



ORIGINAL



0000010948

Jana Van Ness
Manager
Regulatory Compliance

Tel 602-250-2310
Fax 602-250-3003
e-mail: Jana.VanNess@aps.com
<http://www.aps.com>

Mail Station 9908
P.O. Box 53999
Phoenix, AZ 85072-3999

August 6, 2004

Docket Control
Arizona Corporation Commission
1200 W. Washington
Phoenix, Arizona 85007

RE: ARIZONA PUBLIC SERVICE COMPANY APPLICATION FOR A DECLARATORY ORDER REGARDING
BILL ESTIMATION PROCEDURES
Docket No. E-01345A-03-0775

Docket Control:

Attached is Arizona Public Service Company's ("APS") Second Amended Application in the above referenced docket. The attachment marked as Exhibit C (Revised) in our filing dated May 26, 2004, has been revised to include clarifying language as well as correct erroneously stated language. The Second Amended Application reflects these changes.

APS has provided Staff and intervenors a red-lined version of both the Second Amended Application and Exhibit C (Second Revised) under separate cover for their convenience.

If you or your staff have any questions, please feel free to call me.

Sincerely,

Jana Van Ness
Manager
Regulatory Compliance

Attachment

JVN/vld

Arizona Corporation Commission

DOCKETED

AUG 06 2004

DOCKETED BY

AZ CORP COMMISSION
DOCUMENT CONTROL

2004 AUG -6 P 3: 31

RECEIVED

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

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

MARC SPITZER, Chairman
WILLIAM A. MUNDELL
JEFF HATCH-MILLER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF
ARIZONA PUBLIC SERVICE COMPANY FOR
A DECLARATORY ORDER REGARDING BILL
ESTIMATION PROCEDURES

DOCKET NO. E-01345A-03-0775

**SECOND AMENDED
APPLICATION**

Arizona Public Service Company (“APS” or “Company”) hereby files a Second Amended Application requesting a declaratory order from the Arizona Corporation Commission (“Commission”) finding that APS’ past and present procedures for bill estimation either are exempt from or comply with the requirements of A.A.C. R14-2-210 (“Rule 210”) and A.A.C. R14-2-1612 (“Rule 1612”), and that all estimated bills rendered using such procedures are valid and enforceable unless specifically found by this Commission to be incorrect in one respect or another through either a formal or informal complaint proceeding under A.A.C. R14-2-212 (“Rule 212”). Such an order is necessary in view of pending litigation in Superior Court that purports to ask the Court to determine the scope and effect of Rule 210, both without any input from this Commission on a subject clearly within the Commission’s authority and expertise, and without consideration of the impact of its decision on other APS customers.

I. INTRODUCTION AND BACKGROUND

Rule 210 is one of the Commission regulations that address the subject of bill estimation. Although it is APS’ goal to have every billing for metered service based on

1 an accurate and timely meter reading, that is obviously not possible in every instance.
2 Meters fail (either by accident or as a result of tampering) or are destroyed. Company
3 access to meters is obstructed by any number of circumstances outside the Company's
4 control, and sometimes weather prevents APS personnel from even reaching the
5 customer's property, let alone reading the meter. In such instances, it is not only
6 appropriate but legally required that APS attempt to estimate as closely as possible the
7 customer's actual usage for the month.¹

8 Rule 210 (A) was amended in 1998 as part of the Commission's Electric
9 Competition Rules to add the following provision:

10 5. A utility or billing entity may not render a bill based on estimated
11 usage if:

12 a. The estimating procedures employed by the utility or billing
entity have not been approved by the Commission.

13 As part of that same rulemaking package, the Commission passed Rule 1612, which in
14 relevant part states:

15 14. The Director, Utilities Division shall approve operating procedures
16 to be used by the Meter Reading Service Provider for validating,
editing, and estimating metering data.

17
18
19
20 ¹ The Commission has repeatedly held that utilities are under a statutory and constitutional duty to bill
21 each customer for his or her usage in accordance with its Commission-approved tariff. *See, e.g.*, Decision
Nos. 54972 (March 26, 1986), 54976 (April 21, 1986), and 55544 (April 23, 1987). Moreover, Rule 210
(A)(2) specifically authorizes a utility to issue a bill based on estimated usage:

22 If the utility or Meter Reading Service Provider is unable to obtain an actual reading, the
23 utility or billing entity may estimate the consumption for the billing period giving
consideration [to] the following factors where applicable:

24 a. The customer's usage during the same month of the previous year,

25 b. The amount of usage during the previous month.
26

1 Neither the 1998 amendments to Rule 210, including but not limited to the language
2 quoted above, nor Rule 1612 were ever certified by the Arizona Attorney General under
3 A.R.S. § 41-1044.

4 On July 3, 2001, the Utilities Division Director issued a document entitled
5 “Arizona Interval Data Validating, Editing, and Estimating (VEE) Rules and
6 Procedures.” A copy is attached as **Exhibit A**. Although this document was in response
7 to the requirements of Rule 1612, it did not apply, by its own terms, to non-interval kW
8 and kWh meters.² Non-interval meters are used by all but seven of the Standard Offer
9 customers served by APS. To this date, no new or different “operating procedures” (as
10 compared to those then and presently in use by APS and other Affected Utilities) relative
11 to these latter categories of meters have been approved by either the Commission or its
12 designee, the Utilities Division Director.

13 On June 4, 2002, a class action complaint was filed against APS by Avis Read
14 (“Complaint”). Ms. Read subsequently filed an amended class action complaint on
15 December 1, 2003 (“Amended Complaint”), a copy of which is attached as **Exhibit B**
16 **(REVISED)**.³ The Amended Complaint alleges, in relevant part, that APS cannot issue
17 estimated bills *for any reason* absent Commission “approval” of its estimation
18 procedures, thus entitling those customers whose meters cannot be read with free
19 electricity. On April 6, 2004, APS filed a Motion to Dismiss the Amended Complaint on
20 grounds that these issues are within the primary jurisdiction of the Commission. That
21 motion is set for oral argument in July of this year.

