breakdown of Non-residential Sample Population

Project Characteristics	PBI - Large	PBI - Medium	Total
Application was Logged, but not Awarded a Reservation*	4	1	5
Approved for a Reservation Received an Extension Completed	3	1	4
Approved for a Reservation No Extension Completed	3	2	5
Approved for a Reservation Received an Extension Canceled by APS	1	0	1
Approved for a Reservation No Extension Canceled by APS*	4	0	4
TOTAL	15	4	19

Source: Navigant October, 2011

Navigant staff went on-site at APS offices to work with program staff to access the hardcopy project documentation associated with each sample project and to create electronic files for reference by the offsite project team. Navigant compared data in the hardcopy project documentation to that in APS's program tracking spreadsheet to identify any noteworthy discrepancies or undocumented data. In the few cases where data in the program tracking spreadsheet could not immediately be tracked to hardcopy project documentation, APS staff

was able to provide Navigant with electronic copies of emails and other documentation sufficient to address any gaps. As a result, Navigant found no noteworthy discrepancies or inconsistencies between original project documentation and the program tracking spreadsheet relied on for its subsequent analysis.

3. Analysis and Results

This section presents the analysis of each of the issues and results. The following section presents findings for the closely related issues of project selection (Issue 1) and granting of extensions (Issue 2) in parallel. The second section presents a flow-of-funds analysis that examines Issues 3 and 4.

3.1. Issues 1 and 2: Project Selection and Granting of Extensions

Section 3.1.1 discusses the residential program findings, while Section 3.1.2 presents non-residential program findings.

3.1.1. Residential Systems

3.1.1.1. Analysis and Results: Application of Project Selection Processes (Issue 1)

Using the entire residential program population from the dataset, Navigant sought to identify any patterns of unfair or inconsistent rejection and/or selection against three criteria: installer, system size, and upfront incentive amount. Each of the following subsections presents analysis and findings for the remaining three criteria.

Installer

Given the large number of project installers (461) that have applied for funds over the period of study, Navigant focused its analysis on the top 60 installers, which accounted for approximately 80 percent of all the applications. This group's average funding hit rate (i.e., the proportion of applications that are neither owner-cancelled nor cancelled by APS) is 91 percent, with a standard deviation of 12 percentage points. Given this high average hit-rate and its relatively narrow distribution, the data do not suggest any patterns of favoritism in awarding reservations to installers for residential sector projects.

In terms of cancellation rate (i.e., the proportion of an installer's applications that are cancelled by APS, less those that are owner-cancelled), the group's average proportion was 9 percent with a standard deviation of 12 percentage points. Navigant further examined those installers with a cancellation rate more than one standard deviation above the average (i.e., 21 percent), which comprised only six installers. Two of these six installers were working on new construction projects that were cancelled or only partially built; two appear to have gone out of business; and two received deadline extensions (suggesting APS gave them a fair chance to address unforeseen circumstances). Based on these findings around installers with higher cancellation rates, Navigant did not identify any patterns suggesting APS has inconsistently or unfairly canceled projects based on installers.

System Size

Navigant looked for patterns related to extensions for the on-grid PV reservation type, which accounts for approximately 90 percent of the total incentive dollar value for residential DE applications received by APS. Table 9 shows project selection and rejection

by project size. Navigant used increments of 1 kW for projects less than 10 kW because 88 percent of projects were in this size range. The average cancellation rate was 12 percent with a standard deviation with 7 percentage points. Two categories had cancellation ranges above one standard deviation – 15 to 20 kW and > 20 kW. The Not Listed category also had a high cancellation rate, but those are mostly duplicate requests. APS's larger residential projects often involve custom projects that are more difficult to permit, take longer to construct, and require more detailed engineering. This may result in schedule delays.⁵ As a result, the higher cancellation rate among larger projects does not raise particular concerns related to APS's consistent application of cancellation processes.

The average hit rate was 86 percent with a standard deviation of 8 percentage points. One category had a hit rate above this rate – 1 kW to 2 kW. However, 50% of these projects were done by a handful of developers under what appears to be a new home construction program. If the new construction development was successful in getting built, all of the PV projects would have been installed. As a result, this does not raise particular concerns related to APS's consistent application of project selection.

