OPEN MEETING

ORIGINAL

MEMORANDUM

TO: THE COMMISSION

FROM: Utilities Division

DATE: July 11, 2008

RE: IN THE MATTER OF THE JOINT APPLICATION OF GARKANE ENERGY COOPERATIVE, INC. AND DIXIE-ESCALANTE RURAL ELECTRIC ASSOCIATION, INC. FOR A WAIVER OF THE REQUIREMENT OF DECISION NO. 69736 FOR IMPLEMENTATION OF TIME-BASED RATE SCHEDULES (DOCKET NOS. E-01891A-08-0061 AND E-02044A-08-0061)

Garkane Energy Cooperative, Inc. ("Garkane") and Dixie-Escalante Rural Electric Association, Inc. ("Dixie-Escalante") are member-owned, Utah-based non-profit cooperative associations that supply electricity to their members - most of which are located in the state of Utah. On February 1, 2008, Garkane and Dixie-Escalante filed a Joint Application ("Application") with the Arizona Corporation Commission ("Commission" or "ACC") requesting a waiver of the Decision No. 69736 ("Decision") requirement to implement time-based rate schedules.

The following excerpt from subparagraph (A) of the Public Utility Regulatory Policies Act of 1978 ("PURPA") Time-Based Metering and Communications standard, as modified by the ACC in Decision No. 69736 (p. 7, lines 6-9), contains the requirement from which Garkane and Dixie-Escalante ("Cooperatives") are seeking waivers[1]:

> "(A) Within 18 months of Commission adoption of this standard, each electric distribution utility shall offer to appropriate customer classes, and provide individual customers upon customer request, a time-based rate schedule under which the rate charged by the electric utility varies during different time periods and reflects the variance, if any, in the utility's costs of generating and purchasing electricity at the wholesale level."

Staff finds that Decision No. 69736 requires each electric distribution utility under ACC jurisdiction to offer time-based rate schedules to appropriate customer classes and individual customers upon request. With the Commission's July 30, 2007 adoption of this modified Time-Based Metering and Communications standard, Staff concludes that all electric distribution utilities under ACC jurisdiction are required to offer Commission-approved time-based rate schedules no later than January 31, 2009.

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[1] It should be noted at p. 7 of Decision No. 69736 (lines 14-28) and p. 8 (lines 1-2) that the rate schedule referred to in Subparagraph (A) may include, but is not limited to, time-of-use pricing, critical peak pricing, real-time pricing or credits for load reduction agreements.

Both Cooperatives are all-requirements members of the Deseret Generation and Transmission Cooperative ("Deseret") and, as such, are obligated by contract to take all of their power and energy at wholesale from Deseret. Garkane and Dixie-Escalante are billed demand charges based upon each cooperative's load measured at the time of Deseret's Coincident System Peak. There is no time of day or month of year differentiation in the wholesale rates charged to the Cooperatives for capacity or energy purchased from Deseret.

According to the Application, the reasons for requesting the waivers are that the Cooperatives are not being required to implement time-based rates in Utah where the considerable majority of their customers are located; time-based rates are not cost-effective for their customers or the Cooperatives primarily because the Cooperatives' rates are not time-differentiated at the wholesale level; and metering costs associated with implementation of time differentiated rates are relatively high (p. 2 of the Application, lines 17-21). However, in response to a Staff-initiated data request, the Cooperatives were unable to provide specific meter costs or benefit analyses to support their conclusion that metering costs are too high to warrant implementing time-differentiated rates.

Garkane and Dixie-Escalante also believe that it would be difficult to design effective retail time-of-use ("TOU") rates given that Deseret's rates are not time-differentiated at the wholesale level. Staff agrees that TOU rate schedules need to be properly designed, with a price signal that is sufficient to encourage shifting consumption off the hours normally experienced by Deseret as on-peak.

The Application is supported by operating data for the twelve months ended January 2008. Garkane reported having approximately 11,350 customers of which only about 690 (6.1 percent) are located in Arizona. Dixie-Escalante reported having nearly 13,650 customers of which only about 2,100 (15.4 percent) are located in Arizona. Staff concluded that the statistics (see table below) and a Utah Public Service Commission ("Utah Commission") decision to not mandate time-based rates for the Cooperatives' customers located in Utah (Decision No. 06-999-03, issued February 14, 2007), may have influenced the Cooperatives in reaching their conclusion that implementing time-based rates would not be cost-effective for their Arizona customers or the Cooperatives (Application, p.2, lines 18-19).

	Garkane				Dixie-Escalante		
	Utah	Arizona	Arizona %		Utah	Arizona	Arizona %
Annual MWH	170,494.1	14,603.9	7.89%		321,215.8	31,311.3	8.88%
Peak Summer KW CP*	28,310	2,742	8.83%		85,000	7,482	8.09%
Peak Winter KW CP*	41,539	3,146	7.04%		55,994	6,263	10.06%
Total No. of Customers	10,667	690	6.08%		11,545	2,097	15.37%
Rev $ x 000	$12,776.8	$1,197.6	8.57%		$17,112.0	$1,915.6	10.07%

*Utah and Arizona split is estimated based on MWH (summer = May-October; winter = November-April)

Staff believes that it is incorrect to conclude that non-differentiated rates at the wholesale level and "high metering costs" (Application, p. 2, lines 19-21) automatically preclude

conducting detailed empirical analyses to determine the feasibility of implementing time-based rates. For example, if incremental metering costs are $30 per residential meter and the penetration rate is ten percent, Garkane's total incremental residential meter investment would only be about $1,600 (543 residential customers x 10% x $30). A similar approach for Dixie-Escalante produces a total incremental residential meter investment of only about $5,100 (1,697 residential customers x 10% x $30). With these relatively modest incremental capital investment hurdles, Staff is concerned that the Cooperatives may not have quantified the value of shifting some of its Arizona load from on-peak to off-peak, and may have concluded that TOU metering can only be implemented with smart metering and its incrementally expensive infrastructure.

