FILE

PUCO EXHIBIT FILING

Date of Hearing: 5/9/2019

Case No. 18-1205-GA-AIR, 18-1206-GA-ATA, 18-1207-GA-AAM

PUCO Case Caption: In the Matter of Suburban Natural Gas Company for an Increase in Gas Distribution

List of exhibits being filed:

Suburban Exhibit 9 & 10

Reporter's Signature: Karen Sue Gibson

Date Submitted: 5/29/2019

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Suburban Exhibit
9

Suburban Natural Gas South System Future Loading
Performed by UTI, December 9th, 2015

Loads (-)	Base (Q1.2015) Custm. (No.)	Base (Q1.2015) Load (MCFH)	2016 Custm. (No.)	2016 Load (MCFH)	2017 Custm. (No.)	2017 Load (MCFH)	2018 Custm. (No.)	2018 Load (MCFH)
Future Load #1 - New Subdivision on Lewis Center	0	0	100	6	300	18	550	33
Future Load #2 - New Subdivision on Chesire Rd.	0	0	100	6	200	12	400	24
Future Load #3 - New Condos at Mill Road Crossing	0	0	100	2	150	3	200	4
Future Load #4 - New Polaris Loads	0	0	N/A	12	N/A	24	N/A	36
Future Load #5 - New Subdivision at Vinmar	0	0	100	6	150	9	200	12
Future Load #6 - New Subdivision N of Braumiller Rd.	0	0	50	3	100	6	200	12
Future Total	*0*	*0*	*450*	*35*	*900*	*72*	*1550*	*121*
Base Load	11885	717	11885	717	11885	717	11885	717
System Total	***11885***	***717***	***12335***	***752***	***12785***	***789***	***13435***	***838***

System Pressures (-)	Pressure (psig)	ΔP (psig)	Pressure (psig)	ΔP (psig)	Pressure (psig)	ΔP (psig)	Pressure (psig)	ΔP (psig)
Cali Glen Lane	43.67	0.00	43.32	-0.35	43.13	-0.54	42.93	-0.74
Costco (Gemini Place)	33.22	0.00	31.97	-1.25	30.63	-2.59	29.17	-4.05
Eagle Walk	39.41	0.00	39.32	-0.09	39.22	-0.19	38.94	-0.47
Flat Rock Run	18.78	0.00	18.21	-0.57	17.61	-1.17	16.94	-1.84
Gold Meadow Drive (Olentangy Meadows)	39.87	0.00	39.87	0.00	39.87	0.00	39.87	0.00
Highland Hills Drive	40.77	0.00	40.45	-0.32	40.27	-0.50	40.09	-0.68
Hollenback Road (Arrowhead school)	38.15	0.00	38.14	-0.01	38.13	-0.02	38.12	-0.03
Lazelle Road POD - Dead End of ARCO	154.21	0.00	138.85	-15.36	116.02	-38.19	76.30	-77.91
Lyra Drive (Comfort Inn)	33.15	0.00	31.72	-1.43	30.10	-3.05	28.28	-4.87
Middle School (Orange Road)	27.66	0.00	27.37	-0.29	27.08	-0.58	26.76	-0.90
Polaris Parkway (Target)	32.44	0.00	31.28	-1.16	30.03	-2.41	28.69	-3.75
Ranbridge	38.71	0.00	38.71	0.00	38.71	0.00	38.71	0.00
SE Corner of Big Walnut & Worthington	44.42	0.00	44.07	-0.35	43.88	-0.54	43.69	-0.73
Sirius Street (Villages of Polaris Park)	32.39	0.00	31.23	-1.16	29.98	-2.41	28.63	-3.76
Vinmar Way (Vinmar Subdivision)	50.99	0.00	50.16	-0.83	49.65	-1.34	49.08	-1.91

Supply Nodes (-)	Load (MCFH)	ΔQ (MCFH)	Load (MCFH)	ΔQ (MCFH)	Load (MCFH)	ΔQ (MCFH)	Load (MCFH)	ΔQ (MCFH)
Somerlot-Hoffman	504	0	530	26	560	56	602	98
Lazelle Rd	104	0	108	4	112	8	116	12
Big Walnut	109	0	115	6	117	8	120	11

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Suburban Natural Gas South System Future Loading

Performed by UTI, February 3rd, 2016

(Customers and Loads are Cummulative)

Loads	Base (Q1.2015)		2016		2017		2018	
(-)	Custm. (No.)	Load (MCFH)	Custm. (No.)	Load (MCFH)	Custm. (No.)	Load (MCFH)	Custm. (No.)	Load (MCFH)
Future Load #1 - New Subdivision on Lewis Center	0	0	0	0	200	12	400	24
Future Load #2 - New Subdivision on Chesire Rd.	0	0	100	6	200	12	400	24
Future Load #3 - New Condos at Mill Road Crossing	0	0	100	2	150	3	200	4
Future Load #4 - New Polaris Loads	0	0	N/A	12	N/A	24	N/A	36
Future Load #5 - New Subdivision at Vinmar	0	0	100	6	150	9	200	12
Future Load #6 - New Subdivision N of Braumiller Rd.	0	0	50	3	100	6	200	12
Future Load #7 - North Farms	0	0	70	4.2	140	8.4	200	12
Future Total	*0*	*0*	*420*	*33.2*	*800*	*74.4*	*1400*	*124*
Base Load	11885	717	11885	717	11885	717	11885	717
System Total	***11885***	***717***	***12305***	***750.2***	***12685***	***791.4***	***13285***	***841***

System Pressures	Pressure	ΔP	Pressure	ΔP	Pressure	ΔP	Pressure	ΔP
(-)	(psig)	(psig)	(psig)	(psig)	(psig)	(psig)	(psig)	(psig)
Cali Glen Lane	43.67	0.00	43.32	-0.35	43.13	-0.54	42.93	-0.74
Costco (Gemini Place)	33.22	0.00	31.97	-1.25	30.62	-2.60	29.17	-4.05
Eagle Walk	39.41	0.00	39.32	-0.09	39.22	-0.19	38.94	-0.47
Flat Rock Run	18.78	0.00	18.21	-0.57	17.61	-1.17	16.94	-1.84
Gold Meadow Drive (Olentangy Meadows)	39.87	0.00	39.87	0.00	39.87	0.00	39.87	0.00
Highland Hills Drive	40.77	0.00	40.45	-0.32	40.27	-0.50	40.09	-0.68
Hollenback Road (Arrowhead school)	38.15	0.00	38.14	-0.01	38.13	-0.02	38.12	-0.03
Lazelle Road POD - Dead End of ARCO	154.21	0.00	140.25	-13.96	113.68	-40.53	71.85	-82.36
Lyra Drive (Comfort Inn)	33.15	0.00	31.72	-1.43	30.10	-3.05	28.28	-4.87
Middle School (Orange Road)	27.66	0.00	27.37	-0.29	27.08	-0.58	26.76	-0.90
Polaris Parkway (Target)	32.44	0.00	31.28	-1.16	30.03	-2.41	28.69	-3.75
Ranbridge	38.71	0.00	38.71	0.00	38.71	0.00	38.71	0.00
SE Corner of Big Walnut & Worthington	44.42	0.00	44.07	-0.35	43.88	-0.54	43.69	-0.73
Sirius Street (Villages of Polaris Park)	32.39	0.00	31.23	-1.16	29.98	-2.41	28.63	-3.76
Vinmar Way (Vinmar Subdivision)	50.99	0.00	50.16	-0.83	49.65	-1.34	49.08	-1.91

Supply Nodes	Load	ΔQ	Load	ΔQ	Load	ΔQ	Load	ΔQ
(-)	(MCFH)	(MCFH)	(MCFH)	(MCFH)	(MCFH)	(MCFH)	(MCFH)	(MCFH)
Somerlot-Hoffman	504	0	528	24	562	58	605	101
Lazelle Rd	104	0	108	4	112	8	116	12
Big Walnut	109	0	115	6	117	8	120	11

Suburban Natural Gas South System Future Loading

Performed by UTI, February 10th, 2016

(Customers and Loads are Cummulative)

Loads (-)	Base (Q1.2015) Custm. (No.)	Base (Q1.2015) Load (MCFH)	2016 Custm. (No.)	2016 Load (MCFH)	2017 Custm. (No.)	2017 Load (MCFH)	2018 Custm. (No.)	2018 Load (MCFH)
Future Load #1 - New Subdivision on Lewis Center	0	0	0	0	200	12	400	24
Future Load #2 - New Subdivision on Chesire Rd.	0	0	100	6	200	12	400	24
Future Load #3 - New Condos at Mill Road Crossing	0	0	100	2	150	3	200	4
Future Load #4 - New Polaris Loads	0	0	N/A	12	N/A	24	N/A	36
Future Load #5 - New Subdivision at Vinmar	0	0	100	6	150	9	200	12
Future Load #6 - New Subdivision N of Braumiller Rd.	0	0	50	3	100	6	200	12
Future Load #7 - North Farms	0	0	70	4.2	140	8.4	200	12
Future Total	*0*	*0*	*420*	*33.2*	*800*	*74.4*	*1400*	*124*
Base Load	12172	731	12172	731	12172	731	12172	731
System Total	***12172***	***731***	***12592***	***764.2***	***12972***	***805.4***	***13572***	***855***