Table 9. Residential Project Selection and Rejection by Project Size

System Size (kW)	Reservations		Applications		Owner Cancelled (Proxy for Rejection)		APS Cancellations		Cancellation Rate	Hit Rate	
	\$	%	Count	%	Count	%	Count	%			
< 1	31,702	0%	32	0%	-	0%	5	1%	16%	84%	
1 to 2	837,584	1%	269	4%	3	2%	10	2%	4%	95%	
2 to 3	3,632,084	4%	731	10%	9	6%	78	13%	11%	88%	
3 to 4	3,362,224	4%	507	7%	2	1%	35	6%	7%	93%	
4 to 5	5,408,061	6%	630	9%	16	10%	68	11%	11%	87%	
5 to 6	12,053,963	14%	1,231	18%	31	20%	67	11%	6%	92%	
6 to 7	9,563,651	11%	818	12%	10	6%	46	8%	6%	93%	
7 to 8	9,179,954	11%	652	9%	14	9%	43	7%	7%	91%	
8 to 9	12,870,637	15%	821	12%	21	13%	65	11%	8%	90%	
9 to 10	5,711,184	7%	349	5%	12	8%	47	8%	14%	83%	
10 to 15	13,179,346	15%	621	9%	28	18%	74	12%	12%	84%	
15 to 20	5,420,398	6%	168	2%	5	3%	30	5%	18%	79%	
> 20	3,567,136	4%	78	1%	4	3%	18	3%	24%	72%	
Not listed	217,664	0%	57	1%	3	2%	15	2%	28%	68%	
Total	85,035,587	100%	6,964	100%	158	100%	601	100%			
									average	12%	86%
									stdev	7%	8%

Source: Navigant analysis of data provided by APS

Incentive Amount
As shown in

⁵ Based upon conversations with APS program staff.

Table 10, Navigant grouped the 11,071 applications into eight incentive ranges to look for any patterns related to incentive amount. For projects that received incentives below \$20,000, Navigant used a finer resolution (\$5,000) between ranges, as 91 percent of the projects fell within this broader category.

Across all incentive ranges, the average cancellation rate was 14 percent with a standard deviation of 7 percentage points. Only the >\$50,000 category had a cancellation rate one standard deviation above the average. In looking at cancellation rate as a function of incentive amount, cancellation rates rise with incentive amount (which typically correlates with system size). APS’s larger residential projects often involve custom projects that are more difficult to permit, take longer to construct, and require more detailed engineering. This may result in schedule delays.⁶ As a result, the higher cancellation rate among larger (i.e., higher incentive) projects does not raise particular concerns related to APS’s consistent application of cancellation processes.

Among all of the incentive ranges, the average hit rate was 86 percent with a standard deviation of 7 percentage points. The only group more than one standard deviation above the average was the <\$5,000 category. In contrast to the large custom projects discussed above, smaller projects are more likely to involve pre-engineered, standardized designs and a more modest cash outlay for the homeowner, and therefore have a lower likelihood of cancellation. As a result, this trend does not raise significant concerns related to APS’s application of project selection criteria.

Table 10. Residential Project Statistics by Incentive Amount

Incentive Amount (\$)	Reservations		Applications		Owner Cancelled (Proxy for Rejection)		APS Cancellations		Cancellation Rate	Hit rate	
	\$	%	Count	%	Count	%	Count	%			
<5,000	9,159,614	10%	4,870	44%	33	17%	300	34%	6%	94%	
5,000 to 10,000	18,301,273	19%	2,423	22%	35	18%	183	21%	8%	92%	
10,001 to 15,000	22,317,682	24%	1,810	16%	42	22%	133	15%	8%	92%	
15,001 to 20,000	16,911,053	18%	995	9%	38	20%	118	13%	12%	88%	
20,001 to 30,000	16,562,997	17%	692	6%	27	14%	99	11%	15%	85%	
30,001 to 40,000	5,450,537	6%	159	1%	9	5%	24	3%	16%	84%	
40,001 to 50,000	2,694,425	3%	62	1%	3	2%	10	1%	17%	83%	
> 50000	3,486,043	4%	60	1%	4	2%	16	2%	29%	71%	
Total	94,883,624	100%	11,071	100%	191	100%	883	100%			
									average	14%	86%
									stdev	7%	7%

Source: Navigant analysis of data provided by APS.

