
MidAmerican Energy Company

September 4, 2007

Electric Rate Design Workshop

Background

- 2003 request by MidAmerican to establish ratemaking principles for wind investment
- MidAmerican agreed to freeze revenues until January 1, 2011
- Iowa Utilities Board requested a plan to address MidAmerican's geographic differences in rates

MidAmerican's Approved Plan

- Reductions for
 - Target residential and lighting customers
 - Other rate groups across geographic areas
- Additional reductions in high-priced areas
- Rate design workshops in 2007
- File cost-of-service analysis and recommendations in 2009
- Implement approved plan on January 1, 2011

Disclaimer

These are informational workshops. They are intended to assist MidAmerican in developing its final positions on rate issues. I encourage your input today. You should recognize that the positions that are expressed today both by MidAmerican and by the participants are to be considered preliminary in nature and not final positions.

Workshop Description

- Conducted by MidAmerican
 - MidAmerican's initial thoughts
 - Gather input
 - Discuss issues
- Not a formal proceeding
 - No formal record
 - Discussion not intended to be used in future proceedings
 - Educational and issue identification

Introductions

- MidAmerican
 - Naomi Czachura
 - Debra Kutsunis
 - Melanie Acord
- Office of Consumer Advocate

Today's Schedule

- Exits, restrooms, and beverages
- Work until lunch at approximately 12:00 pm
- Lunch on your own
 - List of nearby restaurants at registration table
- Reconvene at 1:30 pm
- Dismiss by 4:00 pm

Agenda

- Preliminary comments
- MidAmerican presentation on non-residential rates
- Alternative presentations by others
- Review procedures for future workshops

Preliminary Comments

Non-Residential Rate Design

Cost-of-Service Review

- Assigns costs to those causing the costs (cost causation)
- Calculates costs by
 - Rate class
 - Function within the rate class
 - Generation
 - Basic service charge – fixed costs
 - Delivery – demand costs
- Provides foundation for rate design

Cost-of-Service Results*

	Current Revenue	Cost-of-Service Revenue (HCM)
Residential	\$ 428.7	\$ 440.9
Lighting	15.8	15.7
Small General Service	267.3	222.2
Large General Service	<u>334.4</u>	<u>367.4</u>
Total	\$ 1,046.2	\$ 1,046.2

*Cost-of-service revenues are for illustration only and are not intended to be test-year quality data.

Cost-of-Service Results*

	Current Dollars per Customer	Cost-of-Service Dollars per Customer
Residential	\$ 801	\$ 822
Small General Service	3,245	2,774
Large General Service	220,000	238,350

*Cost-of-service revenues are for illustration only and are not intended to be test-year quality data.

Goals and Objectives for Rate Design

- Based on cost-of-service principles
- Reduced number of rates
- Incorporate customer input
- Make economic sense

Rate Design

- Establishes how costs are collected
 - Daily, weekly, monthly, annually
 - Fixed, volumetric, or combination
- Seeks consistency between how cost is incurred and recovered
 - Non-variable costs collected in fixed charges
 - Usage-variable costs collected in volumetric charges
 - Seasonally-variable costs collected via seasonally differentiated rates

End-State Rate Design

- Result is equalized rates
- Implementation to end-state subject to Iowa Utilities Board proceeding

Non-Residential Rate Design*

Current Rate Design

- 4 East rates
- 16 North rates
- 15 South rates

End-State Rate Design

- 7 Iowa rates

* Excludes individual customer rates

Basic Rate Design

- Generation component
- Basic service charge
- Delivery charge

Generation Component

Recovery of variable costs based on

- Usage
- Time of year
 - Summer—June through September
 - Winter—October through May
- Addresses cost of generation using hourly costing model

Basic Service Charge Component

Recovery of costs that are incurred regardless of usage including

- Meters
- Services
- Transformers
- Customer account functions

Delivery Charge Component

Recovery of costs for facilities based on monthly peak demand

- Transmission
- Substations
- Distribution lines

Proposed Rate Classes

- Based on facilities needed to serve the rate class from cost-of-service study
 - Single-Phase
 - Three-Phase
 - Secondary
 - Primary
 - Substation
- Time-of-use options available for all rate classes (required for Substation service)

Small General Service

- Single-Phase
 - Available to customers taking single-phase service
 - Customer-elected energy or demand options
- Three-Phase
 - Available to customers taking three-phase service
 - Customer-elected energy or demand options