System Pressures (-)	Pressure (psig)	ΔP (psig)	Pressure (psig)	ΔP (psig)	Pressure (psig)	ΔP (psig)	Pressure (psig)	ΔP (psig)
Cali Glen Lane	43.49	0.00	43.14	-0.35	42.94	-0.55	42.74	-0.75
Costco (Gemini Place)	33.17	0.00	31.91	-1.26	30.56	-2.61	29.10	-4.07
Eagle Walk	39.34	0.00	39.25	-0.09	39.14	-0.20	38.84	-0.50
Flat Rock Run	18.58	0.00	18.01	-0.57	17.39	-1.19	16.72	-1.86
Gold Meadow Drive (Olentangy Meadows)	39.85	0.00	39.85	0.00	39.85	0.00	39.85	0.00
Highland Hills Drive	40.54	0.00	40.22	-0.32	40.04	-0.50	39.85	-0.69
Hollenback Road (Arrowhead school)	38.11	0.00	38.10	-0.01	38.10	-0.01	38.09	-0.02
Lazelle Road POD - Dead End of ARCO	146.55	0.00	131.61	-14.94	102.57	-43.98	53.27	-93.28
Lyra Drive (Comfort Inn)	33.10	0.00	31.66	-1.44	30.03	-3.07	28.21	-4.89
Middle School (Orange Road)	27.52	0.00	27.23	-0.29	26.93	-0.59	26.62	-0.90
Polaris Parkway (Target)	32.38	0.00	31.22	-1.16	29.97	-2.41	28.62	-3.76
Ranbridge	38.69	0.00	38.69	0.00	38.69	0.00	38.69	0.00
SE Corner of Big Walnut & Worthington	44.25	0.00	43.90	-0.35	43.71	-0.54	43.51	-0.74
Sirius Street (Villages of Polaris Park)	32.33	0.00	31.17	-1.16	29.92	-2.41	28.56	-3.77
Vinmar Way (Vinmar Subdivision)	50.93	0.00	50.08	-0.85	49.56	-1.37	48.96	-1.97

Supply Nodes (-)	Load (MCFH)	ΔQ (MCFH)	Load (MCFH)	ΔQ (MCFH)	Load (MCFH)	ΔQ (MCFH)	Load (MCFH)	ΔQ (MCFH)
Somerlot-Hoffman	517	0	540	23	575	58	617	100
Lazelle Rd	104	0	108	4	112	8	116	12
Big Walnut	110	0	116	6	118	8	121	11

Suburban Natural Gas South System Future Loading

Performed by UTI, April 6th, 2017

Loads	Base (Q4.2016) Total Custm.	Load (MCFH)	2017 Incrm. Custm.	2017 Total Custm.	2017 Load (MCFH)	2018 Incrm. Custm.	2018 Total Custm.	2018 Load (MCFH)	2019 Incrm. Custm.	2019 Total Custm.	2019 Load (MCFH)
Braumiller Crossing			*38*	38	2.28	*50*	88	5.28	*30*	118	7.08
Eaststone			*0*	0	0.00	*0*	0	0.00	*23*	23	1.38
Evans Farms			*141*	141	8.46	*150*	291	17.46	*150*	441	26.46
Glade at Highland Lakes			*0*	0	0.00	*13*	13	0.78	*10*	23	1.38
Glenmeade			*30*	30	1.80	*40*	70	4.20	*30*	100	6.00
Glenross			*88*	88	5.28	*30*	118	7.08	*30*	148	8.88
Glenross North			*24*	24	1.44	*30*	54	3.24	*30*	84	5.04
North Farms			*0*	0	0.00	*28*	28	1.68	*50*	78	4.68
Old Colony			*37*	37	2.22	*50*	87	5.22	*50*	137	8.22
Polaris Loads (estimated)			*N/A*	N/A	12.00	*N/A*	N/A	24.00	*N/A*	N/A	36.00
Quail Pass			*50*	50	1.00	*50*	100	2.00	*50*	150	3.00
Ravines at Olentangy			*67*	67	4.02	*60*	127	7.62	*60*	187	11.22
Southwoods			*0*	0	0.00	*30*	30	1.80	*30*	60	3.60
Tall Pines			*0*	0	0.00	*30*	30	1.80	*30*	60	3.60
Vinmar			*50*	50	3.00	*50*	100	6.00	*50*	150	9.00
West Field Lakes			*0*	0	0.00	*0*	0	0.00	*28*	28	1.68
Future Total			*525*	*525*	*41.50*	*611*	*1136*	*88.16*	*651*	*1787*	*137.22*
Base Load	12661	791.00	12661	12661	791.00	12661	12661	791.00	12661	12661	791.00
System Total	***12661***	***791.00***	***13186***	***13186***	***832.50***	***13272***	***13797***	***879.16***	***13312***	***14448***	***928.22***

System Pressures (-)	Pressure (psig)	ΔP (psig)	Pressure (psig)	ΔP (psig)	Pressure (psig)	ΔP (psig)	Pressure (psig)	ΔP (psig)
Cali Glen Lane	42.35	0.00	42.15	-0.20	41.85	-0.50	41.55	-0.80
Costco (Gemini Place)	32.01	0.00	30.66	-1.35	29.21	-2.80	27.64	-4.37
Eagle Walk	39.56	0.00	39.31	-0.25	38.98	-0.58	38.66	-0.90
Flat Rock Run	16.15	0.00	15.47	-0.68	14.69	-1.46	13.84	-2.31
Gold Meadow Drive (Olentangy Meadows)	39.83	0.00	39.83	0.00	39.83	0.00	39.83	0.00
Highland Hills Drive	39.15	0.00	38.96	-0.19	38.60	-0.55	38.26	-0.89
Hollenback Road (Arrowhead School)	37.90	0.00	37.90	0.00	37.88	-0.02	37.86	-0.04
Lazelle Road POD - Dead End of ARCO	135.27	0.00	113.26	-22.01	80.83	-54.44	17.16	-118.11
Lyra Drive (Comfort Inn)	31.95	0.00	30.41	-1.54	28.67	-3.28	26.71	-5.24
Middle School (Orange Road)	26.14	0.00	25.81	-0.33	25.44	-0.70	25.04	-1.10
Polaris Parkway (Target)	31.18	0.00	29.94	-1.24	28.59	-2.59	27.14	-4.04
Ranbridge	38.47	0.00	38.52	0.05	38.24	-0.23	37.93	-0.54
SE Corner of Big Walnut & Worthington	43.19	0.00	42.99	-0.20	42.69	-0.50	42.40	-0.79
Sirius Street (Villages of Polaris Park)	31.13	0.00	29.88	-1.25	28.54	-2.59	27.08	-4.05
Vinmar Way (Vinmar Subdivision)	50.41	0.00	49.95	-0.46	49.36	-1.05	48.69	-1.72

Supply Nodes (-)	Load (MCFH)	ΔQ (MCFH)	Load (MCFH)	ΔQ (MCFH)	Load (MCFH)	ΔQ (MCFH)	Load (MCFH)	ΔQ (MCFH)
Somerlot-Hoffman	567.00	0.00	602.00	35.00	641.00	74.00	682.50	115.50
Lazelle Rd	108.00	0.00	112.00	4.00	116.00	8.00	120.00	12.00
Big Walnut	116.00	0.00	118.50	2.50	122.00	6.00	125.00	9.00