3.1.1.2. Analysis and Results – Application of Extension Policies (Issue 2)

As with Issue 1, Navigant looked for patterns of unfair or inconsistent extensions across three criteria: installer, system size, and upfront incentive amount. Each of the following

⁶ Based upon conversations with APS program staff.

subsections presents analysis and findings related to extensions granted against the remaining three criteria.

Installer

For those installers associated with projects that had received extensions, Navigant compared the installer's share of total extensions to its share of total applications across all reservation types (i.e. technologies). Navigant then flagged any installers whose share of extensions appeared substantially higher than its share of applications (i.e., at or above a 2x factor). Navigant identified and further examined three installers that met this criterion.

- The first of these installers was working on a large new multi-family residential development that would have hosted more than 100 DE systems. The construction project was first delayed, and then subsequently built to only a small portion of its originally planned size. The installer had applied for extensions in the hopes that the development would be fully built out. When the development failed to reach scale, many of the installer's reservations were cancelled as they reached their extended deadlines.
- The second installer was initially offering a third party ownership with terms that were not compatible with APS's DE program. After discussions with APS, they applied for several extensions to discuss changing their offering with their customers. After this point, their extension rate appears to decrease and becomes similar to their portion of applications.
- APS held phone conversations with the third installer about their high rate of extensions. However, Navigant was not able to verify this because no phone records were available.

Based upon this information, these installer's extension rates are not of significant concern to Navigant.

System Size

Navigant looked for patterns related to extensions for the on-grid PV reservation type, which accounts for approximately 90 percent of the total incentive dollar value for residential DE applications received by APS. Table 11 shows the distribution of extensions mapped against system size ranges. Below 10 kW, Navigant used an increment of 1 kW between ranges, as 80 percent of the applications fell within this size range.

Table 11. Distribution of Reservations, Applications and Extensions for the Residential On-Grid PV Program

System Size (kW)	Reservations		Applications		Extensions	
	\$	%	Count	%	Count	%
< 1	31,702	0%	32	0%	-	0%
1 to 2	837,584	1%	269	4%	5	1%
2 to 3	3,632,084	4%	731	10%	66	14%
3 to 4	3,362,224	4%	507	7%	29	6%
4 to 5	5,408,061	6%	630	9%	33	7%
5 to 6	12,053,963	14%	1,231	18%	66	14%
6 to 7	9,563,651	11%	818	12%	44	9%
7 to 8	9,179,954	11%	652	9%	41	9%
8 to 9	12,870,637	15%	821	12%	54	11%
9 to 10	5,711,184	7%	349	5%	28	6%
10 to 15	13,179,346	15%	621	9%	63	13%
15 to 20	5,420,398	6%	168	2%	37	8%
> 20	3,567,136	4%	78	1%	15	3%
Not listed	217,664	0%	57	1%	-	0%
Total	85,035,587	100%	6,964	100%	481	100%

Source: Navigant analysis of data provided by APS

Only systems greater than 15 kW showed a disproportion share of extensions (e.g., greater than 2x) compared to their share of all applications. As previously mentioned, larger residential projects more often involve custom designs and applications that are more difficult to permit, take longer to construct, and require more detailed engineering. This can result in schedule delays.⁶ Thus, the fact that the largest projects have a disproportionate share of the extensions is not of significant concern.

Incentive Amount

Navigant similarly looked for extension-related patterns based on ranges of incentive amounts across all DE reservation types. Table 12 summarizes the analysis findings. Below the \$20,000 incentive level, Navigant used smaller range increments of \$5,000, as 80 percent of incentives fell below that level. As shown in the table, projects with incentives above \$30,000 had a disproportionate share of extensions (10 percent of extensions from only 3 percent of applications). As previously discussed, these larger, typically custom residential projects are more difficult to permit, take longer to construct, and may require more detailed engineering. Thus, the fact that the largest projects have a disproportion of the extensions is not of concern to Navigant.