22
23 ² An interval meter records and stores electronically the customer’s energy usage in 15-minute time
intervals throughout the entire billing cycle. Such meters also have electronic interrogation capability.

24 ³ Although not a named plaintiff, the Company believes that the real party in interest in such litigation is
25 Mr. George Bien-Willner, who has filed a series of informal complaints with this Commission over the
26 past several years, both against APS and others.

1 On October 22, 2003, APS filed its original Application in this matter.⁴
2 Subsequently, the Company took this and other issues surrounding bills based on
3 estimated consumption—some of which were also raised by the Complaint and Amended
4 Complaint—to the Process Standardization Working Group (“PSWG”). The PSWG was
5 created by the Commission pursuant to A.A.C. R14-2-1614 and provides
6 recommendations to the Commission and the Commission’s Utilities Division Director
7 concerning various implementation issues resulting from the Electric Competition Rules.
8 For example, the estimation procedures for interval metering described in Exhibit A were
9 originally developed by the PSWG. The PSWG also pursued a waiver of portions of Rule
10 210, which resulted in issuance of Decision No. 64180 (October 15, 2002). The PSWG is
11 composed of representatives from “Affected Utilities,” including APS, and non-
12 jurisdictional entities, such as Salt River Project and the City of Mesa. Competitive
13 electric service providers (“ESPs”) and Commission Staff also participate in the PSWG.

14 As a result of meetings by the PSWG, it became clear that several portions of
15 amended Rule 210 require authoritative Commission interpretation to clarify whether the
16 Commission intended the Electric Competition Rules to change the Affected Utilities’
17 existing bill estimating procedures. For example, for bill estimation purpose, does the
18 permissive language of Rule 210 (A) (2) allow for the use of data *other than* customer
19 usage during the same month of the previous year and the usage from the preceding
20 month of the same year? APS, like other utility participants of the PSWG, has always
21 used and continues to use additional factors when estimating consumption in an effort to
22 be as accurate in its estimations as possible, especially when one or both of the specific
23 factors described in Rule 210 (A) (2) are unavailable or are believed not to fairly
24 represent a customer’s usage for the current month.

25 _____
26 ⁴ By Procedural Order dated March 26, 2004, the Commission granted Avis Read intervention in APS’
original Application in an individual capacity.

1 Another issue requiring Commission interpretation is whether Rules 210 (A) (3)
2 (c) and (A) (4)—which allow utilities to use estimated bills once the utilities have
3 undertaken “reasonable alternatives to obtain a customer reading of the meter”—require
4 utilities to secure a customer-obtained meter read under all circumstances prior to
5 rendering a bill based on estimated consumption. APS has a policy of accepting
6 customer-obtained meter reads when it is reasonable and practical to do so. This policy is
7 consistent with A.A.C. R14-2-209 (A) (1), which provides that “[e]ach utility... *may at*
8 *its discretion* allow for customer reading of meters.” (Emphasis added.) Nevertheless,
9 when it is neither reasonable nor practical to obtain a customer-obtained meter read, the
10 Company must use estimated meter data to fulfill its obligation to timely bill customers.

11 Both APS and the other utility participants in the PSWG have also spent a
12 significant amount of time on the issue of what constituted an “estimated bill” within the
13 meaning of Rule 210. In addition to the most common bill estimation situation -- APS
14 cannot access the customer’s meter to obtain a meter read (e.g., locked gate, dangerous
15 dog, weather, etc.) -- APS identified the following ten separate situations involving
16 customer bills where there could be a question as to whether the bill was “estimated”
17 within the meaning of Rule 210.

18 Situation No. 1 is present every time an “estimated bill,” that is, a bill using
19 estimated consumption, is issued. How do Arizona utilities characterize the bill covering
20 the billing period *after* that billing period for which consumption was estimated? In other
21 words, there is a valid meter read at the end of period one (e.g., May) but no read after
22 period two (e.g., June), resulting in the issuance of an “estimated” bill for period two.
23 The utility then obtains an accurate meter read for period three (e.g., July). Although
24 there could be a question whether the billing for period three is “estimated,” it was
25 unanimously agreed by the PSWG participants that period three’s bill was not
26 “estimated” within the meaning of the Commission’s rules and regulations.

1 Situation No. 2 is likewise a common situation for any utility using cycle billing,
2 that is, when meters are read throughout the calendar month in a series of billing
3 “cycles.” Is a bill considered “estimated” if rates change in the middle of a customer’s
4 billing cycle, which will happen for some customers regardless of the effective date of
5 the rate change? The PSWG participants again unanimously concluded that this is
6 considered a non-estimated bill if the billing cycle’s consumption was based on a valid
7 meter read even though the usage was pro-rated to the appropriate number of days’
8 consumption to apply the new and old rates.

9 Situation No. 3 results when a bill must be issued prior to obtaining a valid meter
10 read. Amended Rule 210 (A) requires that bills reflect no more than 35 days’
11 consumption. If a customer-read is late or the utility meter read is delayed beyond the 35
12 day maximum by weather, lack of timely access to the meter, etc., this results in first an
13 “estimated” bill, followed by a “corrected” bill. The PSWG participants concurred with
14 APS’ treatment of this situation.