Subparagraph (A) of the modified Time-Based Metering and Communications standard also contains the following requirement (p. 7, lines 9-12): "Within 18 months of Commission adoption of this standard, each electric distribution utility shall investigate the feasibility and cost-effectiveness of implementing advanced metering infrastructure for its service territory and shall begin implementing the technology if feasible and cost effective." According to page 2 (lines 22-23) and page 3 (lines 1-3) of the Application, Garkane and Dixie-Escalante plan to study "smart metering" as required by the Commission's order, and Staff believes that the Cooperatives' findings and conclusions will be documented with the Commission no later than January 31, 2009.

Staff's Recommendations and Findings

Staff recommends that the Commission not approve the Application of Garkane and Dixie-Escalante for a waiver of the Decision No. 69736 requirement to implement time-based rate schedules. Staff's support for this recommendation is discussed in items 1-3 below.

Staff further recommends that Garkane and Dixie-Escalante each develop a detailed cost-benefit analysis to determine the feasibility of implementing time-based rate schedules that are voluntary rate options for all appropriate Arizona customers, taking into consideration Staff's findings as discussed in items 1-2 below.

Staff further recommends that Garkane and Dixie-Escalante implement time-based rate schedules and, if their investigations on advanced metering infrastructure indicate that smart metering would not be appropriate, use standard TOU meters that do not utilize "smart" technologies.

Staff further recommends that if the Cooperatives' detailed cost-benefit analyses of implementing time-based rate schedules indicate that the rate schedules would not be appropriate, feasible, and cost-effective, the Cooperatives may file another request for a waiver.

Staff supports its recommendations with the findings that follow:

1. Approximately 80 percent of Garkane's and Dixie-Escalante's Arizona customers are residential class customers. Staff believes that given reasonable incremental metering

costs, the residential class would be a viable rate class to target for TOU metering due to its TOU-related load shifting opportunities and potential impact on demand billings at the wholesale level. It is likely that TOU metering technologies have evolved since the 1980s, and these developments have lowered incremental TOU metering costs to a level that simultaneously encourages participation in TOU rate schedules and provides offsetting benefits for electric distribution utilities.

A case in point is Sulphur Springs Valley Electric Cooperative ("SSVEC"). Although SSVEC has substantially more Arizona customers than Garkane and Dixie-Escalante, all three cooperatives' residential classes represent approximately 80 percent of their respective total customer numbers. When SSVEC's residential TOU rates were implemented in 1995, SSVEC's billing arrangements were similar to the circumstances now facing Garkane and Dixie-Escalante in that SSVEC was an all-requirements member of Arizona Electric Power Cooperative ("AEPCO"); SSVEC was billed for demand coincident with AEPCO's monthly peak for that member class; and demand rates were not time-differentiated at the wholesale level, as is the case for the Cooperatives.

The reason Staff cites SSVEC is that its February 2008 report on the participation (which is extremely modest) and benefits of TOU rates states that implementing TOU options has saved SSVEC approximately $315,000 in avoided annual demand charges. The following quotes from page 3 of the report encapsulate SSVEC's support of TOU rates: A) "SSVEC would like to continue using the TOU rates as they provide an economic benefit to the Co-op and give the members a choice in how to purchase their energy with the potential for savings by modifying their consumption habits by shifting their load to the "off-peak" periods." and B) "Because SSVEC is member owned and we want to act in the best interest of the members, it is our intent to notify those members who didn't save money by using the TOU rates that they either need to move more loads to the "non-peak" periods or consider going back to the non TOU rates ...." These findings motivated Staff to quantify (as discussed below) the potential cost-benefit of Garkane and Dixie-Escalante offering TOU rates to their residential customers located in Arizona.

2. Staff's approach in determining the feasibility of the Cooperatives implementing TOU rates in Arizona does not include rate design or a comprehensive cost-benefit analysis. Staff assumed that if signing up one residential customer to use TOU rates reduced annual demand billings from Deseret by more than $30 (hypothetical target), then it would be appropriate to recommend that Garkane and Dixie-Escalante be required to undertake a more comprehensive cost-benefit analysis. Using respective residential rate classes' sales data, Staff developed Attachment 1 to create a base case scenario that identifies Arizona's residential share of total billed kW for the period February 2007 through January 2008 (Column 4). Attachment 2 was developed to establish a hypothetical 10 percent penetration with a 25 percent load shift to develop a benefit ratio per residential customer. Simply defined, if the benefit ratio is greater

than 1, demand charge savings at the wholesale level exceed TOU-related incremental costs at the retail level. The underlying elements in the model are kW reduction per customer, kW charges to the Cooperatives, and a $30 incremental cost per TOU meter. As Attachment 2 illustrates, Benefit Ratios of 1.41 and 1.56 were derived for Dixie-Escalante and Garkane, respectively.

Staff acknowledges that its analysis may omit critical elements due to its lack of knowledge about the day-to-day operations of the Cooperatives and that it is important to properly design a TOU rate schedule, with appropriate on-peak/off-peak designations and price signals. However, implementing TOU rates at Garkane and Dixie-Escalante might result in annual demand savings similar to those experienced by SSVEC.