Suburban Natural Gas South System Future Loading

Performed by UTI | August 31st, 2018

Loads	Base (Q4.2017) Total Custm.	Base (Q4.2017) Load (MCFH)	Aug 2018 Total Custm.	Aug 2018 Load (MCFH)	2018 EOY Incrm. Custm.	2018 EOY Total Custm.	2018 EOY Load (MCFH)	2019 Incrm. Custm.	2019 Total Custm.	2019 Load (MCFH)	2020 Incrm. Custm.	2020 Total Custm.	2020 Load (MCFH)
Berlin Manor			0		3	3	0.18	20	23	1.38	30	53	3.18
Braumiller Woods			1		4	4	0.24	20	24	1.44	13	37	2.22
East Stone			0		0	0	0.00	0	0	0.00	23	23	1.38
Evans Farms			0		20	20	1.20	50	70	4.20	50	120	7.20
Glade at Highland Lakes			5		8	8	0.48	10	18	1.08	20	38	2.28
Glenmeade			5		5	5	0.30	30	35	2.10	30	65	3.90
Glenross			43		20	20	1.20	20	40	2.40	0	40	2.40
Glenross North			17		13	13	0.78	30	43	2.58	30	73	4.38
Howard Farms			0		0	0	0.00	20	20	1.20	30	50	3.00
Little Bear			8		0	0	0.00	2	2	0.04	0	2	0.04
Mainous			0		0	0	0.00	0	0	0.00	10	10	0.60
Mirasol			3		2	2	0.12	20	22	1.32	20	42	2.52
North Farms			21		7	7	0.42	10	17	1.02	0	17	1.02
Olentangy Crossing			0		0	0	0.00	0	0	0.00	0	0	0.00
Old Colony			3		17	17	1.02	30	47	2.82	30	77	4.62
Old Harbor			6		0	0	0.00	24	24	1.44	0	24	1.44
Paykoff (200 Ac)			0		0	0	0.00	0	0	0.00	0	0	0.00
Polaris (Estimated Loads)			N/A		N/A	N/A	2.00	N/A	N/A	14.00	N/A	N/A	26.00
Quail Pass			14		21	21	0.42	35	56	1.12	0	56	1.12
Sanctuary			15		5	5	0.30	5	10	0.60	5	15	0.90
South Woods (Piatt Road)			0		0	0	0.00	10	10	0.60	10	20	1.20
Stockdale Farms			0		0	0	0.00	0	0	0.00	20	20	1.20
The Pines (Old State)			0		0	0	0.00	30	30	1.80	30	60	3.60
Terra Alta			0		0	0	0.00	15	15	0.90	20	35	2.10
Village at Olentangy			30		0	0	0.00	0	0	0.00	0	0	0.00
Vinmar			18		10	10	0.60	10	20	1.20	10	30	1.80
West Field Lakes			0		0	0	0.00	0	0	0.00	20	20	1.20
Miscellaneous			61		0	0	0.00	0	0	0.00	0	0	0.00
Future Total			250	16.47	135	135	9.26	391	526	43.24	401	927	79.30
Base Load	13081	817.07	13081	817.07		13081	817.07		13081	817.07		13081	817.07
System Total	***13081***	***817.07***	***13331***	***833.54***		***13466***	***842.80***		***13607***	***876.78***		***14008***	***912.84***

System Pressures (-)	Pressure (psig)	Pressure (psig)	ΔP (psig)	Pressure (psig) wo/ DM	Pressure (psig) w/ DM	ΔP wo/ DM	ΔP w/ DM	Pressure (psig) wo/ DM	Pressure (psig) w/ DM	ΔP wo/ DM	ΔP w/ DM	Pressure (psig) wo/ DM	Pressure (psig) w/ DM	ΔP wo/ DM	ΔP w/ DM
Cali Glen Lane	43.47	43.23	-0.24	43.11	43.11	-0.36	-0.36	42.77	42.77	-0.70	-0.70	42.36	42.36	-1.11	-1.11
Costco (Gemini Place)	32.30	32.12	-0.18	31.86	31.86	-0.44	-0.44	30.58	30.58	-1.72	-1.72	29.20	29.20	-3.10	-3.10
Eagle Walk	39.70	39.63	-0.07	39.57	39.57	-0.13	-0.13	39.48	39.48	-0.22	-0.22	39.42	39.42	-0.28	-0.28
Flat Rock Run	17.70	17.46	-0.24	17.25	17.25	-0.45	-0.45	16.55	16.55	-1.15	-1.15	15.75	15.75	-1.95	-1.95
Gold Meadow Drive (Olentangy Meadows)	39.84	39.84	0.00	39.84	39.84	0.00	0.00	39.84	39.84	0.00	0.00	39.84	39.84	0.00	0.00
Highland Hills Drive	39.66	39.28	-0.38	39.14	39.14	-0.52	-0.52	38.73	38.73	-0.93	-0.93	38.21	38.21	-1.45	-1.45
Hollenback Road (Arrowhead School)	37.97	37.96	-0.01	37.94	37.94	-0.03	-0.03	37.87	37.87	-0.10	-0.10	37.85	37.85	-0.12	-0.12
Lazelle Road POD - Dead End of ARCO	120.82	111.90	-8.92	104.27	236.12	-16.55	115.30	78.72	232.50	-42.10	111.68	39.17	228.68	-81.65	107.86
Lyra Drive (Comfort Inn)	32.20	32.02	-0.18	31.77	31.77	-0.43	-0.43	30.48	30.48	-1.72	-1.72	29.07	29.07	-3.13	-3.13
Middle School (Orange Road)	26.88	26.71	-0.17	26.58	26.58	-0.30	-0.30	26.21	26.21	-0.67	-0.67	25.79	25.79	-1.09	-1.09
Polaris Parkway (Target)	31.59	31.44	-0.15	31.21	31.21	-0.38	-0.38	30.10	30.10	-1.49	-1.49	28.91	28.91	-2.68	-2.68
Ranbridge	38.48	38.48	0.00	38.51	38.51	0.03	0.03	38.24	38.24	-0.24	-0.24	37.96	37.96	-0.52	-0.52
SE Corner of Big Walnut & Worthington	43.78	43.53	-0.25	43.41	43.41	-0.37	-0.37	43.07	43.07	-0.71	-0.71	42.67	42.67	-1.11	-1.11
Sirius Street (Villages of Polaris Park)	31.54	31.39	-0.15	31.16	31.16	-0.38	-0.38	30.05	30.05	-1.49	-1.49	28.85	28.85	-2.69	-2.69
Vinmar Way (Vinmar Subdivision)	50.42	50.22	-0.20	50.11	50.11	-0.31	-0.31	49.91	49.91	-0.51	-0.51	49.69	49.69	-0.73	-0.73

Supply Nodes (-)	Load (MCFH)	Load (MCFH)	ΔQ (MCFH)	Load (MCFH) wo/ DM	Load (MCFH) w/ DM	ΔQ wo/ DM	ΔQ w/ DM	Load (MCFH) wo/ DM	Load (MCFH) w/ DM	ΔQ wo/ DM	ΔQ w/ DM	Load (MCFH) wo/ DM	Load (MCFH) w/ DM	ΔQ wo/ DM	ΔQ w/ DM
Somerlot-Hoffman	585.96	600.00	14.04	607.51	607.54	21.55	21.58	635.46	635.48	49.49	49.51	665.07	665.08	79.10	79.12
Lazelle Rd	111.09	111.59	0.51	112.49	112.49	1.40	1.40	116.49	116.49	5.41	5.41	120.55	120.55	9.46	9.46
Big Walnut	120.02	121.95	1.93	122.86	122.86	2.85	2.85	124.93	124.93	4.91	4.91	127.31	127.31	7.29	7.29

Suburban Exhibit
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RATE CASE AND AUDIT MANUAL

Prepared by:

NARUC Staff Subcommittee
on Accounting and Finance

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INTRODUCTION TO THE MANUAL

This manual has been prepared by the National Association of Regulatory Utility Commissioners (NARUC) Staff Subcommittee on Accounting and Finance as a guideline for state, territory, and federal regulatory utility commission personnel.[1] It is not our intent to provide a checklist for use by commission auditors, accountants or analysts[2]. Rather, it is our intent to set forth the most common, basic regulatory principles, processes, and procedures used by many regulatory commissions to examine and investigate general rate applications. We anticipate that each regulatory jurisdiction will have areas of uniqueness and specific areas of differences when it comes to examining a utility's revenue requirement and operating earnings. Recognizing that these differences exist, we have tried to present the basic steps of the rate case investigation in such a way that revisions and changes can be made by the individual jurisdictions while maintaining the overall usefulness of the more general guidelines.

An example of a common difference among the jurisdictions is the test year used. Some states use an average historic test year, others use a year-end historic test year, and others use projected, future test periods. Yet, this difference does not generally change the nature or importance of the test year, nor does it change the basic list of elements that are included in the rate base or the operating income statement.

We offer one caution to those who are concerned about the use of the phrase "audit manual." We make use of the word "audit" as it is commonly referred to in regulatory circles. We do not mean it in the purist sense of the word, where one might assume a verification of booked numbers to source documents and a strict sampling of accounts. Instead, we use it to mean a regulatory review, a field investigation, or a means of determining the appropriateness of a financial presentation for regulatory purposes. Clearly, the reader should distinguish a regulatory audit from financial audits performed by independent certified public accountants.

[1] The term "Commission" used throughout this document refers to the individual state, territory, or federal regulatory commission that is examining and investigating the general rate application.

[2] The term "auditor" used throughout this document refers collectively to auditors, accountants, and analysts.

PRELIMINARY PROCEDURES

Determining the Scope and Purpose of the Audit

The auditor should fully understand the scope of the audit that is about to be performed. This manual focuses on steps most commonly used for audits related to general rate cases wherein the regulator is looking at the reasonableness of the presented revenue requirement or operating earnings.