Small General Service

	1-Phase Energy	3-Phase Energy	1-Phase Demand	3-Phase Demand
Generation (Seasonal)	Per kWh Charge—Summer and Winter			
Basic Service Charge	Monthly Rate			
Delivery	Per kWh	Per kWh	Per kW— 12 mo. Ratchet	Per kW— 12-mo. Ratchet

12-Month Demand Ratchet

- Bills the highest of current and previous 11 months
- Reduces variation from month-to-month
- Benefits high load factor customers
- Yields a lower overall demand charge rate vs. non-ratcheted demand charge rate
- Consistent in aligning costs caused with costs charged

Small General Service—Energy FOR ILLUSTRATION ONLY

	Current South Rate (GBS)	Single-Phase Example	Three-Phase Example
Basic Service Charge	\$ 10.00	\$ 16.00	\$ 31.00
Generation summer and delivery 1 st 4,000 kWh Over 4,000 kWh All kWh	\$ 0.09499 0.07207	\$ 0.07190	\$ 0.07320
Generation winter and delivery 1 st 2,000 kWh Over 2,000 kWh 1 st 4,000 kWh Over 4,000 kWh	\$ 0.09069 0.06447	\$ 0.06795 0.02750	\$ 0.03646 0.02750

Small General Service—Demand FOR ILLUSTRATION ONLY

	Current South Rate (GDS)	Single-Phase Example	Three-Phase Example
Basic Service Charge	\$ 80.00	\$ 22.00	\$ 41.00
Delivery Charge, kW 12-month ratchet		\$ 5.00	\$ 3.75
Generation summer			
1 st 250 hours	\$ 0.07207		
Next 150 hours	0.02907		
Over 400 hours	0.01957		
All kWh		\$ 0.04565	\$ 0.04565
Generation winter			
1 st 250 hours	\$ 0.06447		
Next 150 hours	0.02907		
Over 400 hours	0.01957		
All kWh		\$ 0.02741	\$ 0.02741

Hours Use Explanation

- Load factor rate
- Relationship of kWh usage and kW demand
- $\text{Hours Use} = \text{kWh} / \text{kW}$
- Rate application example: 1st 250 hours use
 - $\text{kW} \times 250 \text{ hours} \times 1^{\text{st}} 250 \text{ hours kWh rate}$
- No plans to include in future rate design

Small General Service—Example TOU Rates

FOR ILLUSTRATION ONLY

	Single-Phase Energy	Three-Phase Energy	Single-Phase Demand	Three-Phase Demand
Basic Service Charge	\$ 16.00	\$ 31.00	\$ 22.00	\$ 41.00
Summer				
On-peak	0.08554	0.07814	0.06068	0.06070
Off-peak	0.05842	0.05102	0.03413	0.03413
Winter				
On-peak	0.05109	0.04379	0.02755	0.02755
Off-peak	0.05085	0.04355	0.02730	0.02730

Large General Service

- Secondary Service--3-phase, transformed voltage delivery <600 V
 - MidAmerican provides
 - Transformation
 - Service
- Primary Service--3-phase, untransformed voltage delivery >601 V
 - Customer provides
 - Transformation
 - Service
 - Option to rent transformation under excess facilities

Large General Service

	Secondary Delivery	Primary Delivery	Substation Delivery
Generation (Seasonal)	Per kWh Charge—Summer and Winter		
Basic Service Charge	Monthly Rate		
Delivery	Per kW—12- mo. Ratchet	Per kW—12- mo. Ratchet	Per kW—12- mo. Ratchet

Large General Service

FOR ILLUSTRATION ONLY

	Current South Rate (LLS)	Secondary Example	Primary Example
Basic Service Charge	\$ 125.00	\$ 321.00	\$ 234.00
Delivery Charge, kW Summer/Winter	\$ 6.39 / \$ 5.70	\$ 4.00 / \$ 4.00	\$ 3.30 / \$ 3.30
Generation summer			
1 st 250 hours	\$ 0.03797		
Next 150 hours	0.02597		
Over 400 hours	0.01847		
All kWh		\$ 0.04345	\$ 0.04345
Generation winter			
1 st 250 hours	\$ 0.03387		
Next 150 hours	0.02597		
Over 400 hours	0.01847		
All kWh		\$ 0.02739	\$ 0.02739

Large General Service—Example TOU Rates

FOR ILLUSTRATION ONLY

	Secondary	Primary
Basic Service Charge	\$ 321.00	\$ 234.00
Summer		
On-peak	\$ 0.06813	\$ 0.06813
Off-peak	0.03561	0.03561
Winter		
On-peak	\$ 0.02755	\$ 0.02755
Off-peak	0.02734	0.02734