15 Situation No. 4 is one involving total meter failure or malfunction under
16 circumstances where there is no means of reading the meter or where it cannot be
17 determined when and to what degree the meter has failed, either in whole or in part. (It is
18 possible, for example, for a meter to record energy usage accurately but not demand, and
19 vice versa, or to record both accurately in total but not record the time of use for billing
20 purposes under time-differentiated rates.) All the PSWG participants agreed that these
21 circumstances necessitated the issuance of an “estimated” bill.

22 Situation No. 5 also assumes meter malfunction. But in these instances, the time
23 and impact of the malfunction can be precisely determined such that the usage recorded
24 by the meter can be mathematically adjusted to produce the customer’s actual usage for
25 the billing period or periods in question. For example, if one leg of a three phase meter
26 fails, you know that the usage has been under-recorded by exactly one-third. Other

1 examples include use of the wrong meter multiplier, there is a current transformer error
2 ratio, or the meter tests a consistent and constant percentage slow or fast. Under the
3 circumstances posited, APS and other utility participants of the PSWG agreed that these
4 did not constitute “estimated” bills.

5 Situation No. 6 assumes that the utility, using an electronic meter reading system
6 (e.g., an Itron probe), cannot obtain an accurate read. However, the meter reader does
7 visually read and manually records the customer’s usage. Again, APS agreed with the
8 utility participants of the PSWG that the resultant bill was not “estimated.”

9 Situation No. 7 covers instances when the Commission-approved tariff itself calls
10 for un-metered usage to bill the customer. This is common in certain street and private
11 lighting services. There is also an extra-small General Service rate approved for APS that
12 is for un-metered services. Neither APS nor other PSWG participants considered bills for
13 these services to be “estimated” bills within the meaning of the Commission’s
14 regulations.

15 Situation No. 8 is unique to load-profiled direct access customers (below 20 kW).
16 Because these under 20 kW customers are not required by the Retail Electric Competition
17 Rules to use interval metering, their metered monthly usage is allocated to specific days
18 and times based on class load profiles. This is then used to bill ESPs for transmission
19 service and for generation settlement purposes (both are FERC-regulated services).
20 Again, since load profiling has been specifically authorized by the Commission, and the
21 services provided to ESPs are FERC-regulated, no PSWG participants concluded that
22 load profiling constituted bill “estimation.”⁵

23
24
25 ⁵ Even if this were considered an “estimated” bill, it usually would be the ESP’s bill that was “estimated”
26 and not the APS bill to Direct Access customers for unbundled distribution service, which is generally not
time-differentiated.

1 Situation No. 9 is a meter tampering situation. Unless the tampered meter falls into
2 the “known failure” (both as to time and extent) situation described in Situation No. 5, all
3 the PSWG participants agree that this requires issuance of an “estimated” bill.

4 Situation No. 10 involves the rare instance of where there is an accurate electronic
5 meter read, but the billing computer cannot, for some reason, download the read for
6 billing purposes. The result is an “estimated” bill, as agreed to by the PSWG participants.

7 Whether or not the Commission agrees with APS’ arguments as to the validity of
8 Rules 210 and 1612, the applicability of the various provisions of these rules to
9 “estimated” bills, or the Company’s interpretation of such provisions, there must be a
10 meeting of the minds on what constitutes an “estimated” bill in the first instance.
11 Likewise, assuming *arguendo* that the Commission finds that APS’ existing bill
12 estimating procedures do not comply with the amended rules, the Commission must
13 determine a remedy that is appropriate and fair for all involved, including the individual
14 customer receiving an “estimated” bill, other APS customers, and the Company itself.

15 **II. RULE 210 AND RULE 1612 ARE INVALID ABSENT** 16 **CERTIFICATON BY THE ATTORNEY GENERAL**

17 Rule 210 and Rule 1612 are invalid absent certification by the Attorney General.
18 The Court of Appeals recently invalidated Rule 1612 in *Phelps Dodge Corp. v. Ariz.*
19 *Elec. Power Coop.*, 207 Ariz. 95, ___, ¶ 86, 83 P.3d 573, 594-595 (App. 2004). That
20 opinion affirmed *US WEST Communications, Inc. v. Arizona Corporation Commission*
21 *(US WEST I)*, in which the Court of Appeals held that Commission regulations dealing
22 with utility billing practices require certification by the Attorney General. 197 Ariz. 16, 3
23 P.3d 936 (App. 1999), *review denied*. The *Phelps Dodge* court applied this principle to
24 Rule 1612—which addresses both billing and estimating procedures—and held that the
25 rule was invalid absent the requisite Attorney General certification.
26

1 Given the holdings in *US WEST I* and *Phelps Dodge*, Rule 210 is also invalid until
2 the Attorney General approves it. Rule 210—which also addresses billing and estimating
3 procedures—falls squarely within the holdings of these two cases. Furthermore, by
4 invalidating Rule 1612, the *Phelps Dodge* opinion also indirectly invalidated Rule 210.
5 Rule 1612 expressly incorporates by reference Rule 210. *See* Rule 1612 (A) & (B)
6 [incorporating by reference Rules 201, 203, 204, 205, 208 (A)-(D), 209, 210, 211, and
7 212 except for Rule 212 (F) (1)]. The Court of Appeals could have held that Section (A)
8 of Rule 1612 was valid, while the rest of the rule was invalid. *See Phelps Dodge*, 207
9 Ariz. at ___, ¶ 84, 83 P.3d 594 (holding that a court reviewing a regulatory scheme may
10 consider the rules individually and invalidate only those portions of the rules that are
11 subject to attorney general review); *see also US West I*, 197 Ariz. at 24-25, ¶¶ 30-37, 3
12 P.3d at 944-45. The Court of Appeals did not draw this distinction. Instead, the court
13 invalidated the entire rule and held that rules discussing the topics of billing and
14 collection practices must be approved by the Attorney General. *Phelps Dodge*, 207 Ariz.
15 at ___, ¶ 86, 83 P.3d at 594-95. The logical conclusion, then, is that both amended Rule
16 210 and Rule 1612 are also invalid until they receive approval from the Attorney
17 General.