Other types of regulatory audits tend to focus on one isolated expense category (e.g., fuel and purchased power) or a specific investment (e.g., costs of recently completed construction project.) Yet, other audits may focus on management processes or compliance with specific commission directives. This manual is not intended to provide a comprehensive walk-through of *these regulatory examinations.*

In addition, the auditor should be aware of the resource constraints that exist at the time of the audit or rate case. Limited time and staff may require the auditor to focus on larger impact items (i.e., those having more impact on the revenue requirement) rather than allowing oneself the luxury of a comprehensive review of all rate base and income statement items. To limit travel costs, copies of many documents can be provided for review at the Commission office. When limited resources exist, and a more narrow focus is required, a risk analysis should be performed early in the process. (See Focusing the Audit discussion below.)

Understanding the Utility's Accounting System

The auditor should become familiar with any regulatory requirements mandating the use of a particular accounting system, such as the Commission's uniform system of accounts and system of accounts from other regulatory agencies including, as applicable, Part 32 from the Federal Communications Commission (FCC) and the uniform system of accounts from the Federal Energy Regulatory Commission (FERC). In familiarizing oneself with the mandated system, the auditor should become familiar not only with the account descriptions and numbering system, but also with the instructions accompanying the accounting requirements.

The auditor should gain a basic understanding of how the utility's accounting and reporting for financial purposes differs from accounting and reporting for regulatory purposes. The auditor should become familiar with what is driving these differences, and the types of items included in regulatory assets and regulatory liabilities that comprise these differences. In this regard, the auditor should have a basic familiarity with Statement of Financial Accounting Standard 71, Accounting for the Effects of Certain Types of Regulation.

The auditor should gain a basic understanding of the utility's accounting system and the Chart of Accounts that is used in the day-to-day implementation of the accounting system. The auditor should also gain a basic understanding of what queries can be performed to retrieve information

from the utility's accounting system and how extensive the process would be to develop new queries needed to meet the auditor's information needs. In gaining this general understanding, the auditor should also inquire into the comprehensiveness of the accounting system and related matters. For example, is the payroll system an associated system, or is it unique unto itself? How are work orders and construction estimates incorporated into the overall system, or are they created manually?

Analyzing Historical Financial Data

The auditor should prepare a spreadsheet of historic financial data or otherwise obtain such an analysis from the utility. This type of spreadsheet analysis generally contains three to five years of data for the most recent historic years for which data is available. The level of detail contained in the spreadsheet is dependent on the data availability and the needs and comfort level of the auditor. In general, the spreadsheet would include line items for each element of rate base, each category of revenue, and each category of expense (or each expense account). Additional detail may be prepared on each plant account, each accumulated depreciation and depreciation account (by type of plant), and additional expense account detail. When determining the level of detail, the auditor should consider the items most necessarily examined in rate proceedings, and those accounts most likely to have the largest impact on revenue requirements. These spreadsheets will provide the auditor with a starting point for identifying the most significant changes in investment, revenues, and expenses, and thus, assist in identifying areas for which additional detail may need to be obtained during the field visit or through the informal or formal discovery process. While several sources may be available for obtaining this data, common sources include FERC Form No. 1 and FERC Form No. 2, Automated Reporting and Management Information System (ARMIS) Reports filed with the FCC, or state commission annual reports by the utility.

In addition to preparing a spreadsheet with the above described data, the auditor will want to consider preparing a similar spreadsheet containing unit sales data (e.g., sales in kilowatt hours or cubic feet), number of customers by type (e.g., residential, commercial, irrigation, etc.), and other information that is deemed to provide general background or useful information (e.g., number of employees, miles of installed cable, etc.).

To the extent that it can be obtained through Commission records, trial balances, or informational requests to the utility, it is also useful to prepare a side-by-side spreadsheet of similar financial and operational monthly data for the twelve months of the test year. The month-by-month analysis will allow the auditor to visualize anomalies in any revenue trends (e.g., declining sales), to view seasonal expenses (e.g., tree trimming) or expense anomalies (e.g., storm damage), or to view lumpy changes in investment (e.g., plant retirements). This again will allow the auditor to create a list of items to be further examined by obtaining invoices, payroll records, work orders, or other source documents.

Focusing the Audit

The auditor may want to prepare an analysis, in order to better focus one's time and resources on portions of the expenses, revenues, and investment that are most likely to impact customers' rates. For instance, it would be easy to get lost in the political sensitivities of trying to eliminate donations and political expenditures that regulators may consider to be offensive, but in doing so, one could overlook the larger expense of special pensions for the Board of Directors that may also be inappropriate. By identifying the big ticket items – those that really matter to the overall level of rates – one can determine the issues about which to inquire first, and those that can wait or move to the bottom of the list.

The spreadsheets of historical data and trends can be very useful in identifying the more significant items. One may want to focus on those costs that have changed the most from historical levels. Regardless of the change from historical levels, the auditor may want to focus on those few items that make up the most significant portion of the operating costs (e.g., salaries, depreciation, and purchased power costs).

Another approach to focusing the audit is to compute ranges of change that would have to be incurred to impact rates. What percentage change in rate base would have to occur in order to change the earned return by one percentage point (or 100 basis points)? In another instance, a utility could be asking for less than its fully authorized return in order to mitigate rate impacts on customers. If so, what dollar level of expense or rate base adjustment would be required in order to exceed the requested authorized return level? These boundaries can assist the auditor in deciding whether to pursue a more difficult or questionable adjustment.

There is another area related to focusing the audit of which the auditor will want to be aware: What limitations or constraints exist regarding the areas to review? If the auditor believes that it is important to review affiliate transactions, it is useful to know early in the process whether one might be overstepping the Commission's authority to review such transactions, or whether the Commission has broad powers of review in this area. Similarly, if the auditor wants to review not only the minutes of the Board of Directors' meetings for the utility, but also for the Board of the parent company, may he/she do so? When looking at these sensitive areas, the auditor should have thought through answers to questions of relevance to the utility operations and Commission authority.

Reviewing Federal Regulatory Reports, Shareholder Reports, and SEC Filings

Reports filed by the utility with the Securities and Exchange Commission (SEC), the FCC, the FERC, and other regulatory bodies may contain a host of information over and above the traditional financial information that becomes the mainstay of an auditor's work. This information will reveal everything from lawsuits pending against the utility to the significant accounting practices, if the auditor takes the time to read the footnotes. The perspective provided to shareholders in these reports is often significantly different than the outlook provided to regulators, and may provide the auditor insights into management's views.

These reports also provide an independent source against which to verify the figures contained in the utility's application or submission. However, this comparison may be difficult if the filing to the federal agency or shareholders contains consolidated information for regulated and unregulated operations or consolidated operations for multiple jurisdictions.

Reviewing SEC Audit Reports, Federal Utility Audit Reports, and Other Audit Reports

A review of audit reports from other regulatory agencies or taxing authorities will also provide useful background information to the auditor. Audit reports from these various governmental authorities will provide different sets of information, depending on the jurisdiction of that agency. The SEC's audit reports may provide insight into allocations from service companies to the state utility operations or may look at larger corporate relationships. An FCC audit report may look at specific property, plant and equipment accounts and provide a view of the appropriateness of a utility's continuing property records. A taxing authority's audit report may indicate whether the utility has properly maintained its sales and tax records. If a problem is indicated, it could be indicative of other record keeping problems of the utility. Often, a problem in one record keeping area warrants inquiries into other accounting practices.

Reviewing Prior Orders of One's Own Jurisdiction

One of the best indicators of items to examine in a regulatory audit comes from prior orders of that jurisdiction. The orders can provide two distinct messages. In one case, if a very recent audit of the utility focused on officer salaries and compensation upon termination, there may be no need to do the same level of in-depth audit. Upon learning that there has been no change in the policy from the prior case, assuming that the practice had previously been acceptable, the auditor could pick a different large item upon which to focus. This new issue area could be anything from purchasing practices to expense/capitalization practices. The second message gleaned from prior cases may be to look at recurring problem areas. Were inconsistent deferral practices an issue in previous cases? If so, the auditor may wish to again look at deferral practices to see if they continue as a problem or if corporate policies and practices have changed.

As difficult as it is to admit, rarely does an auditor – either individually or as a team – have the opportunity or resources to look at every aspect of the utility in each and every case. Additionally, issues ebb and flow. The Commission may be interested in the cost of consolidated service centers one year, and in the next case be more interested in the cost of maintaining equipment. It is up to the auditor to not only present audit findings that are useful, but also information that is relevant to the times and the circumstances of the case.

Reviewing Prior Audit Reports and Prior Workpapers

The auditor may also review files, reports, and workpapers from previous regulatory audits, if such records are available. Reviewing these documents may provide one with a better understanding of what to expect during the field visit. What should one expect the work orders to look like? What was a primary focus on the prior audit, and can some of that information

simply be updated, rather than recreated? What information should one expect to see on the customer bills? Are prior organizational charts available so that a comparison can be made of the current organizational structure to those of the past (perhaps allowing one to ask about the cost of the reorganization)?