3. Staff's recommendations are reinforced by the Public Service Commission of Utah's ("Utah Commission") decision issued February 14, 2007 (Docket No. 06-999-03). The decision determined that it was not appropriate to adopt the federal time-based metering and communications standard as written. Staff believes that the decision supports Staff's recommendations because TOU rates already existed in Utah at the time of the Utah Commission's ruling, and the ruling does not condemn time-based metering. The Utah Commission was concerned with smart metering-related costs and benefits, and ordered Rocky Mountain Power[2] to support its conclusion that smart metering, as envisioned by the PURPA standard, is not cost-effective for its applicable circumstances. Staff believes that the Utah Commission ruling has relevance in this proceeding, because Garkane and Dixie-Escalante also did not provide empirical data to support their request for a waiver from the ACC requirement that they must implement time-based rates by January 31, 2009. Furthermore, Staff's preliminary finding produced ratios indicating that the economic and operational benefits of implementing TOU rate options with non-smart metering are likely to produce positive benefits for the Cooperatives and their customers.

Ernest G. Johnson
Director
Utilities Division

EGJ:WHM:lhm\CH

ORIGINATOR: William H. Musgrove

[2] Rocky Mountain Power is the only PURPA-covered utility over which the Utah Commission has ratemaking authority.

Attachment 1

Staff's Residential TOU Analysis - Base Case

(DOCKET NOS. E-01891A-08-0061 AND E-02044A-08-0061)

Dixie @ 0% Penetration (1,697 Customers)

	Total KWH Sold in AZ	Res KWH Sold in AZ	(1) Res % of Total AZ	(2) Total CP Billed KW	(3) AZ % of Total Sys	(4)=(1)x(2)x(3) AZ Res Share of Total KW	(5) Avg No Res Custs	(6)=(4)/(5) Avg KW Per Cust	(7) Est Wgt Avg Cost Per KW	(8)=(4)x(7) Est Value To Dixie	(9)=(8)/(5) Dixie's Value Per Cust
Feb-07	2324597	1575176	67.8%	52,298	9.40%	3332	1697	1.96	$6.091	$20,292	$12
Mar-07	2132737	1340222	62.8%	49,158	10.21%	3155	1697	1.86	$6.091	$19,218	$11
Apr-07	1851399	1100077	59.4%	55,950	9.74%	3238	1697	1.91	$6.091	$19,720	$12
May-07	2262256	1446632	63.9%	67,526	8.00%	3455	1697	2.04	$6.091	$21,046	$12
Jun-07	2843291	1862728	65.5%	86,063	8.36%	4714	1697	2.78	$6.091	$28,713	$17
Jul-07	3743354	2661162	71.1%	92,482	8.53%	5606	1697	3.30	$6.091	$34,148	$20
Aug-07	3369337	2335484	69.3%	92,010	7.77%	4954	1697	2.92	$6.091	$30,178	$18
Sep-07	2994370	2099013	70.1%	88,953	7.17%	4473	1697	2.64	$6.091	$27,248	$16
Oct-07	1876448	1147077	61.1%	35,961	9.45%	2077	1697	1.22	$6.091	$12,650	$7
Nov-07	1799624	1071220	59.5%	52,723	7.52%	2359	1697	1.39	$6.091	$14,369	$8
Dec-07	2983864	2167261	72.6%	53,149	12.42%	4795	1697	2.83	$6.091	$29,207	$17
Jan-08	3130031	2244942	71.7%	62,257	10.87%	4854	1697	2.86	$6.091	$29,564	$17
Sum	31,311,308	21,050,994								$286,353	$169
Average			66.25%					2.31			

Garkane @ 0% Penetration (543 Customers)

	Total KWH Sold in AZ	Res KWH Sold in AZ	(1) Res % of Total AZ	(2) Total CP Billed KW	(3) AZ % of Total Sys	(4)=(1)x(2)x(3) AZ Res Share of Total KW	(5) Avg No Res Custs	(6)=(4)/(5) Avg KW Per Cust	(7) Est Avg Cost Per KW	(8)=(4)x(7) Est Value To Garkane	(9)=(8)/(5) Gark's Value Per Cust
Feb-07	1191087	772797	64.9%	38,137	6.68%	1652	543	3.04	6.518	$10,768	$20
Mar-07	1024041	653227	63.8%	35,609	7.22%	1641	543	3.02	6.518	$10,694	$20
Apr-07	923379	486579	52.7%	21,657	6.63%	757	543	1.39	6.518	$4,934	$9
May-07	1150674	475602	41.3%	23,453	8.53%	827	543	1.52	6.518	$5,389	$10
Jun-07	1237945	524374	42.4%	28,469	8.25%	995	543	1.83	6.518	$6,485	$12
Jul-07	1378444	623691	45.2%	31,052	8.72%	1225	543	2.26	6.518	$7,983	$15
Aug-07	1399641	680592	48.6%	29,819	9.34%	1354	543	2.49	6.518	$8,824	$16
Sep-07	1523082	684726	45.0%	25,951	9.91%	1156	543	2.13	6.518	$7,532	$14
Oct-07	1066060	425784	39.9%	31,185	8.11%	1011	543	1.86	6.518	$6,587	$12
Nov-07	1021217	529858	51.9%	33,838	7.19%	1262	543	2.32	6.518	$8,228	$15
Dec-07	1142527	667757	58.4%	42,058	7.10%	1746	543	3.22	6.518	$11,381	$21
Jan-08	1545817	946171	61.2%	44,685	7.34%	2008	543	3.70	6.518	$13,086	$24
Sum	14,603,914	7,471,158								$101,892	$188
Average			51.28%					2.40			