Table 12. Distribution of Reservations, Applications and Extensions for the Full Residential Program

Incentive Amount (\$)	Reservations		Applications		Extensions	
	\$	%	Count	%	Count	%
<5,000	9,159,614	10%	4,870	44%	84	15%
5,000 to 10,000	18,301,273	19%	2,423	22%	130	23%
10,001 to 15,000	22,317,682	24%	1,810	16%	110	20%
15,001 to 20,000	16,911,053	18%	995	9%	106	19%
20,001 to 30,000	16,562,997	17%	692	6%	75	13%
30,001 to 40,000	5,450,537	6%	159	1%	32	6%
40,001 to 50,000	2,694,425	3%	62	1%	12	2%
> 50,000	3,486,043	4%	60	1%	12	2%
TOTAL	94,883,624	100%	11,071	100%	561	100%

Source: Navigant analysis of data provided by APS

3.1.2. Non-Residential Systems

This section focuses on the data collection, validation, and analysis Navigant undertook to address Issues 1 and 2 for the non-residential portion of APS's DE program.

3.1.2.1. Analysis and Results: Application of Project Selection Processes (Issue 1) and Granting of Extensions (Issue 2)

Using the entire population of solar PV projects that applied for PBI incentives (N=528), Navigant sought to identify any patterns of unfair or inconsistent selection or granting of extensions in APS's non-residential DE program. Based on the similarity of data and approach used to explore Issues 1 (selection) and 2 (extensions), Navigant completed the analyses in parallel. The following subsections describe each of two methods Navigant used to conduct these analyses, as well as the collective findings related to both issues.

Verification of PBI Score Limits

Navigant's first step in reviewing APS's selection of PBI projects was to confirm that projects selected for reservations in each nomination period were legitimately below that period's published PBI threshold. Table 13 summarizes the results of this analysis.

Table 13. Summary of PBI Score Verification Findings

Nomination Period	800 or less	801 to 900	901 to 1000	1001 to 1100	1101 to 1200	>1200	TOTAL	PBI Cutoff
PBI - Medium								
Jan/Feb 2010					2	6	8	1300
Mar/Apr 2010		1	2				3	1086
May/Jun 2010		1	5	1	2	2	11	1225
Jul/Aug 2010		2	2	6			10	1097
Sep/Oct 2010	1	1	7	1			10	1062
Nov/Dec 2010							0	551
Jan/Feb 2011	3	4	5			6	18	1260
Mar/Apr 2011			3	3			6	1090
May/Jun 2011		3	12	2			17	1094
Jul/Aug 2011	2	9					11	824
Unfunded*	2	18	23	2	5	17	67	N/A
PBI - Large								
Jan/Feb 2010				4	3	24	31	1225*
Jul/Aug 2010		7	23				30	980
Jan/Feb 2011	9	9	10	1		1	30	1003*
Jul/Aug 2011	18	18					36	850
Unfunded*	1	7	21	23	40	51	143	N/A

Source: Navigant analysis.

Notes: (1) APS currently does not record the date that non-funded applications were submitted.

(2) PBI-Large, Jan/Feb 2010: 12 projects fall slightly outside of PBI limit (PBI score = 1226). All 12 are for one site host organization. One additional project has a PBI score of 1298, but the project was allowed to increase its system size which moved it to the large category. It passed the PBI cutoff for medium projects in the same nomination period. (3) PBI-Large, Jan/Feb 2011: 1 project has a score of 1206. This project was awarded after the original PBI cutoff was published because additional funds were available and it was the next project in the queue.

As shown, in most cases the spreadsheet data immediately verified that projects with reservations fell within the published PBI threshold. In two instances, Navigant had to seek additional clarification from APS staff regarding projects listed as reserved during nomination periods for which the projects' PBI scores fell above the published threshold. These exceptions are explained in the notes at the bottom of Table 13.

The Navigant team subsequently intended to review the application submittal dates for non-funded projects to verify that their respective PBI scores fell outside of the published thresholds for each nomination period for which they were eligible. However, APS currently does not enter each project's application submittal date into its project tracking spreadsheet. As a result, Navigant could not complete this additional portion of the analysis within the timeframe and scope of this assignment.