Reviewing External and Internal Audit Reports and Workpapers

The auditor may wish to obtain a list of internal and external audits performed in recent history by the utility's internal and external auditors. These audits by internal audits may include a variety of topics, and the auditor may wish to select the audit topics to review that are most relevant to the issues of the case. Once selecting some or all of the audits to review, one will wish to obtain (or review) a copy of the audit report and then determine whether it is important to follow-up with a review of the workpapers. Examples of the types of things the internal auditors may look at include everything from the handling and deposits of payments to allocations of officers' compensation among subsidiaries.

The auditor may also wish to review the reports, recommendations, and workpapers of the utility's external auditors. These reports and recommendations would normally include the annual financial audit with the testing procedures and testing results with supporting workpapers. One should expect that much of this may be available electronically. While the types of audits being performed by the external and regulatory auditor are very different, there will likely be information useful to the regulator in the external audit report (e.g., level of deferrals of expenses and any concern about recoverability). One should not limit a review of audit reports to that of only the annual financial audit, as external auditors may have been hired to look into specific other items (e.g. cost allocation manuals or property records). Furthermore, one may also wish to inquire if any consultants performed reviews or audits that might be of interest. An example of something that might have been done by a consultant, rather than an auditor per se, would be an evaluation of fuel procurement practices.

Contacting Other States about Common Cases or Common Issues

If the utility has operations in multiple jurisdictions, it would be helpful for the auditor to have some familiarity with colleagues or counterparts in the other jurisdictions. The auditor might already be familiar with issues that have arisen in the other jurisdiction, and may want to explore similar issues during the audit. If one does not have such a relationship, it may be useful to contact the other jurisdiction(s) to determine if there are common concerns and/or solutions. Furthermore, orders of other regulatory bodies are commonly available for review, either through the internet, through direct requests to the other state, or by asking the utility to provide copies of the desired documents.

Coordinating with Complaint Personnel and Commission Engineers

Utility regulators generally focus on two categories of regulation: rates and service. These two items go hand in hand and therefore, service is an important consideration when considering the

reasonableness of expenses and investment to be included in rates. In this regard, it would be useful for the auditor to have a discussion with other Commission personnel, such as facility (or safety) engineers and customer complaint representatives, to get a feel for the level of service problems that are associated with the utility being examined. For example, if there are numerous complaints about closing local customer offices, and consolidations into regional service centers, one might want to ask about the savings associated with such a restructuring, in order to see that those savings from the office closing are reflected in the adjusted earnings, and to see that any one-time costs of the offices from the restructuring are properly addressed in the case (e.g., perhaps they should be amortized and not reflected in the one year of the test year). Similarly, if there are complaints about noise on the telephone line in the rainy season, or voltage drops in high winds, the auditor may want to ask about maintenance practices, and examine whether expenditures (either in the form of new investment or operating maintenance) have been reduced in recent years.

Determining the Appropriateness of the Test Year

The test year is a period of measurement for a recent, consecutive twelve-month period consisting of a full year of operations where data is readily available. While many jurisdictions have traditionally used, and continue to use, historical test year data, some commissions either allow or mandate the use of a projected or future test year. In either case, the test year is used to examine earned returns compared to either previously authorized earnings levels (based on approved rates of return) or compared to requested earnings levels (based on requested or recommended rates of return). Whether using a future or historic test year, the auditor should judge the appropriateness of the test year that has been proposed. Is it representative, after adjustments, of the period in which rates take effect?

When looking at an historic test year, one of the first questions asked is whether the test year is too stale to make it a reasonable basis upon which to establish rates for a future period. In looking at the appropriateness of the test year (and whether it might be too old), one should look at what has happened since the end of the test year and the current time. Are the historic costs and revenues normal or recurring? Has extraordinary growth occurred during the intervening time (e.g., has a new industrial customer come on line)? Or, has there been a negative impact on revenues through shift reductions at the local foundry? In looking at the months beyond the end of the test year, have the growth rates for rate base, expenses, and revenues all remained fairly close and constant, maintaining the test year relationship among these three elements, or has one element changed dramatically, making the test year out of kilter with current operations? If so, can this situation be resolved through adjustments to the test year?

When looking at a future test year, one will want to examine the test year selected for reasonableness. Is this period mandated by rules, statute, or Commission directive? Is the test year founded on a historical base or documented figures, such that its projections are readily understandable and traceable?

Checking Schedules and Supporting Documents for Mathematical Accuracy

While this may seem like an obvious step, or even an unnecessary one in the age of computers, one might be surprised at the number of cases in which a number has been added instead of subtracted, a column or row has been hidden in a spreadsheet, a formula has been overridden, or a number has been transposed when being carried from one schedule to the next. The auditor should be able to recreate and verify the computations contained within the utility application or submission.

COORDINATING THE AUDIT

Determining Time and Place

In today's age of consolidations and mergers, many utilities have multiple corporate offices that are located in multiple states. It would not be uncommon for the accounting department and the regulatory department to be in different cities, or even in different states. Thus, it is important to determine where the site visit will take place, or whether it will take place in multiple locations. Will not only the records be available at the location selected, but will the people who can explain the records and answer questions about the adjustments also be available at that location?

Has adequate time been set aside for the site visit? When determining the answer to this question, the auditor should consider time not only for document and record review, but also a walk-through and explanation of the adjustments, and a tour of warehouses (or service territory or customer service centers or the like).

Scheduling Discussions with Utility Personnel

To the extent known, it is useful to provide at least a general list of topics of interest to be discussed during the site visit. Perhaps one will want to devote much of the audit time reviewing invoices, ledgers, and other financial records. However, in other cases (often cases for larger companies), more time may be spent in conversations with utility personnel discussing policies, processes, specific adjustments, budgeting, forecasting, and other similar topics. In those cases, it is wise to provide a list of topics you want to discuss (allowing the utility contact to line up the proper personnel) or a list of specific people that you would like available during your visit. For planning purposes, it is helpful to have the schedule for these interviews arranged prior to the beginning of the field visit. However, it is also practical to build in some non-specified time that can be used to read proprietary reports or have follow-up discussions to earlier listed topics. It is also useful to make arrangements if the auditor wishes to meet with the independent auditor or review his/her workpapers.

Arranging for Field Visits and Review of Property

Many auditors prescribe to the theory that it is more meaningful to deal with the financial aspects of a case when one has a basic understanding of the facilities and operations being discussed, or when the equipment that cost millions of dollars to purchase and install can be visualized. Thus, many auditors use the field visits as a time to do more than examine invoices and read Board of Directors' minutes. This may be a time to listen in on how well customer service representatives handle customer complaints. It may be a time to visit a power plant and see the size of a boiler or a coal plant. It may be a time to see the service territory and the size of the new refinery that has been added during the test year.

The auditor may also want to walk around the warehouse or the corporate offices in order to determine the reasonableness of the costs. It is difficult to know if the cost of an office is

appropriate without visualizing. Are the offices opulent? Are there original Picasso paintings on the wall (and included in rate base)? Are employees generally busy? Are garages full of extra vehicles during the day, or are they all out being used? Are warehouses full of utility equipment and supplies, or are they being used for non-utility purposes?

Listing Information to be Available

The auditor should prepare a list of the items that should be waiting and available during the field visit, since the utility coordinator will likely ask for this in preparing for the audit. Are there specific accounts that have been identified for which you would like invoices so that you can better understand why the expenses are higher than in prior years? Do you want copies of Board minutes to take with you, or are you willing to read them there, if they are ready and waiting? Perhaps a list of internal audit reports could be made available, and then the auditor could indicate early during the visit which of the reports he/she would like to read or have copied.

Determining Confidentiality Procedures

The auditor does not want to get to the site visit, or rate case audit, and find that much of the work is stalled because of an inability to review confidential (or propriety) data. Thus, the auditor should have made arrangements (in consultation with the assigned attorney) with the utility relative to treatment and review of confidential data.