Staff's Estimate of Residential TOU Coversion Benefits*

(DOCKET NOS. E-01891A-08-0061 AND E-02044A-08-0061)

Attachment 2

Dixie @ 10% Penetration (170 Customers) & 25% kWh shift

	Total KWH Sold in AZ	Res KWH Sold in AZ	(1) Res % of Total AZ	(2) Total CP Billed KW	(3) AZ % of Total Sys	(4)=Base Case Less 10/25 KW Benefit	(5) Avg No Custs on TOU	(6)=(4)/(5) KW benefit Per Cust	(7) Est Wgt Avg Cost Per KW	(8)=(4)x(7) Est Value To Dixie	(9)=(8)/(5) Dixie's Value Per Cust
Feb-07	2324597	1575176	67.8%	52,298	9.40%	83	170	0.49	$6.091	$508	$3
Mar-07	2132737	1340222	62.8%	49,158	10.21%	79	170	0.46	$6.091	$481	$3
Apr-07	1851399	1100077	59.4%	55,950	9.74%	81	170	0.48	$6.091	$494	$3
May-07	2262256	1446632	63.9%	67,526	8.00%	87	170	0.51	$6.091	$527	$3
Jun-07	2843291	1862728	65.5%	86,063	8.36%	118	170	0.69	$6.091	$719	$4
Jul-07	3743354	2661162	71.1%	92,482	8.53%	140	170	0.83	$6.091	$855	$5
Aug-07	3369337	2335484	69.3%	92,010	7.77%	124	170	0.73	$6.091	$756	$4
Sep-07	2994370	2099013	70.1%	88,953	7.17%	112	170	0.66	$6.091	$682	$4
Oct-07	1876448	1147077	61.1%	35,961	9.45%	52	170	0.31	$6.091	$317	$2
Nov-07	1799624	1071220	59.5%	52,723	7.52%	59	170	0.35	$6.091	$360	$2
Dec-07	2983864	2167261	72.6%	53,149	12.42%	120	170	0.71	$6.091	$731	$4
Jan-08	3130031	2244942	71.7%	62,257	10.87%	122	170	0.72	$6.091	$740	$4
Sum	31,311,308	21,050,994								$7,171	$42
Average			66.25%					0.58	Benefit Ratio =	1.41	

*$30 Annual Incremental Meter Cost

Garkane @ 10% Penetration (54 Customers) & 25% kWh shift

	Total KWH Sold in AZ	Res KWH Sold in AZ	(1) Res % of Total AZ	(2) Total CP Billed KW	(3) AZ % of Total Sys	(4)=Base Case Less 10/25 KW Benefit	(5) Avg No Custs on TOU	(6)=(4)/(5) KW benefit Per Cust	(7) Est Avg Cost Per KW	(8)=(4)x(7) Est Value To Garkane	(9)=(8)/(5) Gark's Value Per Cust
Feb-07	1191087	772797	64.9%	38,137	6.68%	41	54	0.76	6.518	$268	$5
Mar-07	1024041	653227	63.8%	35,609	7.22%	41	54	0.76	6.518	$266	$5
Apr-07	923379	486579	52.7%	21,657	6.63%	19	54	0.35	6.518	$123	$2
May-07	1150674	475602	41.3%	23,453	8.53%	21	54	0.38	6.518	$134	$2
Jun-07	1237945	524374	42.4%	28,469	8.25%	25	54	0.46	6.518	$161	$3
Jul-07	1378444	623691	45.2%	31,052	8.72%	30	54	0.56	6.518	$198	$4
Aug-07	1399641	680592	48.6%	29,819	9.34%	34	54	0.62	6.518	$219	$4
Sep-07	1523082	684726	45.0%	25,951	9.91%	29	54	0.53	6.518	$187	$3
Oct-07	1066060	425784	39.9%	31,185	8.11%	25	54	0.47	6.518	$164	$3
Nov-07	1021217	529858	51.9%	33,838	7.19%	31	54	0.58	6.518	$205	$4
Dec-07	1142527	667757	58.4%	42,058	7.10%	43	54	0.80	6.518	$283	$5
Jan-08	1545817	946171	61.2%	44,685	7.34%	50	54	0.92	6.518	$325	$6
Sum	14,603,914	7,471,158								$2,533	$47
Average			51.28%		*$30 Annual Incremental Meter Cost			0.60	Benefit Ratio =	1.56	

BEFORE THE ARIZONA CORPORATION COMMISSION

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

IN THE MATTER OF THE JOINT APPLICATION OF GARKANE ENERGY COOPERATIVE, INC. AND DIXIE-ESCALANTE-ESCALANTE RURAL ELECTRIC ASSOCIATION, INC. FOR A WAIVER OF THE REQUIREMENT OF DECISION NO. 69736 FOR IMPLEMENTATION OF TIME-BASED RATE SCHEDULES	DOCKET NOS. E-01891A-08-0061 E-02044A-08-0061 DECISION NO. _____ ORDER

Open Meeting
July 29 and 30, 2008
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. Garkane Energy Cooperative, Inc. ("Garkane") and Dixie-Escalante Rural Electric Association, Inc. ("Dixie-Escalante") are public service companies certificated to provide electric service to customers located in specifically designated areas within the State of Arizona.

