

Roundtable - Unbilled Revenue

Alaska Electric Utility Accounting and
Financial Workshop

October 13, 2017

Unbilled Revenue

USDA RUS Bulletin 1767B-1: Uniform System of Accounts – Electric

Account 173 – Accrued Utility Revenues

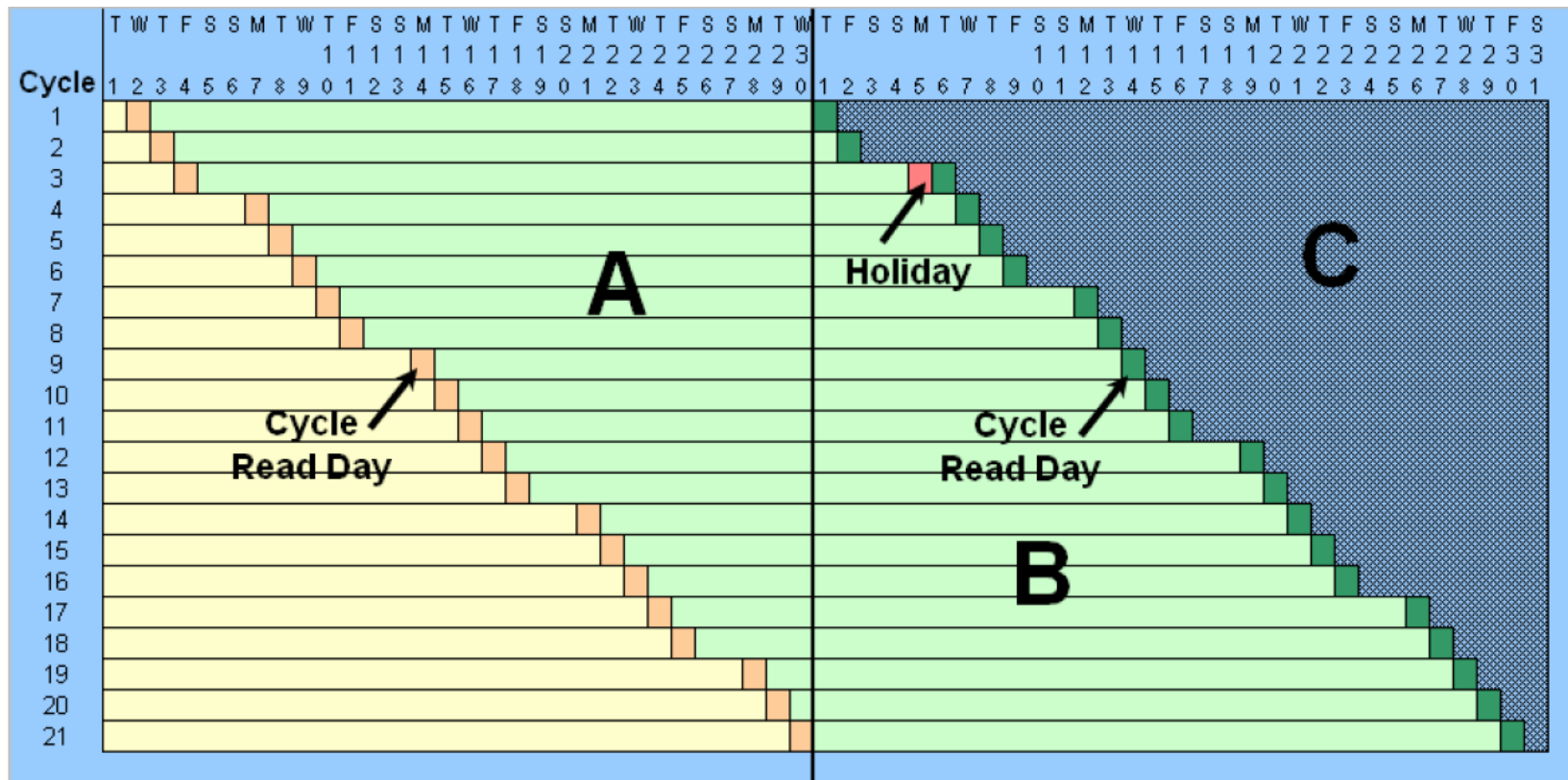
At the option of the utility, the estimated amount accrued for service rendered, but not billed at the end of any accounting period, may be included herein. If accruals are made for unbilled revenues, accruals shall also be made for unbilled expenses, such as the purchase of energy.