RECORDS TO BE REVIEWED

The following is a list of records that the auditor may consider obtaining or reviewing during the audit or site visit:

- Affiliate Agreements for Inter-affiliate Transactions
- Audit Committee Minutes
- Billing Records (registers, etc.)
- Board of Director Minutes
- Chart of Accounts and Accounts Manual
- Construction Work Orders
- Construction Budgets
- Continuing Property Records
- Depreciation Studies
- External Independent Audit Reports and Workpapers (looking especially at the adjustments that the company chose not to make in spite of the auditor's recommendations)
- Franchise Fee Records (collection and payment)
- General Ledger and Subsidiary Ledgers
- Income Tax Returns
- Internal Audit Reports and Workpapers
- Invoices
- Lead-Lag Studies
- List of Property Units
- Monthly or Quarterly Operating/Financial Reports
- Monthly or Quarterly Trial Balances
- Organizational Charts (one showing the corporate (parent and affiliate entities) and one showing internal reporting lines and internal departments)
- Payroll Records
- Property Tax Statements
- Risk Committee Minutes and Documentation
- Sample of Customer Bills (to verify rates and information)

REVIEWING PROPOSED ADJUSTMENTS

A utility's rate filing commonly begins with test year booked numbers, which are then adjusted to represent anticipated, normalized operations for the period, that the rates will take effect. (See Revenue Requirement Computation example toward the end of this document.) Several types of adjustments may be included, and these adjustments may be referenced by different names in different jurisdictions. Commonly, these adjustments will include correcting adjustments (e.g., the removal of prior period items from the test year), normalizing adjustments (e.g., adjusting revenues for normalized weather conditions or for a normalized level of expenses), and pro forma adjustments (e.g., the reflection of authorized salary increases into the test year figures). In general, the pro forma adjustments can be viewed as a ratemaking attempt to transform the relationship that exists between the elements of cost of service (revenues, expenses, taxes, and investment) during the test year to one that would take place during the period that the rates resulting from the rate proceeding take effect. One is trying to identify circumstances during the test year, or beyond the end of the test year, that impact the on-going expenditures or revenues of the utility.

The adjustments proposed by the utility are generally listed and described in the exhibits and testimony contained within or accompanying the filing or submission being reviewed. If not provided up-front, the auditor should obtain the workpapers and electronic files that lay out the computations and supporting documents used to develop the adjustments.

In reviewing the prudence and reasonableness of the adjustments proposed by the utility, the auditor should ultimately keep in mind that the ultimate purpose of the review is to determine a revenue requirement and customer rates that are just, fair, reasonable, and sufficient.

The auditor should look for an application of the matching principle. For example, if plant is proposed to be removed from rate base, is there a matching adjustment to the depreciation expense and/or accumulated depreciation reserve, and should deferred taxes be adjusted? If expenses are changed, is there a matching adjustment to the cash working capital figure? If the adjustment adds new equipment (rate base) will it generate additional revenues or reduce expenses? Have the proper adjustments been made to revenues, expenses, and taxes?

The auditor should not only review the utility's proposed adjustments, but should also look for the adjustments that have *not* been made. Are there adjustments missing that if made would make the test year more reflective of normal, on-going operations?

RATE BASE ITEMS

General Principles

The utility's rate base is the total of the investor funded or supplied plant, facilities, and other investments used by the utility in providing utility services to its customers. The rate base is the investment base to which a fair rate of return is applied to arrive at the net operating income requirement (i.e., the amount of authorized return).

Many jurisdictions have adopted the concept of using the original cost of the plant or equipment to determine the value for the purposes of computing rate base. Under the original cost concept, the cost of the item at the time that it was first put into utility service is the cost that remains with that item throughout its life. If the asset is purchased during its life from another utility, the original cost carries with it, and any difference between it and the purchased price is booked as an acquisition adjustment (known as goodwill in non-utility industries). However, some jurisdictions have adopted other valuation methods, such as fair value, reconstruction costs, or replacement costs. The audit guidelines listed below presume the use of original cost and do not specifically address auditing based on other valuation methods.

When examining the balances of the various rate base items, the auditor will want to determine his/her jurisdiction's policy, if any, regarding the use of average or year-end balances. While the proper matching of booked investment, expenses, and revenue would argue in favor of an average test year, many jurisdictions have moved toward the use of year-end balances. One rationale for using year-end balances is to offset regulatory lag, and to make the plant more reflective of the time that rates are to be placed into effect. The auditor will want to verify that the utility's submission is consistent with Commission policy, if any. Some states have no policy on this matter and leave the matter to the discretion of the utility. In other instances, year-end balances may be used for items such as plant in service (e.g., accounts with less month to month volatility) but may use 13-month averages or other monthly average data for items such as prepayments, materials and supplies, and other similar accounts that have a lot of variability throughout the course of a year.

In reviewing specific rate base items, the auditor will want to continually be considering the concept of *used and useful*. This principle is widely adopted by regulatory commissions and requires that plant be functioning and necessary to be included in the revenue requirement. Plant that is considered to be excessive may not be appropriate for inclusion in rates at this time. However, the auditor should be aware that utility investment is often lumpy in nature, such that it may be cost ineffective to add small increments of plant and equipment each year, rather than building to meet a longer growth horizon.

Plant in Service

In addition to the used and useful concept described above, the auditor should be aware of any Commission policy and state laws regarding plant being in-service prior to its inclusion in rates. For example, one jurisdiction may have a policy of allowing plant to be included as long as it is in service prior to the time the rates go into effect, whereas another jurisdiction may not allow plant that is not in service by the end of the test year to be included in the revenue requirement. Other jurisdictions may look at the issue on a case-by-case basis. The auditor should become familiar with past decisions on this matter.

Another concept that is common when looking at plant in service is that there should be no *gold-plating* of facilities. In other words, the facilities should be reliable and adequate to the needs of providing service (and need not be Spartan) but should not be extravagant or extreme (e.g., no need for Taj Mahal-like facilities). Some analysis of this can be done by looking at the cost per square foot of office space, or the cost per installed megawatt (MW) of capacity, or the like. However, the auditor will also be required to use judgment in these areas.

The auditor will want to examine the major additions in the facilities that have occurred since the last rate proceeding. This examination can start with asking the utility to identify the major plant additions by year (with the auditor stating, for instance, projects that exceeded a specific dollar value or percentage of total plant), specifying the type of project, the need for the project, total cost of the project, and the project start and completion dates. Once this list is received, the auditor may wish to follow-up on specific projects, by examining the detailed work orders and the specific expenditures that were incurred. It may also be useful to compare the ultimate cost of the project to the initial projects submitted when the project was initially authorized or approved by management. It is also important to identify any plant that is replaced so as to verify that it is retired properly.

The auditor may also use this review as an opportunity to look at current and historic net plant balances to determine a trend in plant investment. If net plant balances are increasing, is there an explanation for the new investment or the slower depreciation rate? If net plant is generally decreasing, is that a reasonable expectation based on the circumstances of the service area (e.g., growth rates, economic conditions, etc.) Or, is the decline in investment an indication of new corporate policies (e.g., purchasing power rather than constructing power plants)? Is there a risk that the reduction in net plant, and reduction in investment, will put service quality or reliability at risk? Is adequate investment being budgeted to maintain appropriate service levels?

The auditor will also want to review any sales of plant or equipment that have occurred since the last rate case, and determine if any gains or losses from the sale are being properly treated. Other items to look at with a sale include whether the cost of the plant was properly removed not only from the plant in service, but also from accumulated depreciation and depreciation expense. Additionally, have any deferred taxes associated with the plant been removed from the books, and have the continuing property records been updated?

The auditor will also want to look at plant in service that is leased rather than owned. In addition to making sure that it is used, useful, and prudent in its provision of service, one will want to make sure that it is properly recorded either as a capital lease or an operating lease. (For example, if a subsidiary builds a power plant on behalf of its sister utility company, and the utility then leases the power from that plant, one should examine the proper accounting and treatment of that power cost.) Furthermore, the auditor should examine lease transactions for arms length transactions (e.g., is the transaction cost priced at the affiliate's cost, at market price, or at the lower of cost or market? Does the jurisdiction have a policy on the pricing of affiliate transactions?)

The auditor may also want to look at land, as it is included in plant in service. One would want to look at whether land balances have changed, as well as verifying deeds on land purchases and verifying sales prices using county records for any purchases and sales. Finally, one may wish to examine land transactions between the utility and affiliates or subsidiary entities.

Plant Held for Future Use

This category of plant generally contains plant that is owned and held for a future purpose, and thus not yet in active service. Many jurisdictions require that the property held in this account have a definite plan for use (e.g., the FERC) or even specify a time frame by which the property must be actively used (e.g., the FCC). Therefore, the auditor should specifically examine the list of items within this account and determine if there is a definite plan for use related to the provision of utility service. Some states completely disallow any inclusion of plant held for future use in rates, while others may allow some or all to be included in rate base. This is a jurisdictional specific decision.

Construction Work-in-Progress

The auditor should become familiar with any existing policy on construction-work-in progress. Some states completely disallow any inclusion of construction work-in-progress (CWIP) in rates, while others may allow some or all to be included in rate base. This is a jurisdictional specific decision. However, to the extent that a jurisdiction does permit construction-work-in progress to be included in rate base, the auditor should make sure that allowance for funds used during construction (AFUDC) has stopped being accrued. To the extent that CWIP is not allowed to be included in rates, it is likely that AFUDC will be accrued until the property is completed and put into service.

The auditor should become familiar with the formula used by the utility to compute AFUDC (sometimes referred to as Interest Used During Construction, or IDC), and make sure that the utility has computed the rate correctly. The auditor should especially make sure that the proper return has been used in computing the rate.