18 **III. EVEN ASSUMING RULES 210 AND 1612 ARE VALID, THESE RULES**
19 **DO NOT APPLY TO APS' STANDARD OFFER CUSTOMERS**

20 Both the amendatory language to Rule 210 and the new addition of Rule 1612's
21 language were responses to the Commission's decision to open up metering and billing
22 for electric services to competition from competitive ESPs. The competitive scheme
23 raised the prospect of having multiple metering and billing entities within APS' service
24 territory, as well as having two different billing entities for the same customer. The
25 Commission adopted Amended Rule 210 and Rule 1612 to bring uniformity bill
26 estimating procedures used by these different entities.

1 Under the historical regulatory scheme, it may be appropriate for electric utilities
2 operating in different service territories—such as APS and Tucson Electric Power
3 Company (“TEP”)—to have estimating procedures based on a different customer mix,
4 different rate options, different climatology, or different metering schemes. The existing
5 utilities customize their estimating procedures to reflect the individual circumstances of
6 their service territories. For example, APS makes far wider use of demand metering and
7 time-of-use rates than do other Arizona electric utilities. Under such a scheme,
8 Commission action is not necessary because a uniform set of estimating practices is used
9 in a single service territory.

10 In contrast, under the electric competition scheme, there potentially could be different
11 sets of estimation practices within the APS and TEP service territories. Theoretically,
12 each competitive meter reading service provider could have different estimation
13 practices. Additionally, companies serving the same customer—such as APS and an
14 ESP—could use different estimation procedures. It was logical for the Commission to
15 adopt amended Rule 210 and Rule 1612 to bring uniformity to the estimating procedures
16 used for direct access customers within a single service area.

17 A review of the Commission’s rulemaking docket, the comments filed by the
18 numerous parties, and the Commission’s own description of the Electric Competition
19 Rules reveal no intent to change the historic treatment of estimated billing for Standard
20 Offer customers, i.e., those served entirely by their incumbent utility. Neither did it
21 establish any procedure for such utilities to secure approval of their billing estimation
22 procedures, even though such procedures had been and were clearly in place and being
23 applied on a daily basis by incumbent utilities such as APS, which were serving literally
24 hundreds of thousands of existing customers. In contrast, the Commission’s certificate of
25 convenience and necessity (“CC&N”) application form for ESPs seeking to provide
26 metering and billing services required a description of those same estimation procedures,

1 which could then be approved or modified as part of their CC&N proceeding and, more
2 importantly, prior to their being authorized to provide these services to any Arizona
3 consumers. Also, as noted earlier, the only document issued by the Commission's
4 Utilities Division Director under the provisions of Rule 1612 and that satisfies the
5 requirements of Rule 210 pertains almost exclusively to direct access customers. Thus,
6 the most reasonable and logical interpretation must be that the provisions of those rules
7 discussed herein do not apply to APS Standard Offer customers.

8 **IV. EVEN ASSUMING RULES 210 AND 1612 ARE VALID, NEITHER RULE**
9 **INVALIDATED APS' HISTORICAL BILL ESTIMATION PROCEDURES**

10 To the extent that the Commission does interpret amended Rule 210 and Rule
11 1612 as applying to Standard Offer customers, there is still the critical issue of timing.
12 Neither of these rules is self-executing, in that both require some subsequent Commission
13 action, whether by the Commission itself or through its designee. Yet, as noted above,
14 each of Arizona's Affected Utilities, including APS, already had bill estimation
15 procedures in place, and at least in the case of APS, routinely had presented those
16 procedures to Staff and the Commission in various informal and formal complaint
17 proceedings over the years. It is simply unreasonable to now assume that the entire
18 process of rendering estimated bills was to totally and immediately cease, as suggested by
19 the Amended Complaint, until such time, if ever, as the Commission or its Utilities
20 Division Director acted either to establish new procedures for existing and continuing
21 Standard Offer customers or to re-validate those then existing procedures. This would fly
22 in the face of the Commission's repeated statements that billing customers for their usage
23 is a Constitutional and statutory obligation of the utility that cannot be abrogated by a
24 damaged or obstructed meter. A far more compelling interpretation is that those
25 incumbent utilities already utilizing estimation procedures within their service areas that
26 were lawfully in effect prior to the adoption of amended Rule 210 and Rule 1612 could

1 continue to use those procedures until such time as the Director issued new and different
2 “operating procedures” under Rule 1612.

3 **V. THE COMMISSION SHOULD RE-AFFIRM THE COMPANY’S**
4 **CURRENT BILL ESTIMATION PROCEDURES**

5 The Company previously submitted bill estimation procedures to the Commission
6 for Staff review pursuant to Decision No. 64180 (October 15, 2002). A copy of those
7 procedures was attached as Exhibit C to the original Application. An updated and more
8 comprehensive description of the Company’s bill estimating procedures is attached
9 hereto as **Exhibit C (REVISED)**. Unfortunately, **Exhibit C (REVISED)** incorrectly
10 indicated that APS utilized customer class average data to apportion estimated usage to
11 peak and off-peak periods for TOU customers. That was incorrect. Class data is utilized
12 only when there is no valid customer-specific data to make this allocation of usage. Also,
13 **Exhibit C (REVISED)** inadvertently indicated that some estimation procedures were
14 limited to residential customers when, in fact, they are used for both residential and
15 general service customers. A corrected Exhibit C is attached as **Exhibit C (SECOND**
16 **REVISED)**. **Exhibit C (SECOND REVISED)** is redlined against **Exhibit C**
17 **(REVISED)** for the Commission’s convenience in understanding the changes.