MEA Financial Statement Disclosure:

Unbilled Revenue

Billings for sales reflect metered sales through varying dates ending on or prior to the end of each month. The Association records estimated unbilled revenue at the end of each month, with a corresponding charge to fuel and purchased power costs for the estimated cost of fuel and purchased power attributable to the unbilled revenue.

Unbilled Revenue – Billing Calendars



A + B = billed sales

A = prior month unbilled sales

C = current month unbilled sales (unbilled revenue)

B + C = calendar month sales

Unbilled Revenue - Accounting

- Revenue Recognition
- Matching Principle
- Asset Recognition
- Ratemaking
- Materiality

MEA Methods

Revenue = Billed revenue + current unbilled – prior unbilled

Manually calculated in a spreadsheet:

- Calculate estimated unbilled kWh per month for each cycle
- Calculate average billed revenue per kWh for each cycle
- Resulting estimated unbilled kWh and revenue are prorated to each class based on the percentage of total billed amounts

MEA Method

Calculate # of days billed per cycle and # of days remaining

Cycle #	June Read Date	July Read Date	August Read Date	# of Days Billed	# of Days Unbilled at Month End
1	5/31/2017	7/2/2017	7/31/2017	29	31
2	6/3/2017	7/3/2017	8/1/2017	29	30
3	6/4/2017	7/3/2017	8/2/2017	30	29
4	6/5/2017	7/5/2017	8/6/2017	32	25
5	6/6/2017	7/8/2017	8/7/2017	30	24
6	6/7/2017	7/9/2017	8/8/2017	30	23
7	6/11/2017	7/10/2017	8/9/2017	30	22
8	6/13/2017	7/12/2017	8/13/2017	32	18
9	6/14/2017	7/16/2017	8/14/2017	29	17
10	6/18/2017	7/16/2017	8/19/2017	34	12
11	6/19/2017	7/20/2017	8/21/2017	32	10
12	6/21/2017	7/24/2017	8/22/2017	29	9
13	6/24/2017	7/24/2017	8/22/2017	29	9
14	6/25/2017	7/25/2017	8/26/2017	32	5
15	6/15/2017	7/15/2017	8/15/2017	31	16

MEA Method – Unbilled kWh

Calculate average daily billed kWh

Cycle #	# of Days Billed	kWh Billed (Cycle Total)	kWh Billed (Daily)
1	29	3,910,744	134,853
2	29	1,537,322	53,011
3	30	1,047,239	34,908
4	32	4,128,117	129,004
5	30	5,053,592	168,453
6	30	879,724	29,324
7	30	2,576,751	85,892
8	32	3,859,479	120,609
9	29	8,867,692	305,782
10	34	4,934,753	145,140
11	32	2,025,646	63,301
12	29	3,041,878	104,892
13	29	1,459,752	50,336
14	32	6,994,594	218,581
15	31	4,748,706	153,184

Calculate estimated total unbilled kWh

Cycle #	kWh Billed (Daily)	# of Days Unbilled at Month End	Estimated Unbilled kWh at Month End
1	134,853	31	4,180,450
2	53,011	30	1,590,333
3	34,908	29	1,012,331
4	129,004	25	3,225,091
5	168,453	24	4,042,874
6	29,324	23	674,455
7	85,892	22	1,889,617
8	120,609	18	2,170,957
9	305,782	17	5,198,302
10	145,140	12	1,741,678
11	63,301	10	633,014
12	104,892	9	944,031
13	50,336	9	453,026
14	218,581	5	1,092,905
15	153,184	16	2,450,945
		Totals	31,300,011 =====