Acquisition Adjustments

Under the concept of booking all plant-in-service at original cost, any difference between the price paid for the utility plant and the original cost of that plant is booked as an acquisition adjustment. It is at the discretion of each jurisdiction as to whether or not the acquisition adjustment is included in rate base, and often, that decision is made by the jurisdiction on a case-by-case basis. The auditor should look at each acquisition adjustment transaction and determine the circumstances for its existence. Why did the utility pay above book for the property, and is there some benefit to ratepayers as a result of that transaction? Will customers have better service as a result of the purchase by the utility, even if the utility did pay above book value for the property? As another option, some jurisdictions have allowed the amortization of the acquisition adjustment above the line, but have not allowed the unamortized balance to be included in rate base – thus splitting the risk of that transaction between ratepayers and the utility's shareholders.

Cash Working Capital

In its simplest form, it is broadly recognized that, when a new business starts up, it requires some of the investors' money in the cash drawer to cover expenses until the business can sell its merchandise and receive payment for it. As the business matures, the need is the same, but there is confusion about whose money is in the drawer. Another way to look at it is that cash working capital is the measure of investor funding of daily expenditures and a variety of non-plant investments that are necessary to sustain on-going operations of the utility until those expenditures can be recovered through revenues.

There are several methods commonly used by regulators to measure the amount of cash working capital required for inclusion in a revenue requirement computation. Some jurisdictions prefer one method over another, while sometimes the decision of which method is used is dependent upon the size and resources of the company. The three methods, each described in more detail below, are: the formula method, the balance sheet approach, and the use of a lead-lag study.

1. Formula Method. The formula method is also known as the 45-day rule, and was established by the FERC (formerly, the Federal Power Commission) in a 1939 decision. At that time, the working capital was computed as 45/365 of operating costs, but excluded taxes (which did not require initial outlays of capital) and depreciation (which is a non-cash expense). In a 1949 case, the FERC modified the formula so that not only were taxes and depreciation excluded from the formula, but purchased power was also excluded (based on the contention that purchased power is paid for after revenues are received.) This is the key point for the auditor. Even when the jurisdiction adopts the formula approach, the actual elements of the formula may be different form the formula used in other jurisdictions, or even from that used in other cases. For example, at one time, a particular jurisdiction modeled its formula after that used by FERC, but allowed 15/365 of purchased power to be included. Other jurisdictions have had debates over whether taxes (specifically, income and property taxes) should be included in the formula. These are all legitimate points for discussion, although the auditor should look to previous cases for guidance.

Under this method, the auditor should also be aware of changes made to the allowed operating expenses, since changes to those expenses will also change the overall result of the formula based cash working capital.

2. Balance Sheet Method. Two unique balance sheet approaches have been noted in practice. In one, often referred to as the *net current asset method*, the average current and accrued assets are compared to the current and accrued interest free liabilities. This is the method that is generally discussed in accounting circles. This method focuses on the fact that all of the current assets must be financed, and is less concerned with how long any particular asset must be financed. If adopting this method, the auditor should look at the nature of the current assets and current liabilities to see if they are reasonable and prudent.

Another balance sheet approach is sometimes referred to as the *overall balance sheet* approach. It is based on the premise that a utility's return should be equal to the carrying cost of outstanding securities including common equity, noting that capital devoted to non-utility ventures is removed, as are investments on which no return is allowed for ratemaking purposes. If the rate base exceeds the return bearing capitalization then the difference between the two quantities is the cost free source of capital. If the capitalization exceeds the rate base, the difference is the requirement for cash working capital. The auditor should be aware that under this method, capital will be difficult to allocate between utility and non-utility uses. Additionally, under this computation, either a positive or negative cash working capital may result. The balance sheet method is the working capital method that attempts to determine if the utility actually funds the working capital.

3. Lead-Lag Study. While the lead-lag study can be more time consuming and costly than other more simplistic methods, the results tend to be more individualized to a specific company. Under this method, one is attempting to measure the actual time between a utility's out-of-pocket payment of expenses to provide service and the collection of revenues for service. The weighted average of the net lag days times the average daily expense yields a positive or negative requirement for cash working capital. As with other methods, the result may be either a positive or negative cash working capital requirement. (For example, if a utility bills service at the beginning of the period for which service is being provided, as many of the telecommunications companies do, then one should not be surprised at a result of negative cash working capital.) As with other methods, there continue to be debates as to which expenses to include in the calculation. For instance, should non-cash items be included or excluded? How should items such as long-term debt interest, stock dividends, and deferred taxes be treated in this computation? Once again, these questions are best answered both by looking at the theory of what is attempting to be measured (e.g., the measurement of *paid* expenses may argue against the inclusion of depreciation) and what treatment these items have been given in previous cases in a particular jurisdiction or for a particular utility.

Customer Deposits

Customer deposits are shown as a liability on the utility's balance sheet and represent a source of non-investor supplied capital. Customer deposits are generally treated one of three ways.

The first method does not reduce rate base by the customer deposits balance and classifies any interest accrued or paid on those deposits as a below-the-line (or non-operating) expense. This method allows the utility to earn a return on a rate base that has not been reduced by the amount of customer deposits, and then allows it to use that return to pay the interest that is required to be returned to customers with the return of that deposit. One consideration in using this method is whether the return allowed on rate base is higher than the return that the utility is required to pay on its customer deposits. If so, the utility may be allowed to earn more than is necessary, and return that difference to shareholders.

The second method reduces rate base by the customer deposits balance, and classifies any interest accrued or paid on those deposits as an above-the-line (or operating) expense that is included in the revenue requirement computation. The interest that the utility must pay is generally deemed to be a legitimate expense that must be recovered in one form or another.

The third method includes the liability for customer deposits in the utility's capital structure at a zero cost, reducing the overall rate of return. If interest is paid on the customers' deposits, the utility can recover that interest expenses as an above-the line (or operating) expense.

When examining this item, the auditor may want to become familiar with the utility's deposit policies, to make sure that the amount of deposits it holds is consistent with any rules of the particular jurisdiction on the matter. One wants to make sure that the proper amount is being held, not only for the sake of customers who paid the deposits, but also to assure that too much interest expense is not being included in rates to be paid by the general body of ratepayers. One may want to look not only at the policy of how much is collected from any individual customer as a deposit, but whether deposit policies are consistent with minimizing uncollectibles. One may also wish to review policies of when deposits are returned to customers.

Prepayments

The auditor should examine the nature of the prepayments as well as the amounts of each type of prepayment. In looking at these items, one should look to see that they relate to the provision of utility service, and are the type of expense that is normally lumpy in nature, and therefore, paid periodically and then amortized over some number of months. An example of a commonly included prepayment is insurance. Watch the allocation of insurance as it often covers not only the regulated utility, but also affiliates and deregulated activities. Since the prepayment balance will vary during a period, the auditor may wish to consider using an average balance in order to reach a more normalized level for inclusion in rate base.

Contributions-in-Aid of Construction/Customer Advances

Contributions-in-Aid of Construction (CIAC) and Customer Advances reduce the rate base as a source of non-investor supplied capital. CIAC and Customer Advances are payments made by customers generally to fund plant additions for new or expanded service. CIAC are generally non-refundable, whereas Customer Advances often have a provision allowing for refunds under specified circumstances. For certain of the utility industries (e.g., water and wastewater), it is common for the CIAC and Customer Advances to be contained in its own rate base account, whereas for other industries (e.g., electric and gas) it is common for these items to be netted against the plant costs associated with their payment. For telecommunications utilities, CIAC and Customer Advances are generally not an issue. Therefore, the auditor should be familiar with the accounting policy for the utility involved.

Additionally, the auditor should be familiar with the utility's line extension policy and any other tariffs that relate to the CIAC and Customer Advances and the level to which the utility may still have an obligation to refund these amounts. Furthermore, the auditor should determine whether any taxes or amortization expenses are associated with either the CIAC or Customer Advances, such as whether any of the funds are considered to be taxable income, or whether any of the funds include a gross-up for taxes.

Materials and Supplies and Purchasing Practices

The auditor should look for ways to determine the reasonableness of the materials and supplies (inventories) balance. For instance, one might ask for the utility's policy on spare parts inventory, and its ability to obtain materials and supplies on short notice. One might also ask about the purchasing practices of the utility, to determine whether it is using reasonable care in keeping its material and supply costs low. Additionally, the auditor may wish to look for anomalies in the month end balance during the period, to see if there is a need to normalize the balance included in rate base.

For utilities with fuel stocks (such as electric utility coal piles or natural gas storage), one may want to ask about balances and policies on determining the most efficient and effective inventory levels. For example, is it generally the policy to keep a certain number of days of coal stock on hand, with a review of that level if a strike is pending? Is the amount of natural gas stored dependent upon the price of that natural gas?

Accumulated Deferred Income Taxes

Accumulated Deferred Income Taxes are also treated as a reduction to rate base. See Income Taxes discussion below.