2. Garkane and Dixie-Escalante are member-owned, Utah-based non-profit cooperative associations that supply electricity to their members - most of which are located in the state of Utah.

3. On February 1, 2008, Garkane and Dixie-Escalante filed a Joint Application ("Application") with the Arizona Corporation Commission ("Commission" or "ACC") requesting a waiver of the Decision No. 69736 ("Decision") requirement to implement time-based rate schedules.

4. The following excerpt from subparagraph (A) of the Public Utility Regulatory Policies Act of 1978 ("PURPA") Time-Based Metering and Communications standard, as modified by the ACC in Decision No. 69736 (p. 7, lines 6-9), contains the requirement from which Garkane and Dixie-Escalante ("Cooperatives") are seeking waivers[1]:

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5. Staff finds that the Decision requires each electric distribution utility under ACC jurisdiction to offer time-based rate schedules to appropriate customer classes and individual customers upon request.

6. With the Commission's July 30, 2007 adoption of this modified Time-Based Metering and Communications standard, Staff concludes that all electric distribution utilities under ACC jurisdiction are required to offer Commission-approved time-based rate schedules no later than January 31, 2009.

7. Both Cooperatives are all-requirements members of the Deseret Generation and Transmission Cooperative ("Deseret") and, as such, are obligated by contract to take all of their power and energy at wholesale from Deseret.

8. Garkane and Dixie-Escalante are billed demand charges based upon each cooperative's load measured at the time of Deseret's Coincident System Peak. There is no time of day or month of year differentiation in the wholesale rates charged to the Cooperatives for capacity or energy purchased from Deseret.

9. According to the Application, the reasons for requesting the waivers are that the Cooperatives are not being required to implement time-based rates in Utah where the considerable majority of their customers are located; time-based rates are not cost-effective for their customers

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[1] It should be noted at p. 7 of Decision No. 69736 (lines 14-28) and p. 8 (lines 1-2) that the rate schedule referred to in Subparagraph (A) may include, but is not limited to, time-of-use pricing, critical peak pricing, real-time pricing or credits for load reduction agreements.

or the Cooperatives primarily because the Cooperatives' rates are not time-differentiated at the wholesale level; and metering costs associated with implementation of time-differentiated rates are relatively high (p. 2, lines 17-21). However, in response to a Staff-initiated data request, the Cooperatives were unable to provide specific meter costs or benefit analyses to support their conclusion that metering costs are too high to warrant implementing time-differentiated rates.

10. Garkane and Dixie-Escalante also believe that it would be difficult to design effective retail time-of-use ("TOU") rates given that Deseret's rates are not time-differentiated at the wholesale level. Staff agrees that TOU rate schedules need to be properly designed, with a price signal that is sufficient to encourage shifting consumption off the hours normally experienced by Deseret as on-peak.

11. The Application is supported by operating data for the twelve months ended January 2008. Garkane reported having approximately 11,350 customers of which only about 690 (6.1 percent) are located in Arizona. Dixie-Escalante reported having nearly 13,650 customers of which only about 2,100 (15.4 percent) are located in Arizona.

12. Staff concluded that the statistics (see table below) and a Utah Public Service Commission ("Utah Commission") decision to not mandate time-based rates for the Cooperatives' customers located in Utah (Decision No. 06-999-03 issued February 14, 2007), may have influenced the Cooperatives in reaching their conclusion that implementing time-based rates would not be cost-effective for their Arizona customers or the Cooperatives (Application, p. 2, lines 18-19).

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*Utah and Arizona split is estimated based on MWH (summer = May-October; winter = November-April)

13. Staff respects the Cooperatives' logic as discussed above, but believes that it is incorrect to conclude that non-differentiated rates at the wholesale level and "high metering costs"

(Application, p. 2, lines 19-21) automatically preclude conducting detailed empirical analyses to determine the feasibility of implementing time-based rates. For example, if incremental metering costs are $30 per residential meter and the penetration rate is ten percent, Garkane's total incremental residential meter investment would only be about $1,600 (543 residential customers x 10% x $30). A similar approach for Dixie-Escalante produces a total incremental residential meter investment of only about $5,100 (1,697 residential customers x 10% x $30).

14. With these relatively modest incremental capital investment hurdles, Staff is concerned that the Cooperatives may not have quantified the value of shifting some of its Arizona load from on-peak to off-peak, and may have concluded that TOU metering can only be implemented with smart metering and its incrementally expensive infrastructure.

15. Subparagraph (A) of the modified Time-Based Metering and Communications standard also contains the following requirement (p. 7, lines 9-12): "Within 18 months of Commission adoption of this standard, each electric distribution utility shall investigate the feasibility and cost-effectiveness of implementing advanced metering infrastructure for its service territory and shall begin implementing the technology if feasible and cost effective."

16. According to page 2 (lines 22-23) and page 3 (lines 1-3) of the Application, Garkane and Dixie-Escalante plan to study "smart metering" as required by the Commission's order, and Staff believes that the Cooperatives' findings and conclusions will be documented with the Commission no later than January 31, 2009.

Staff's Recommendations and Findings

17. Staff has recommended that the Commission not approve the Application of Garkane and Dixie-Escalante for a waiver of the Decision No. 69736 requirement to implement time-based rate schedules. Staff's support for this recommendation is discussed in items A through C below.

18. Staff has further recommended that Garkane and Dixie-Escalante each develop a detailed cost-benefit analysis to determine the feasibility of implementing time-based rate schedules that are voluntary rate options for all appropriate Arizona customers, taking into consideration Staff's findings as discussed in items A and B below.