MEA Method – Unbilled Revenues

Calculate average revenue per kWh

Cycle #	Revenue Billed (Cycle Total)	kWh Billed (Cycle Total)	Per kWh Revenue Billed
1	\$ 729,450	3,910,744	\$ 0.1865
2	\$ 308,963	1,537,322	\$ 0.2010
3	\$ 206,770	1,047,239	\$ 0.1974
4	\$ 820,913	4,128,117	\$ 0.1989
5	\$ 939,046	5,053,592	\$ 0.1858
6	\$ 174,894	879,724	\$ 0.1988
7	\$ 511,895	2,576,751	\$ 0.1987
8	\$ 731,593	3,859,479	\$ 0.1896
9	\$ 1,684,234	8,867,692	\$ 0.1899
10	\$ 968,567	4,934,753	\$ 0.1963
11	\$ 407,524	2,025,646	\$ 0.2012
12	\$ 559,280	3,041,878	\$ 0.1839
13	\$ 293,559	1,459,752	\$ 0.2011
14	\$ 1,309,714	6,994,594	\$ 0.1872
15	\$ 839,858	4,748,706	\$ 0.1769

Calculate estimated total unbilled revenue

Cycle #	Per kWh Revenue Billed	Estimated Unbilled kWh at Month End	Estimated Unbilled Revenue at Month End
1	\$ 0.1865	4,180,450	\$ 799,823
2	\$ 0.2010	1,590,333	\$ 319,617
3	\$ 0.1974	1,012,331	\$ 199,877
4	\$ 0.1989	3,225,091	\$ 641,338
5	\$ 0.1858	4,042,874	\$ 751,237
6	\$ 0.1988	674,455	\$ 134,086
7	\$ 0.1987	1,889,617	\$ 375,389
8	\$ 0.1896	2,170,957	\$ 411,521
9	\$ 0.1899	5,198,302	\$ 987,310
10	\$ 0.1963	1,741,678	\$ 341,847
11	\$ 0.2012	633,014	\$ 127,351
12	\$ 0.1839	944,031	\$ 173,570
13	\$ 0.2011	453,026	\$ 91,104
14	\$ 0.1872	1,092,905	\$ 204,643
15	\$ 0.1769	2,450,945	\$ 433,475
		31,300,011	\$ 5,992,189
		=====	=====

MEA Method – Unbilled kWh per Class

Determine % of kWh billed per class:

Month	Total kWh Billed	Class Percentage of kWh Sold			
		Single Phase Residential	Single Phase Commercial	Three Phase Commercial	Streetlights
January, 2017	79,422,856	64.49%	9.70%	25.71%	0.09%
February	74,830,679	62.60%	10.10%	27.20%	0.10%
March	64,165,869	60.98%	10.28%	28.62%	0.11%
April	63,709,924	59.90%	10.24%	29.75%	0.11%
May	55,961,385	57.66%	10.12%	32.09%	0.13%
June	53,895,269	58.19%	10.08%	31.59%	0.13%
July	53,647,458	55.86%	10.05%	33.95%	0.13%
August	54,635,093	54.93%	10.16%	34.78%	0.13%

Prorate 31,300,011 unbilled August kWh to August class %'s

Ex- Single Phase Residential: $31,300,011 \times 54.93\% = 17,194,071$ kWh

MEA Method - Unbilled Revenue per Class

Determine % of net revenues billed per class (net of monthly fixed charge)

Month	Total Revenue Net of Facilities Charges	Class Percentage of Net Revenue Billed			
		Single Phase Residential	Single Phase Commercial	Three Phase Commercial	Streetlights
January, 2017	\$ 9,027,839	68.68%	9.56%	21.54%	0.22%
February	\$ 8,494,316	66.88%	10.00%	22.88%	0.24%
March	\$ 7,326,280	65.26%	9.99%	24.47%	0.27%
April	\$ 7,272,712	64.43%	10.19%	25.18%	0.19%
May	\$ 6,416,933	62.15%	10.12%	27.42%	0.31%
June	\$ 6,212,272	62.45%	10.03%	27.20%	0.32%
July	\$ 6,144,610	60.41%	10.07%	29.19%	0.33%
August	\$ 6,227,636	59.48%	10.15%	30.04%	0.32%

Prorate \$5,992,189 unbilled August revenue to August class %'s

Ex- Single Phase Residential: $\$5,992,189 \times 59.48\% = \$3,564,378$

Estimate Considerations/Challenges

- Seasonality
 - Weather
 - Holidays
 - Daylight/Darkness
 - Seasonal loads
- Meter errors/estimated reads
- Rate changes
- Change in # of customers

Unbilled Revenue

Discussion!