Statistical Review for Inconsistencies in Project Selection and Extensions

Navigant ran statistical comparisons to identify any patterns that might provide evidence that APS unfairly or inconsistently applied selection criteria or granted extensions across

three criteria: installer, site host, and third-party owner. Each of the following subsections presents analysis and findings related to these issues for each of these criteria.

Installers

Navigant ran a comparative analysis of the applications associated with each installer in the dataset (N=72). Against the baseline of percentage share of all applications submitted (both count and proposed incentive dollar value), the team compared each installer's share of non-funded projects, funded projects, granted extensions, and cancellations. The team also compared the relative funding hit rates (percent of applications receiving reservations), extension rates, and the rate at which projects were canceled by APS (i.e., because they missed project milestone deadlines) for each installer. The team flagged for further investigation installers who exhibited a higher proportional share of funded, extended, or cancelled projects when compared to their respective share of all applications. These comparisons also considered the absolute number of project applications in any one of these categories. For example, the team did not flag an installer who received an extension on its only funded project (e.g., a 100-percent extension rate).

When reviewing APS justification and documentation related to extensions that were granted, Navigant attempted to apply the letter and spirit of APS's published criteria related to extensions. These include the following:

- Significant investment has already been made by the customer
- Unforeseen, extenuating circumstances have caused a delay in completion
- System completion is imminent⁷

In all the team flagged four installers for additional research. This in-depth review included both closer examination of the program spreadsheet and correspondence with APS program staff regarding the particular circumstances surrounding each installer's projects. Table 14 summarizes the reasons each installer was flagged and the explanations provided by additional research and discussion with APS. Navigant found these explanations to be in-line with program guidelines.

⁷APS 2011. "APS Renewable Energy Program Update: Renewable Energy Stakeholder Meeting. April 2011." Available at: <http://www.aps.com/files/renewable/RESpresentation042011.pdf>

Table 14. Explanations for Flagged Issues by Installer

Installer	Reason Flagged	Explanation
Installer 1	Disproportionate shares of funded, extended, and canceled projects.	Projects selected for funding were competitive. Extensions were granted for several projects based on extenuating circumstances documented by APS staff. Cancellations (representing a greater share of projects than those that received extensions) were also justified and documented by program staff.
Installer 2	Disproportionately low funding hit rate.	PBI Rank for projects falls at or above the published limit for most nomination periods.
Installer 3	Disproportionate share of extensions.	Allowable and appropriate extensions granted by APS to help address contract administration hurdles faced by various customers.
Installer 4	Disproportionately low funding hit rate.	PBI Rank for projects falls well above the published limit for all nomination periods.

Source: Navigant analysis of data and documentation provided by APS

Site Hosts

Navigant repeated the above described comparative analysis of the applications associated with each site host organization in the dataset (N=195). In all the team flagged four site hosts for additional research. Table 15 summarizes the reasons each site host was flagged and the explanations provided by additional research and discussion with APS. Again, Navigant found these explanations to be in-line with program guidelines.

Table 15. Explanations for Flagged Issues by Site Host

Installer	Reason Flagged	Explanation
Site Host 1	Disproportionate shares of funded, extended, and canceled projects.	Project competitiveness and award was based in part on economies of scale that enabled lower financing, panel, and balance-of-system costs that resulted in a lower proposed incentive and PBI score. Extensions were allowable and appropriate based on extenuating circumstances and customer expenditures toward project completion.
Site Host 2	Disproportionate share of extensions.	Extensions were allowable and appropriate based on extenuating circumstances and customer expenditures toward project completion.
Site Host 2	Disproportionate shares of funded projects; high hit rate.	Project competitiveness and award was based in part on economies of scale that enabled lower financing, panel, and balance-of-system costs that resulted in a lower proposed incentive and PBI score
Site Host 2	Disproportionate shares of funded and extended projects.	Project competitiveness and award was based in part on economies of scale that enabled lower financing, panel, and balance-of-system costs that resulted in a lower proposed incentive and PBI score. Extensions were allowable and appropriate based on extenuating circumstances and customer expenditures toward project completion.