18 To date, APS has not received any comment or criticism from Commission Staff
19 concerning its estimation procedures, which basically have been in effect since prior to
20 the enactment of amended Rule 210 and Rule 1612. Moreover, APS’ estimation
21 procedures have been before the Commission on several occasions since adoption of
22 amended Rule 210 and Rule 1612 through both the formal and informal complaint
23 process outlined in Rule 212. At no time has either Staff or the Commission suggested to
24 APS that these procedures were, in any sense, invalid or that the Company should not
25 have issued estimated bills under the circumstances presented in such complaint
26 proceedings.

1 Should the Commission now both determine that amended Rule 210 and Rule
2 1612 apply to Standard Offer customers and that the estimation procedures used by the
3 Company need explicit Commission approval even though validly in effect as of the
4 adoption of these Rules and even in the absence of the Utilities Division Director issuing
5 contrary "operating procedures," APS would ask the Commission to re-affirm the
6 attached bill estimation procedures for its Standard Offer customers and, to the extent
7 necessary, for any future Direct Access customers for which APS is obligated to bill
8 using estimated consumption. Because the procedures attached are fully consistent with
9 both the existing provisions of amended Rule 210 (A) (2) and those approved by the
10 Utilities Division Director for integral metering of customers, and also in light of the
11 Company's Constitutional and statutory duty to bill customers for service provided, such
12 reaffirmation should cover the entire period from the adoption of Rule 210 and Rule
13 1612.

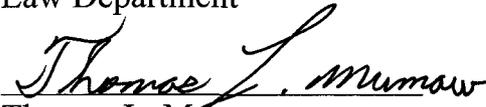
14 Even the best estimation procedures can be improved over time. Thus, in addition,
15 and again only if the Commission rejects the Company's first two arguments herein, APS
16 would ask the Commission to approve a specific and pragmatic procedure by which APS
17 can amend or refine its estimation procedures in the future as new information and
18 perhaps new technology becomes available. That procedure would encompass a formal
19 filing by APS with the Commission, similar to those used for determining tariffs, and
20 would become effective thirty days after filing unless suspended or altered by the
21 Commission. This would prevent an overly-literal reading of the language in amended
22 Rule 210 from being used as an argument for requiring a continuous string of
23 applications covering every new wrinkle proposed for the bill estimation process, while
24 still providing the Commission with the ability to delay or even stop implementation of
25 significant or controversial changes to estimation procedures.

26

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

RESPECTFULLY SUBMITTED this 6th day of August 2004.

PINNACLE WEST CAPITAL CORP.
Law Department


Thomas L. Mumaw

Attorney for Arizona Public Service Company

ORIGINAL AND 13 COPIES OF THE FOREGOING
filed this 6th day of August 2004, with:

Docket Control
Arizona Corporation Commission
1200 West Washington
PHOENIX, AZ 85007

and a copy was served on all parties of record by regular U.S. Mail.


Vicki DiCola

Exhibit "C"
"SECOND REVISED"
ARIZONA PUBLIC SERVICE COMPANY

Methodologies for Estimating Customer Usage Without Meter Reads
Revised 8/2/04

BACKGROUND

Arizona Public Service Company ("APS" or "the Company") regularly encounters situations in which APS cannot obtain a complete and valid meter read. This could result from, among other reasons, the fact that a customer has not provided APS access to the meter or has diverted energy, the meter is broken, or weather conditions have made it impossible to read the meter. Without a valid meter read, the customer's energy usage must be estimated in order to render the bill for the missing-read-period.

APS uses various methods to estimate electrical usage -- depending on the circumstances -- to ensure that APS obtains the most accurate usage estimate. When APS is unable to obtain an actual meter read, the Company follows the estimation methods and procedures described below.

SUMMARY OF ESTIMATING METHODOLOGIES

There are two measures of electric usage that may be estimated: the amount of energy used (kWh) during the billing period and maximum demand (kW) during the billing period. To estimate energy usage (kWh), APS' preferred approach is to use the customer's average daily usage for the same season. If there is insufficient information to do so, APS then uses the customer's usage from the previous month, if it is in the same season, or the customer's usage from the same month of the previous year. For recently connected customers, APS uses the previous usage for the same premises. Because the number of days in the customer's billing period varies from one month to another, APS calculates estimated energy usage on a daily basis and multiplies this number by the number of days in the period. To estimate demand (kW), APS applies the applicable class average load factor to the estimated energy use.

The estimating methods employed by APS to estimate a meter read are listed below:

- A. Estimates for Active Accounts, Including Initial and Final Bills
 - 1. Estimating Energy Usage (kWh)
 - a. Existing Meter With Account History
 - i. Seasonal Average Method
 - ii. Previous Month Method
 - iii. Same Month Previous Year Method
 - iv. Time-of-Use Energy Allocation
 - b. New Meter Set Without Account History
 - 2. Estimating Demand (kW)
 - a. Residential Time-of-Use Demand Service Plan
 - b. Residential Non-Time-of-Use Demand Service Plan
 - c. Non-residential Demand Estimates
- B. Adjusting Estimated Usage Based on Subsequent Actual Read
- C. Estimating When Customers Divert Energy
- D. Estimating for Meter Failure
 - 1. Complete Meter Failure ("dead meters")
 - 2. Slow/Fast Meters

ARIZONA PUBLIC SERVICE COMPANY

Methodologies for Estimating Customer Usage Without Meter Reads
Revised 8/2/04

A. Estimates for Active Accounts, Including Initial and Final Bills

APS uses the following methods for estimating electrical usage for active monthly bills, including initial and final bills, when the Company is not able to obtain a meter read.