Substation Service

- Available to customers taking service directly from a substation
- Limited to 10 MW of demand
- Customer provides
 - Transformation
 - Service
 - Switchgear
 - Other equipment necessary for taking service

Substation Service

FOR ILLUSTRATION ONLY

	Current South Rate Summer (LXP)	Current South Rate Winter (LXP)	Substation Summer Example	Substation Winter Example
Basic Service Charge	\$ 1,200.00		\$ 3,873.00	
Delivery Charge			\$ 2.80	
1 st 600 kW	\$ 13.15	\$ 11.45		
Next 10,400 kW	10.98	9.29		
Over 11,000 kW	9.74	8.25		
Off peak	5.49	5.49		
Energy Charge (generation)				
On-peak	\$ 0.02127	\$ 0.02127	\$ 0.06383	\$ 0.02695
Off-peak	0.01657	0.01657	0.03394	0.02674

Individual Customer Rates

- Available for single-site customers over 10 MW
- Pricing based on individual cost-of-service studies
- Individual terms and conditions
- Filed as tariff rates subject to IUB approval

Customer Impacts

- Impacts are for illustration only and are not based on rate-case quality data
- Reflect seasonal rates only (time-of-use rates are not reflected)
- Excludes taxes, riders, and other non-rate related charges
- Excludes contract rates and customers on contract
- Based on customers' current rates converted to proposed rates
 - migration to best rates were not determined for individual customers

Small General Service 1-Ph Energy Impacts

Dollar per Month Change--**ILLUSTRATION ONLY**

	Total Iowa	East	North	South
All Months	\$ (7)	\$ (9)	\$ 3	\$ (17)
Summer Months	(5)	(14)	9	(14)
Winter Months	(9)	(7)	1	(18)
Winter Months Space Heat	10	19	26	(6)

Small General Service 3-Ph Energy Impacts

Dollar per Month Change—**ILLUSTRATION ONLY**

	Total Iowa	East	North	South
All Months	\$ (57)	\$ (90)	\$ (35)	\$ (57)
Summer Months	(24)	(75)	22	(34)
Winter Months	(74)	(97)	(63)	(69)
Winter Months Space Heat	(43)	(17)	(31)	(54)

Small General Service 1-Ph Demand Impacts

Dollar per Month Change—**ILLUSTRATION ONLY**

	Total Iowa	East	North	South
All Months	\$ (80)	\$ (108)	\$ 49	\$ (97)
Summer Months	(34)	(79)	169	(62)
Winter Months	(103)	(123)	(12)	(115)
Winter Months Space Heat	51	93	132	42

Small General Service 3-Ph Demand Impacts

Dollar per Month Change—**ILLUSTRATION ONLY**

	Total Iowa	East	North	South
All Months	\$ (158)	\$ (387)	\$ 71	\$ (130)
Summer Months	(43)	(238)	242	(51)
Winter Months	(215)	(461)	(14)	(169)
Winter Months Space Heat	98	103	179	75

Large General Service Secondary Impacts

Dollar per Month Change—ILLUSTRATION ONLY

	Total Iowa	East	North	South
All Months	\$ 1,323	---	\$ 2,605	\$ 535
Summer Months	3,028	---	5,251	1,661
Winter Months	471	---	1,282	(28)
Winter Months Space Heat	1,495	---	1,760	1,418

Large General Service Primary Impacts

Dollar per Month Change—**ILLUSTRATION ONLY**

	Total Iowa	East	North	South
All Months	\$ 1,496	---	\$ 4,156	\$ 1,222
Summer Months	7,762	---	9,630	7,570
Winter Months	(1,637)	---	1,419	(1,951)
Winter Months Space Heat	7,691	---	---	7,691

Substation Service Impacts

Dollar per Month Change—**ILLUSTRATION ONLY**

	East (TOU)	North	South (Non-TOU)
All Months	\$ (21,000)	---	\$ 30,000
Summer Months	80,000	---	65,000
Winter Months	(72,000)	---	13,000

Questions

Procedures for Presentations

- RSVP 7 days prior to the workshop
- 3 days prior to workshop
 - Provide electronic copy of presentation
 - E-mail to ttthompson@midamerican.com
 - 30-minute time limit
- Presentations posted prior to scheduled workshop

Website Information

- MidAmerican's website:
 - midamericanenergy.com
 - Rates tab, Iowa Electric Workshops
- Direct link:
midamericanenergy.com/html/rates2a.asp
- Changes in dates or subject will be posted

Next Workshop—Lighting October 2 at DMAACC