Source: Navigant analysis of data and documentation provided by APS

Third-Party Owners

Finally, Navigant repeated the above described comparative analysis of the applications associated with each third-party owner organization in the dataset (N=58). In all the team flagged five third-party owner organizations for additional research. Table 16 summarizes the reasons each third-party owner was flagged and the explanations provided by additional research and discussion with APS. Most of these third-party owners' projects were associated with the same installers and site hosts described above. As such, there were few new issues to research. Navigant found the explanations for each flagged issue to be in-line with program guidelines.

Table 16. Explanations for Flagged Issues by Third-Party Owner

Third-Party Owner	Reason Flagged	Explanation
Owner 1	Disproportionate shares of funded projects; high hit rate.	Project competitiveness and award was based in part on economies of scale that enabled lower financing, panel, and balance-of-system costs that resulted in a lower proposed incentive and PBI score.
Owner 2	Disproportionate shares of funded projects; high hit rate.	Project competitiveness and award was based in part on economies of scale that enabled lower financing, panel, and balance-of-system costs that resulted in a lower proposed incentive and PBI score.
Owner 3	Disproportionate shares of extended and canceled projects.	Extensions were granted for several projects based on extenuating circumstances documented by APS staff.
Owner 4	Many extensions granted	Extensions were allowable and appropriate based on extenuating circumstances and customer expenditures toward project completion.
Owner 5	All 10 funded projects received extensions. 1/4 of all extensions granted.	Project competitiveness and award was based in part on economies of scale that enabled lower financing, panel, and balance-of-system costs that resulted in a lower proposed incentive and PBI score. Extensions were allowable and appropriate based on extenuating circumstances and customer expenditures toward project completion.

Source: Navigant analysis of data and documentation provided by APS

Non-Extension Exceptions to CPA Language

The preceding non-residential analysis supports that APS has consistently applied its published program guidelines for awarding PBI reservations and extensions, and that APS's reasons for granting extensions are well documented. However, during the data collection and verification process, Navigant did note one project that was granted an exception to specific terms in the Credit Purchase Agreement (CPA) stemming from the customer's request for an extension. Specifically, APS granted the customer an exception to terms in the CPA related to resizing of a system under an active reservation.

In this particular case, the project representative had alerted APS that they would be unable to complete the entire project by their commissioning deadline due to financing issues and seasonal use of the space adjacent to a portion of the project. Because the system had been designed for construction in two separate phases, the customer proposed completing the first phase (which was more than 90 percent complete) by the original deadline, but requested a four- to five-month extension for the second phase. However, APS's emails indicate that such an extension would fall outside the bounds of what APS could grant. Instead, program staff suggested that the customer consider applying the CPA language (Section 6) that allows the customer to resize, within certain parameters, the project and its associated reservation.⁸

Re-sizing this particular reservation to accommodate only the first phase of the project would exceed the 20-percent limit for decreasing a system's projected output as stated in the CPA. However, APS granted the customer an exception to this limitation based on several factors, including: 1) the fact that the first phase of the project was nearly complete; 2) that the site host and installer had performed well against all other project milestones; and 3) that the reservation for the remaining Phase 2 portion of the project would be returned to the program's unreserved funds budget. The customer subsequently resized the project to utilize only the Phase 1 portion of the larger system.

Upon further investigation, internal APS emails also indicated that the decision to grant the exception was partly influenced by the fact that a similar exception had previously been granted to a different customer. The emails indicate APS's desire to avoid inconsistent application of the exemption when extenuating circumstances present program staff with this particular situation.

While this particular exception to the CPA does not specifically provide for a deadline extension, the effect on project viability is similar to if an extension had being granted. Navigant could not find any specific language in the CPA or DE Administration Plan related to non-extension exceptions to the CPA, and so did not provide extensive analysis of the issue.

3.2. Issues 3 and 4: Flow of Funds for Canceled and Completed Projects

As part of Navigant's analysis of the sampled projects, the team confirmed that the reserved funds for all cancelled projects were directed back into the pool of available funds for new project applications and that the funds committed for completed projects were paid as agreed. In addition to confirming the appropriate reallocation of funds for the sampled projects, Navigant also reviewed APS's general process for tracking project funds, included those from canceled reservations. However, the team did not verify that the funds from every cancelled reservation since the program's inception were re-allocated to available program funds.