19. Staff has further recommended that Garkane and Dixie-Escalante implement time-based rate schedules and, if their investigations on advanced metering infrastructure indicate that smart metering would not be appropriate, use standard TOU meters that do not utilize "smart" technologies.

20. Staff has further recommended that if the Cooperatives' detailed cost-benefit analyses of implementing time-based rate schedules indicate that the rate schedules would not be appropriate, feasible, and cost-effective, the Cooperatives may file another request for a waiver.

21. Staff supports its recommendations with the findings that follow:

A. Approximately 80 percent of Garkane's and Dixie-Escalante's Arizona customers are residential class customers. Staff believes that given reasonable incremental metering costs, the residential class would be a viable rate class to target for TOU metering due to its TOU-related load shifting opportunities and potential impact on demand billings at the wholesale level. It is likely that TOU metering technologies have evolved since the 1980s, and these developments have lowered incremental TOU metering costs to a level that simultaneously encourages participation in TOU rate schedules and provides offsetting benefits for electric distribution utilities.

A case in point is Sulphur Springs Valley Electric Cooperative ("SSVEC"). Although SSVEC has substantially more Arizona customers than Garkane and Dixie-Escalante, all three cooperatives' residential classes represent approximately 80 percent of their respective total customer numbers. When SSVEC's residential TOU rates were implemented in 1995, SSVEC's billing arrangements were similar to the circumstances now facing Garkane and Dixie-Escalante in that SSVEC was an all-requirements member of Arizona Electric Power Cooperative ("AEPCO"); SSVEC was billed for demand coincident with AEPCO's monthly peak for that member class; and demand rates were not time-differentiated at the wholesale level, as is the case for the Cooperatives.

The reason Staff cites SSVEC is that its February 2008 report on the participation (which is extremely modest) and benefits of TOU rates states that implementing TOU options has saved SSVEC approximately $315,000 in avoided annual demand charges. The following quotes from page 3 of the report encapsulate SSVEC's support of TOU rates: A) "SSVEC would like to continue using the TOU rates as they provide an economic benefit to the Co-op and give the members a choice in how to purchase their energy with the potential for savings by modifying their consumption habits by shifting their load to the "off-peak" periods." and B) "Because SSVEC is member owned and we want to act in the best interest of the members, it is our intent to notify those members who

didn't save money by using the TOU rates that they either need to move more loads to the "non-peak" periods or consider going back to the non TOU rates ...." These findings motivated Staff to quantify (as discussed below) the potential cost-benefit of Garkane and Dixie-Escalante offering TOU rates to their residential customers located in Arizona.

B. Staff's approach in determining the feasibility of the Cooperatives implementing TOU rates in Arizona does not include rate design or a comprehensive cost-benefit analysis. Staff assumed that if signing up one residential customer to use TOU rates reduced annual demand billings from Deseret by more than $30 (hypothetical target), then it would be appropriate to recommend that Garkane and Dixie-Escalante be required to undertake a more comprehensive cost-benefit analysis. Using respective residential rate classes' sales data, Staff developed Attachment 1 to create a base case scenario that identifies Arizona's residential share of total billed kW for the period February 2007 through January 2008 (Column 4). Attachment 2 was developed to establish a hypothetical 10 percent penetration with a 25 percent load shift to develop a benefit ratio per residential customer. Simply defined, if the benefit ratio is greater than 1, demand charge savings at the wholesale level exceed TOU-related incremental costs at the retail level. The underlying elements in the model are kW reduction per customer, kW charges to the Cooperatives, and a $30 incremental cost per TOU meter. As Attachment 2 illustrates, Benefit Ratios of 1.41 and 1.56 were derived for Dixie-Escalante and Garkane, respectively.

Staff acknowledges that its analysis may omit critical elements due to its lack of knowledge about the day-to-day operations of the Cooperatives and that it is important to properly design a TOU rate schedule, with appropriate on-peak/off-peak designations and price signals. However, implementing TOU rates at Garkane and Dixie-Escalante might result in annual demand savings similar to those experienced by SSVEC.

C. Staff's recommendations are reinforced by the Public Service Commission of Utah's ("Utah Commission") decision issued February 14, 2007 (Docket No. 06-999-03). The decision determined that it was not appropriate to adopt the federal time-based metering and communications standard as written. Staff believes that the decision supports Staff's recommendations because TOU rates already existed in Utah at the time of the Utah Commission's ruling, and the ruling does not condemn time-based metering. The Utah Commission was concerned with smart metering-related costs and benefits, and ordered Rocky Mountain Power[2] to support its conclusion that smart metering, as envisioned by the PURPA standard, is not cost-effective for its applicable circumstances. Staff believes that the Utah Commission ruling has

[2] Rocky Mountain Power is the only PURPA-covered utility over which the Utah Commission has ratemaking authority.

relevance in this proceeding, because Garkane and Dixie-Escalante also did not provide empirical data to support their request for a waiver from the Decision requirement that they must implement time-based rates by January 31, 2009. Furthermore, Staff's preliminary finding produced ratios indicating that the economic and operational benefits of implementing TOU rate options with non-smart metering are likely to produce positive benefits for the Cooperatives and their customers.

CONCLUSIONS OF LAW

1. Garkane and Dixie-Escalante are public service companies within the meaning of Article XV, Section 2 of the Arizona Constitution.

2. The Commission has jurisdiction over Garkane and Dixie-Escalante and the subject matter of the joint application.

3. The Commission having reviewed the Joint Application for a waiver of the requirement of Decision No. 69736 to implement time-based rate schedules and Staff's Memorandum dated July 10, 2008, concludes that it is not in the public interest to approve the waiver.