1. ESTIMATING ENERGY USAGE (kWh)

a. Existing Meter With Account History

These situations usually occur because a customer has not provided APS personnel safe and unassisted access to the meter to obtain a read. When there is energy usage history available for the site, the Customer Information System ("CIS") or a Billing Associate will estimate the kWh usage (both total monthly usage and time-of-use usage when applicable) using one or more of the following three methodologies.

- i. Seasonal Average Method. This method calculates the average usage per day for the entire season that includes the period for which there is a missing read. The resulting per day usage is multiplied by the number of days in the missing-read billing period to yield the estimate of usage for that period.

This method requires retrieval of the customer's total kWh and the total number of days for the most recent six months for the season of the missing read from CIS. The months in the two billing seasons are:

<u>Season</u>	<u>Residential</u>	<u>Business</u>
Winter	November-April	November-May
Summer	May-October	June-October

Then, using the seasonal account history, CIS or a Billing Associate will follow these steps:

- 1) Total the number of days from each of the previous six months for the appropriate season to yield Seasonal Total Days.
- 2) Total the kWh from each of the previous six months for the appropriate season to yield the Seasonal Total kWh.
- 3) Divide Seasonal Total kWh by Seasonal Total Days to yield the Seasonal Per Day Usage.
- 4) Multiply the Seasonal Per Day Usage by the number of days in the missing-read billing period to yield the kWh for the missing-read billing period.

Example of Seasonal Per Day Calculation

Assume the missing-read month is May 2003 (a summer month) and that there are 32 days in the billing period. Thus, the appropriate seasonal energy is from the six summer months of the previous year. For this example:

ARIZONA PUBLIC SERVICE COMPANY

Methodologies for Estimating Customer Usage Without Meter Reads
Revised 8/2/04

<u>Month</u>	<u>Usage</u>	<u>Days</u>
May 2002	995	30
June 2002	1,532	29
July 2002	1,796	31
Aug 2002	2,098	29
Sep 2002	1,919	31
Oct 2002	<u>1,629</u>	<u>28</u>
Totals	9,969	178

Total Seasonal Usage = 9,969 kWh

Total Seasonal Days = 178 days

Missing-read Period = 32 days

Therefore:

$9,969 \div 178 = 56.01$ kWh per day

$56.01 \times 32 = 1,792$ kWh

Estimated consumption for May is 1,792 kWh.

- ii. Previous Month Method. This method is used when there is not sufficient account history to use the Seasonal Average Method, but there is account history for the previous month in the same season as the missing-read month. This method calculates the estimated daily energy usage (kWh) from the previous month and multiplies it by the number of days in the missing-read billing period.

The steps in this method are as follows:

- 1) Retrieve from CIS the customer's usage and the number of days in the previous month.
- 2) Divide the previous month's usage by the number of days in the previous month to yield the per day usage.
- 3) Multiply the previous month's per day usage by the number of days in the missing-read billing period.

Example of Previous Month Per Day Calculation

Assume the missing-read month is January and the January billing period contains 32 days. For this example:

December usage = 2,369

December number of days = 27

January number of days = 32

$2,369 \div 27 = 87.74$ kWh per day previous month

$87.74 \times 32 = 2,807$ kWh for the missing-read month

January estimated usage is 2,807 kWh.

- iii. Same Month Previous Year Method. This method is used when there is insufficient account history to use the Seasonal Average Method and the previous month is in a different season than the missing-read month. This method is identical to the Previous Month Usage Method (see ¶ A.1.ii. above), except that usage and number of days from the same month in the previous year is used to estimate the energy usage for the

ARIZONA PUBLIC SERVICE COMPANY

Methodologies for Estimating Customer Usage Without Meter Reads
Revised 8/2/04

missing-read period, rather than usage and number of days from the previous month in the same year.

- iv. Time-of-Use Energy Allocation without Account History. If the account is currently on a time-of-use service plan, but was not on time-of-use a year ago, the estimated usage is allocated to on-peak and off-peak based on the class average split for on-peak and off-peak energy.

Example of Same Month Previous Year Method, Time-of-Use Service Plan

Assume the same estimated energy in the previous example. The class average energy split for a time-of-use service plan in the summer months is 40% on-peak and 60% off-peak, and in the winter months it is 30% on-peak and 70% off-peak. Using these averages, the on-peak and off-peak energy calculations for this example are as follows:

Table with 4 columns: Month, Total, 40% On-Peak, 60% Off-Peak for Summer; and Total, 30% On-Peak, 70% Off-Peak for Winter. Values include 2,807 kWh, 1,123, 1,684, 842, and 1,965.

b. New Meter Set Without Account History

This method is used when APS is unable to obtain a meter read at the first read of a new account. When this occurs, CIS flags the account as an "exception" and the account is routed to a Billing Associate, who estimates the usage as follows:

- i. If the number of days between the meter set and read date is less than the established threshold required to estimate usage (currently 10 days), the Billing Associate uses zero usage. Thus, the customer's first bill is only a prorated Basic Service Charge.
ii. If the number of days is greater than the current required threshold, the Billing Associate estimates a read using a "minimum usage estimate" of kWh per day (currently 20 kWh per day) multiplied by the number of days between the original meter set and read date. For those new accounts on a time of-use rate, the "minimum usage estimate" is split at 40% on-peak during the summer and 30% on-peak during the winter. This is consistent with the methodology described in ¶ A.1.a.iv above. If the new account also has a demand meter, the demand is estimated using the same load factor methodology as mentioned in ¶ A.2 below.