⁸ APS Sample Credit Purchase Agreement. Available at: <http://www.aps.com/files/SolarRenewable/PBISampleCredPurchAgr.pdf>

Sampled Projects

For both the completed residential and non-residential projects that Navigant sampled, the team traced funds without exception to either check copies or APS's banking system for those paid electronically.

Regarding the canceled projects, APS's custom-built residential software, RPM, automatically tracks the project status and assigns funds accordingly. The non-residential projects, however, are tracked manually using spreadsheet software. For these projects, Navigant reviewed the tracking spreadsheets and other internal reports to confirm that funds from canceled reservations were re-allocated to program funds available for other projects.

All Non-Residential Projects

While confirming the flow of funds for the sampled projects, Navigant reviewed the overall manual process APS uses to track all non-residential projects. APS tracks each project individually on a master Microsoft Excel workbook. When a project is canceled, an APS manager manually moves the project from the "funded/approved/pending" worksheet onto the "canceled" worksheet, and then adds the funds back to the total funds committed for new projects. For example, APS committed \$55,000,000 for PBI-Large projects in 2011, but its total lifetime commitment cap for PBI-Large projects was approximately \$88,000,000 as of September 30, 2011, which included almost \$33,000,000 from canceled projects, as presented in the following table.

Table 16. Breakdown of 2011 Non-Residential PBI Commitment

Commitment as of Sept. 30	PBI – Large	PBI – Medium	Schools & Govt.
2011 Commitment Cap	55,000,000	18,000,000	27,000,000
Rollover from Pre-2010 Cancellations	2,925,773	-	-
Rollover from 2010 Cancellations	9,444,738	6,586,373	-
Rollover from 2010 Schools & Govt. Cancellations	3,493,125	-	-
Rollover from 2010 Budget Not Reserved	16,978,234	763,664	-
Lifetime Commitment Cap	87,841,870	25,350,037	27,000,000
Application Reserved	86,765,030	19,179,564	13,669,018
Available Existing Lifetime Funds	1,076,840	6,170,473	13,330,982

Source: Navigant analysis of data provided by APS

While the manual process APS utilizes for tracking non-residential projects needs improvement and streamlining, the process does allow for the re-allocation of funds from cancelled projects to the current funds available for reservations.

4. Conclusions

Navigant considered four aspects of APS's administration of the program. This section summarizes Navigant's findings with respect to each aspect.

Issue 1 – Has APS consistently followed its project selection guidelines?

- Residential Program – Navigant found no issues related to project selection or rejection by installer, system size or incentive amount.
- Non-residential Program – Navigant found no issues related to APS's application of its project selection guidelines to projects that had received reservations. APS does not record the reservation application date for unfunded projects in its tracking spreadsheets. As a result, Navigant could not confirm that unfunded projects fell outside of the PBI thresholds for each nomination period for which they were eligible. Analysis of trends related to specific installers, site hosts, or third-party owners showed that notable disproportions between shares of total applications and funding selection rates generally reflected more-competitive PBI scores stemming from factors such as increased economies of scale.

Issue 2 – Has APS been consistent in its approach to granting deadline extensions?

- Residential Program – Navigant found no issues related to inconsistent extensions by installer, system size or incentive amount.
- Non-residential Program: Analysis of trends related to specific installers, site hosts, or third-party owners showed that notable disproportions between shares of total applications and shares of extensions granted could be explained within the criteria set out in APS program guidance. APS was able to provide sufficient documentation to support qualification with these criteria. Navigant did identify one case of APS granting an exception to specific CPA terms that, in this case, were tied to a customer's extension request. This exception, related to the CPA's limitations on resizing of systems with reservations, may require further clarification from APS to avoid future confusion among program participants.

Issue 3 - When reservations have been cancelled, were reserved funds placed back into accounts for new projects?

- Based on Navigant's analysis, APS appears to be appropriately reallocating funds from cancelled projects to other approved projects. Navigant verified that the funds from a sample of such projects were reallocated to the total budget amount for available program funds.

Issue 4 - Were reported payments actually made?

- In reviewing supporting documentation from APS's accounts payable department and banking system, Navigant confirmed that, for a sample of projects, payments were made in accordance with the scheduled incentive amounts.