ORDER

IT IS THEREFORE ORDERED that the Joint Application of Garkane Energy Cooperative, Inc. and Dixie-Escalante Rural Electric Association, Inc. for a waiver of the Decision No. 69736 requirement to implement time-based rate schedules is denied.

IT IS FURTHER ORDERED that Garkane Energy Cooperative, Inc. and Dixie-Escalante Rural Electric Association, Inc. each develop a detailed cost-benefit analysis to determine the feasibility of implementing time-based rate schedules that are voluntary rate options for all appropriate Arizona customers, taking into consideration Staff's findings as referenced in Finding of Fact No. 18.

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IT IS FURTHER ORDERED that Garkane Energy Cooperative, Inc. and Dixie-Escalante Rural Electric Association, Inc. implement time-based rate schedules and, if their investigations on advanced metering infrastructure indicate that smart metering would not be appropriate, use standard TOU meters that do not utilize "smart" technologies.

IT IS FURTHER ORDERED that this decision shall become effective immediately.

BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION

CHAIRMAN COMMISSIONER

COMMISSIONER COMMISSIONER COMMISSIONER

IN WITNESS WHEREOF, I, BRIAN C. McNEIL, Executive Director of the Arizona Corporation Commission, have hereunto, set my hand and caused the official seal of this Commission to be affixed at the Capitol, in the City of Phoenix, this _____day of _____ , 2008.

_____
BRIAN C. McNEIL
EXECUTIVE DIRECTOR

DISSENT: _____

DISSENT: _____

EGJ:WHM:lhm\CH

SERVICE LIST FOR: Garkane Energy Cooperative, Inc. And Dixie-Escalante-Escalante Rural Electric Association, Inc.
DOCKET NOS. E-01891A-08-0061 and E-02044A-08-0061

Mr. Michael M. Grant
Gallagher and Kennedy, P.A.
2575 East Camelback Road
Phoenix, Arizona 85016-9225
Attorneys for Garkane Energy Cooperative, Inc.
Attorneys for Dixie-Escalante Rural Electric Association, Inc.

Mr. Ernest G. Johnson
Director, Utilities Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Ms. Janice M. Alward
Chief Counsel, Legal Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Staff's Residential TOU Analysis - Base Case

(DOCKET NOS. E-01891A-08-0061 AND E-02044A-08-0061)

Attachment 1

Dixie @ 0% Penetration (1,697 Customers)

	Total KWH Sold in AZ	Res KWH Sold in AZ	(1) Res % of Total AZ	(2) Total CP Billed KW	(3) AZ % of Total Sys	(4)=(1)x(2)x(3) AZ Res Share of Total KW	(5) Avg No Res Custs	(6)=(4)/(5) Avg KW Per Cust	(7) Est Wgt Avg Cost Per KW	(8)=(4)x(7) Est Value To Dixie	(9)=(8)/(5) Dixie's Value Per Cust
Feb-07	2324597	1575176	67.8%	52,298	9.40%	3332	1697	1.96	$6.091	$20,292	$12
Mar-07	2132737	1340222	62.8%	49,158	10.21%	3155	1697	1.86	$6.091	$19,218	$11
Apr-07	1851399	1100077	59.4%	55,950	9.74%	3238	1697	1.91	$6.091	$19,720	$12
May-07	2262266	1446632	63.9%	67,526	8.00%	3455	1697	2.04	$6.091	$21,046	$12
Jun-07	2843291	1862728	65.5%	86,063	8.36%	4714	1697	2.78	$6.091	$28,713	$17
Jul-07	3743354	2661162	71.1%	92,482	8.53%	5608	1697	3.30	$6.091	$34,148	$20
Aug-07	3369337	2335484	69.3%	92,010	7.77%	4954	1697	2.92	$6.091	$30,178	$18
Sep-07	2994370	2099013	70.1%	88,953	7.17%	4473	1697	2.64	$6.091	$27,248	$16
Oct-07	1876448	1147077	61.1%	35,961	9.45%	2077	1697	1.22	$6.091	$12,650	$7
Nov-07	1799624	1071220	59.5%	52,723	7.52%	2359	1697	1.39	$6.091	$14,369	$8
Dec-07	2983864	2167261	72.6%	53,149	12.42%	4795	1697	2.83	$6.091	$29,207	$17
Jan-08	3130031	2244942	71.7%	62,257	10.87%	4854	1697	2.86	$6.091	$29,564	$17
Sum	31,311,308	21,050,994								$286,353	$169
Average			66.25%					2.31			

Garkane @ 0% Penetration (543 Customers)