2. ESTIMATING DEMAND (kW)

In general, to estimate a customer's maximum demand without an actual read, CIS or a Billing Associate estimates demand (kW) by applying the applicable class average load factor to actual or estimated energy usage (kWh). The Billing Associate may also give consideration to the customer's demand during the same month of the previous year or the demand during the preceding month to verify the estimated demand using the average load factor.

- a. Time-of-Use Demand Service Plans. For those customers on a time-of-use demand service plan, APS first calculates the estimated on-peak kWh using the appropriate kWh estimating methodology. APS then calculates the total number of on-peak hours during the missing-read billing period by multiplying the on-peak hours per day times the estimated number of

ARIZONA PUBLIC SERVICE COMPANY

Methodologies for Estimating Customer Usage Without Meter Reads Revised 8/2/04

weekdays in the missing-read billing period. APS next calculates the on-peak demand by dividing the on-peak energy usage by the number of on-peak hours and the time-of-use class average on-peak load factor. Residential demands are estimated and billed to the nearest tenth of a kW. Non-residential demands are estimated and billed to the nearest whole kW.

Example of Estimating Demand for Time-of-Use Service Plan

For this example, assume the following:

Estimated on-peak energy usage = 842 kWh
Number of weekday on-peak hours = 12¹
Number of days in the missing-read billing period = 31
Number of weekdays in the missing-read billing period = $5/7 \times 31 = 22$
Class average on-peak load factor = 42%²

Then:

$22 \times 12 = 264$ on-peak hours
 $842 \div (264 \times 0.42) = 7.6$ kW

The estimated on-peak demand for the missing-read period is 7.6 kW.

- b. Non-Time-of-Use Demand Service Plans. To estimate demand for the non-time-of-use service plans, APS calculates the kWh usage for the missing-read billing period. APS then calculates the total number of hours in the missing-read billing period by multiplying the number of days by 24. APS calculates the monthly peak demand by dividing the estimated energy usage by the total number of hours figure multiplied by the class average load factor. Residential demands are estimated to the nearest tenth of a kW. Non-residential demands are estimated and billed to the nearest whole kW.

Example of Estimating Demand for Non-Time-of-Use Service Plan

For this example, assume the following:

Estimated energy usage = 1,160 kWh
Number of days in missing-read billing period = 29
Class average load factor = 35%³

Then:

¹ Currently, the monthly on-peak hours for ECT-1R accounts are 12 hours for each weekday. Until April 2004, the monthly on-peak hours were overstated as 13 hours for all days (based on a superceded rate schedule).

² 42% is the current average monthly on-peak load factor used to estimate demand for ECT-1R customers. From approximately March 1999 until August 2002, APS used a 50% load factor to estimate such demand; from August 2002 until April 2004, APS used a 35% figure to estimate demand for these types of accounts. These changes were based on APS' analysis of average load factors by customer classification.

³ Since August 2002, APS has used a 35% average load factor to estimate demand for EC-1 customers. From approximately March 1999 until August 2002, APS used a 50% load factor to estimate demand for EC-1 customers.

ARIZONA PUBLIC SERVICE COMPANY

**Methodologies for Estimating Customer Usage Without Meter Reads
Revised 8/2/04**

$$29 \times 24 = 696 \text{ hours}$$

$$1,160 \div (696 \times 0.35) = 4.8 \text{ kW}$$

The estimated monthly maximum demand is 4.8 kW.

- c. Non-Residential Demand Estimates. All non-residential services that must be estimated are calculated using the same methods as the residential methods above, except the average load factors for the respective class of non-residential customers are used in the calculations.

ARIZONA PUBLIC SERVICE COMPANY

Methodologies for Estimating Customer Usage Without Meter Reads Revised 8/2/04

B. Adjusting Estimated Usage Based on Subsequent Actual Read

When APS obtains an actual read following a previously estimated meter read that does not fall within the bounds of APS' normal "high-low" energy usage criteria for the previous month, CIS creates an exception. A Billing Associate evaluates the exception to determine if the new read indicates that the prior estimated read now appears to be significantly high or low. If the Billing Associate determines that the estimated read is either high or low, taking into account normal seasonal usage changes, then the Billing Associate will adjust the previous month's estimated read taking into account the subsequent actual read.

The amount of energy usage (kWh) can be estimated for Final and Active Monthly Bills by comparing a subsequent actual read with the last prior actual read and determining the difference to get the adjusted missing read. The difference between the last actual read prior to the estimated read, and the new actual read subsequent to the estimated read are used to calculate the per day usage. The per day usage is multiplied by the number of days for the bill to yield the total energy used in the billing periods.

Example of Reallocation of Energy Usage Based On Subsequent Actual Read

Assume on May 15 APS had an actual read of 19886.

On June 16, APS estimated energy usage for 32 days (May 15 to June 16).

On July 14 APS obtained an actual read of 23210 for 28 days (June 16 to July 14).

Total number of days: $28 + 32 = 60$

Total Usage: $23210 - 19886 = 3,324$ kWh for 60 days

Per day usage: $3,324 \div 60 = 55.4$ kWh

Estimated June usage: $32 \times 55.4 = 1,773$ kWh

Estimated June read: $19886 + 1773 = 21659$

An estimated demand (kW) may be reduced later when a subsequent actual demand read is lower than the estimated demand read for the previous missing-read billing period. When CIS finds this circumstance, it produces a billing exception. The Billing Associate who receives the exception notice reduces the previously estimated demand to the actual read (or lower if warranted), and credits the customer's account balance for the difference in the demand charge.

Example of Adjusting Previously Estimated Demand Based on Subsequent Actual Read

Assume that May demand is an actual read of 6.4 kW and the demand register is reset to zero at the time of the read.

June demand is estimated at 7.3 kW and demand register was not reset (no access).

July is an actual read of 6.9 kW and the demand register is reset to zero at the time of the read.

The July CIS billing will produce a billing exception because the actual demand is less than the estimated demand for the previous month. The Billing Associate will reduce the June demand to 6.9 kW or, perhaps, to a lower demand using other available information such as historical data.

ARIZONA PUBLIC SERVICE COMPANY

Methodologies for Estimating Customer Usage Without Meter Reads Revised 8/2/04

C. Estimating When Customer Diverts Energy

In instances in which a customer diverts his energy use, one or more of the methods described above may be used to estimate the usage for the period of suspected energy diversion. If there is insufficient usage history because tampering has occurred over an extended period of time, the Degree Day Method may be used.

The Degree Day Method consists of determining the customer's non-weather-sensitive "base load" (as metered during a period that is determined to be free from tampering or diversion) and adding to that usage the estimated usage of the customer's inventory of weather-sensitive appliances, adjusted for actual weather conditions as measured by "degree days."

APS estimates the base load as an average of the electric usage with little or no heating or cooling, which represents a customer's basic electric usage for lighting and non-weather-sensitive appliances, such as washer, dryer, television and refrigerator. April and November are normally base load months requiring minimal heating or cooling.

Next, APS adds to the base load the customer's estimated electrical requirements for heating or cooling needs. APS inventories the customer's weather sensitive equipment, such as evaporative cooler, refrigerated air conditioner, heat pump, heat strips, and gas furnace. Using APS' database of the electric usage of such equipment, APS estimates the customer's electric usage for heating and cooling.

The additional electric usage for heating or cooling is calculated by using temperature information received from the National Weather Service. APS retrieves the historical daily temperature during the back-billing period from the National Weather Service to calculate the customer's degree days. To determine how many hours of heating or cooling were needed, the high and low temperatures for each day are averaged. In the summer, if the daily average temperature is over 80 degrees, then the difference between the daily average and 80 degrees represents the number of hours needed for cooling to maintain an inside temperature of 80 degrees that day. In the winter, the high and low temperatures are again averaged and if the daily average high temperature is under 65 degrees, then the difference between the daily average temperature and 65 degrees represents the number of hours needed for heating to maintain an inside temperature of 65 degrees that day.

Once the number of heating or cooling hours is determined, the electric usage of the customer-specific equipment to meet that heating or cooling requirement is calculated. APS uses its current engineering estimates for the kW demand for the heating and cooling equipment and multiplies those factors by the actual degree day hours to yield the kWh for both heating and cooling requirements.

Summary of the Degree Day Calculations:

1. Estimate base load using actual averaged data in base load months.
2. Calculate the number of heating or cooling degree day hours for the billing cycle.
3. Multiply customer specific heating and cooling equipment by the appropriate kW factor. The current average electric usage factor is as follows:
 - a. Heat pump heating = 0.771 kW per ton
 - b. Gas furnace = 0.955 kW per hour
 - c. Refrigerated cooling = 1.266 kW per ton
 - d. Evaporative cooling = 0.955 kW per each $\frac{3}{4}$ horse power cooler
4. Multiply the total heating or cooling hours in the billing cycle (calculated in number 2 above) by the total kW (calculated in number 3 above).
5. Add the product from number 4 above to the base load in number 1 above to determine total kWh for the billing cycle.

ARIZONA PUBLIC SERVICE COMPANY

Methodologies for Estimating Customer Usage Without Meter Reads Revised 8/2/04

Example of Bill Estimation for Energy Usage Using Degree Day Method

Assume:

1. An all-electric, 2,000 square foot home with a three-ton heat-pump.
2. November usage for this home is 700 kWh.
3. National Weather Service temperatures in December as shown in the following table:

Day of the Month	Daily High Temp	Daily Low Temp	Average	Inside temperature of 65° degrees - required heating hours per day
December 1	66	50	58	65 - 58 = 7 heating hours
December 2	70	50	60	65 - 60 = 5 heating hours
December 3	78	56	67	65 - 67 = 0 heating hours
***	***	***	***	***
December 31	68	52	60	65 - 60 = 5 heating hours

Assume for this example:

1. December is the billing period
2. Base load = 700 kWh
3. Total heating hours for the billing period = $7 + 5 + 0 + \dots + 5 = 196$ degree hours
4. 3 tons of heating \times 0.771 kW per hour per ton = 2.313 kWh per heating degree hour
5. $196 \times 2.313 = 453$ kWh, total heating requirement
6. $700 + 453 = 1,153$ kWh, total estimated usage for the billing period

If it is necessary to estimate demand, the demand is determined as set forth in ¶ A.2 above.

ARIZONA PUBLIC SERVICE COMPANY

Methodologies for Estimating Customer Usage Without Meter Reads Revised 8/2/04

D. Estimating for Meter Failure

1. Complete Meter Failure (“dead” meters). Occasionally an actual meter read will indicate very little or no energy usage and CIS will generate a billing exception. A Billing Associate will compare the low or zero consumption to the customer history. If a Billing Associate suspects that the meter is no longer working, the Associate will attempt to determine if there is any activity at the site. The Associate will request a field check to determine whether the meter has failed or the site is vacant and using no energy.

When a meter has failed, the usage is estimated by applying the methods described in Section A above or by applying the actual per day usage (less three percent) of the new replacement meter, whichever is lower. When the new meter period usage is the basis for the estimate, APS adjusts for the typical differences in weather-related usage between the new meter month and the failed meter period.

2. Slow/Fast Meters. If a meter shop test of the suspected failed meter determines that the meter is registering a consistent percentage (either fast or slow) on tests of both full and light load, APS increases or decreases the actual historical usage in proportion to the percentage of error determined by the meter test. The account is rebilled for the period of meter error and the customer’s account is credited or debited accordingly.