	Total KWH Sold in AZ	Res KWH Sold in AZ	(1) Res % of Total AZ	(2) Total CP Billed KW	(3) AZ % of Total Sys	(4)=(1)x(2)x(3) AZ Res Share of Total KW	(5) Avg No Res Custs	(6)=(4)/(5) Avg KW Per Cust	(7) Est Avg Cost Per KW	(8)=(4)x(7) Est Value To Garkane	(9)=(8)/(5) Gark's Value Per Cust
Feb-07	1191087	772797	64.9%	38,137	6.68%	1652	543	3.04	6.518	$10,768	$20
Mar-07	1024041	653227	63.8%	35,609	7.22%	1641	543	3.02	6.518	$10,694	$20
Apr-07	923379	486579	52.7%	21,657	6.63%	757	543	1.39	6.518	$4,934	$9
May-07	1150674	475602	41.3%	23,453	8.53%	827	543	1.52	6.518	$5,389	$10
Jun-07	1237945	524374	42.4%	28,469	8.25%	995	543	1.83	6.518	$6,485	$12
Jul-07	1378444	623691	45.2%	31,052	8.72%	1225	543	2.26	6.518	$7,983	$15
Aug-07	1399641	680592	48.6%	29,819	9.34%	1354	543	2.49	6.518	$8,824	$16
Sep-07	1523082	684726	45.0%	25,951	9.91%	1156	543	2.13	6.518	$7,532	$14
Oct-07	1066060	425784	39.9%	31,185	8.11%	1011	543	1.86	6.518	$6,587	$12
Nov-07	1021217	529858	51.9%	33,838	7.19%	1262	543	2.32	6.518	$8,228	$15
Dec-07	1142527	667757	58.4%	42,058	7.10%	1746	543	3.22	6.518	$11,381	$21
Jan-08	1545817	946171	61.2%	44,685	7.34%	2008	543	3.70	6.518	$13,086	$24
Sum	14,603,914	7,471,158								$101,892	$188
Average			51.28%					2.40			

Attachment 2

Staff's Estimate of Residential TOU Coversion Benefits*

(DOCKET NOS. E-01891A-08-0061 AND E-02044A-08-0061)

Dixie @ 10% Penetration (170 Customers) & 25% kWh shift

	Total KWH Sold in AZ	Res KWH Sold in AZ	(1) Res % of Total AZ	(2) Total CP Billed KW	(3) AZ % of Total Sys	(4)=Base Case Less 10/25 KW Benefit	(5) Avg No Custs on TOU	(6)=(4)/(5) KW benefit Per Cust	(7) Est Wgt Avg Cost Per KW	(8)=(4)x(7) Est Value To Dixie	(9)=(8)/(5) Dixie's Value Per Cust
Feb-07	2324597	1575176	67.8%	52,298	9.40%	83	170	0.49	$6.091	$508	$3
Mar-07	2132737	1340222	62.8%	49,158	10.21%	79	170	0.46	$6.091	$481	$3
Apr-07	1851399	1100077	59.4%	55,950	9.74%	81	170	0.48	$6.091	$494	$3
May-07	2262256	1446832	63.9%	67,526	8.00%	87	170	0.51	$6.091	$527	$3
Jun-07	2843291	1862728	65.5%	86,063	8.36%	118	170	0.69	$6.091	$719	$4
Jul-07	3743354	2661162	71.1%	92,482	8.53%	140	170	0.83	$6.091	$855	$5
Aug-07	3369337	2335484	69.3%	92,010	7.77%	124	170	0.73	$6.091	$756	$4
Sep-07	2994370	2099013	70.1%	88,953	7.17%	112	170	0.66	$6.091	$682	$4
Oct-07	1876448	1147077	61.1%	35,961	9.45%	52	170	0.31	$6.091	$317	$2
Nov-07	1799624	1071220	59.5%	52,723	7.52%	59	170	0.35	$6.091	$360	$2
Dec-07	2983864	2167261	72.6%	53,149	12.42%	120	170	0.71	$6.091	$731	$4
Jan-08	3130031	2244942	71.7%	62,257	10.87%	122	170	0.72	$6.091	$740	$4
Sum	31,311,308	21,050,994								$7,171	$42
Average			66.25%					0.58	Benefit Ratio =	1.41	

*$30 Annual Incremental Meter Cost

Garkane @ 10% Penetration (54 Customers) & 25% kWh shift

	Total KWH Sold in AZ	Res KWH Sold in AZ	(1) Res % of Total AZ	(2) Total CP Billed KW	(3) AZ % of Total Sys	(4)=Base Case Less 10/25 KW Benefit	(5) Avg No Custs on TOU	(6)=(4)/(5) KW benefit Per Cust	(7) Est Avg Cost Per KW	(8)=(4)x(7) Est Value To Garkane	(9)=(8)/(5) Gark's Value Per Cust
Feb-07	1191087	772797	64.9%	38,137	6.68%	41	54	0.76	6.518	$268	$5
Mar-07	1024041	653227	63.8%	35,609	7.22%	41	54	0.76	6.518	$266	$5
Apr-07	923379	486579	52.7%	21,657	6.63%	19	54	0.35	6.518	$123	$2
May-07	1150674	475602	41.3%	23,453	8.53%	21	54	0.38	6.518	$134	$2
Jun-07	1237945	524374	42.4%	28,469	8.25%	25	54	0.46	6.518	$161	$3
Jul-07	1378444	623691	45.2%	31,052	8.72%	30	54	0.56	6.518	$198	$4
Aug-07	1399641	680592	48.6%	29,819	9.34%	34	54	0.62	6.518	$219	$4
Sep-07	1523082	684726	45.0%	25,951	9.91%	29	54	0.53	6.518	$187	$3
Oct-07	1066060	425784	39.9%	31,185	8.11%	25	54	0.47	6.518	$164	$3
Nov-07	1021217	529858	51.9%	33,838	7.19%	31	54	0.58	6.518	$205	$4
Dec-07	1142527	667757	58.4%	42,058	7.10%	43	54	0.80	6.518	$283	$5
Jan-08	1545817	946171	61.2%	44,685	7.34%	50	54	0.92	6.518	$325	$6
Sum	14,603,914	7,471,158								$2,533	$47
Average			51.28%					0.60	Benefit Ratio =	1.56	

*$30 Annual Incremental Meter Cost