Regulatory Assets and Other Deferrals

The auditor should become familiar with the specific items in this account, including the nature of the entries, the dollar amounts, the reason for the deferrals, and whether or not regulatory approval has been obtained (or is needed) for the deferrals. In looking at the nature of the

deferrals, the auditor should consider whether the deferral is appropriate for inclusion in rate base. For instance, is the utility deferring certain fuel or purchased power expenses under a mechanism that is approved by the Commission allowing for dollar-for-dollar recovery of those costs? Or, is the utility deferring controversial costs that are outside of any regulatory mechanisms that have previously been approved? The auditor should also look at the amortization period for these deferrals. What is the rationale for that amortization period? How was it determined? Is the utility simply waiting to begin amortizing the deferral until it is in rates, or did it begin the amortization consistent with some other action or situation? Finally, the auditor should be familiar with Statement of Financial Accounting Standard 71 when looking at these potential rate base items.

Suspense and Clearing Accounts

Suspense or clearing accounts are auxiliary accounts that exist for technical reasons and which are repeatedly cleared. Postings may be made to a clearing account due to a time gap between accounting transactions, organizational task distribution, or accounting transactions requiring clarification. The auditor should examine the utility's reasons for using clearing accounts and its method for clearing them. The auditor should verify that these accounts are routinely cleared and that the method used for clearing is appropriate. If not cleared in the appropriate time period, costs may not be adequately reflected in rates for these expenditures. Be sure the account is not routinely over or under amortized.

INCOME TAXES

Accumulated Deferred Income Taxes

Under Statement of Financial Accounting Standards (SFAS) 109, Accounting for Income Taxes, companies must recognize changes in tax rates when they occur and use deferred tax accounting. The resulting comprehensive interperiod tax allocation, or income tax normalization, causes a rate base adjustment that is amortized over the tax life of the timing difference. The option is cash-basis accounting, which "flows through" the timing difference to the income statement.

Deferred income taxes (DIT) arise when income tax amounts provided for book purposes differ from the amount of taxes currently due and payable. The primary cause of the tax differences is the straight-line depreciation rates used for rate making purposes versus the accelerated depreciation rates used for federal and state income tax purposes. Under this method, there is higher depreciation expense for tax purposes than for regulatory book purposes, causing the taxes computed for regulatory books (and thus, included in revenue requirement) to be more than the taxes actually payable to the Internal Revenue Service and state taxing entities, in the early years of the asset's life. In later years, the situation reverses itself, such that the revenue requirement will reflect a lesser amount of income tax than that which is actually due and payable. This difference then becomes a source of interest-free funds, provided by ratepayers and not investors. This accumulated balance of interest-free funds (ADIT) is available to the utility to further invest until it is then needed to fund the taxes due and payable in the later years. This is shown by the following example:

$3,000 Asset
Tax Life = 3 Years ($1,000 per year depreciation expense)
Book Life = 5 Years ($600 per year depreciation expense)
Tax Rate = 40%

INCOME TAX EFFECT OF DEPRECIATION EXPENSE[3]			
IRS TAXES	BOOK TAXES	CURRENT YR. DIT	DIT BALANCE
$1,000 x 40% = $400	$600 x 40% = $240	$400 - $240 = $160	$160
$1,000 x 40% = $400	$600 x 40% = $240	$400 - $240 = $160	$160 + $160 = $320
$1,000 x 40% = $400	$600 x 40% = $240	$400 - $240 = $160	$320 + $160 = $480
$ 0 x 40% = $ 0	$600 x 40% = $240	$ 0 - $240 = ($240)	$480 - $240 = $240
$ 0 x 40% = $ 0	$600 x 40% = $240	$ 0 - $240 = ($240)	$240 - $240 = $ 0

These differences are generally caused by both differences between IRS/State and regulatory allowed asset depreciation lives, and differences in the depreciation method (e.g., straight line versus accelerated). Other differences in IRS versus regulatory income taxes, which do not

[3] In this table, credits are shown as positive amounts, and debits are shown in parentheses.

become part of the DIT computation per se, are permanent differences, and not just timing differences. An example of a permanent difference is the fact that business meals are not generally deductible for IRS purposes but are often included as a legitimate operating expenses for ratemaking. Finally, there may be basis differences, in that the total amount of the capitalized asset may be different for IRS and regulatory purposes. For example, certain items that are capitalized as plant in service for regulatory purposes (e.g., depreciation on vehicles used during construction) may not be allowed to be capitalized for IRS tax purposes.

The auditor should generally be aware of the two methods of treating the timing differences reflected in accumulated DIT. The timing differences related to life and method differences are required by the federal tax code to be *normalized.* Pursuant to normalization, the timing differences are accumulated in the DIT account and used to spread the benefits of the IRS tax policies over the economic life of the asset. This will be the bulk of the dollars involved in DIT. The remaining items, related to basis differences, may be either normalized or *flowed-through* to customers. Under the flow-through method, income tax savings resulting from IRS tax methods are immediately used to reduce rates (i.e., revenue requirements) instead of recording the difference as a liability in the deferred tax accounts.

In looking at accumulated DIT, the auditor should look at the Schedule M of the federal (and possibly state) tax return, to determine the types of items that are different between the IRS/State computed taxes and taxes computed for regulatory purposes. One should then follow these items through the records and adjustments to determine that they have been properly reflected in the accumulated DIT. One should look for large changes in the accounts and determine why these significant changes occurred, and whether they match other items reflected on the income statement.

There are several unique circumstances for which to watch, including sale of assets and changes in tax rates. If an existing utility asset is sold, there should be a transfer of not only the asset but there should also be a reduction of the associated accumulated DIT balance. Similarly, with a purchase of an asset (for example, from a sister company), one should watch to see if deferred taxes are transferred with the asset. It is important to review current tax regulations to understand when DIT balances can be transferred and when they cannot.

Several of the reductions in federal income tax rates in recent history have caused a unique circumstance, where DIT were computed using a rate that no longer exists. In the example in the table above, if the tax rate were reduced to 35% from 40%, there would be a balance remaining in the account at the end of the five year life, even though the asset were now retired. To address this, a special amortization of the DIT balance must be made. The auditor should examine these circumstances and work with the utility personnel to understand the method by which these special adjustments are reflected in the income tax expense and in revenue requirement. Furthermore, the auditor will want to examine the treatment of those *excess deferred income*

taxes if that asset is sold or transferred before the ratepayers have the full benefit of that tax reduction correction.

There are two ways of treating DIT in the revenue requirement computation. In the first, the accumulated DIT is deducted from rate base. This appropriately recognizes that these are interest free funds upon which the utility should not earn a return. In the second, the accumulated DIT is not deducted from rate base, but instead, is treated as a zero cost element of the capital structure. In doing so, a lower average authorized rate of return is applied to a higher rate base. In concept, the methods should derive similar results. The auditor should become familiar with the jurisdiction's policy and practice on this matter, so it is properly reflected in the rate computation.

Investment Tax Credits

Ending about 1986, a reduction in income taxes was provided as part of the federal tax code for those who constructed plant during this period. The investment tax credit (ITC) was generally required to be amortized in equal increments over the economic life of the asset. Some of the assets constructed during that period are still in service, and thus, the current revenue requirement may reflect a remaining balance related to earlier ITCs.

Utilities were generally required to make a selection of one of two options for regulatory treatment of ITCs. These options generally are:

Option One: For ratemaking purposes, the rate base may be reduced by the unamortized ITC, but the net operating income may not be increased by the amortization of the ITC.

Option Two: For ratemaking purposes, the net operating income may reflect the amortization of the ITC, but the rate base may not be reduced by any portion of the unamortized ITC.

There was a third option that expired in 1980 that allowed for the flow through of credits immediately as a reduction of current tax expense. Most of the utilities have chosen either option one or option two. The auditor should determine the option that was chosen (and cannot be changed) and make sure that the case properly reflects that choice in the rate base or income statement computation. The auditor should also make sure that the amortization period for investment tax credits matches with the life of the asset, and that the amortization period is adjusted if the depreciation life is adjusted. The auditor should be familiar with state tax laws and determine if state ITCs are properly reflected.

Income Tax Expense

Income tax adjustments (additions and deductions) for the test year are affected by ratemaking adjustments. Generally, all ratemaking changes to revenues, expenses, and other taxes would be fully includible or deductible for calculating the tax effects of test year adjustments.

The auditor should look at the Federal and State Schedule M items/adjustments to see what differences exist between the tax return computation and the book tax computation, and inquire about any of the items that appear to be out of place or that are not understood. The auditor should also review and understand the timing and payment schedule of income taxes.

The auditor should verify that the depreciation rates for book purposes and those for tax purposes are appropriate.

The auditor may consider obtaining a copy of the most recent IRS audit report and determine the treatment of any follow-up requirements from that audit.

The auditor should be aware that the marginal tax rate will affect the net to gross factor. This not usually an issue for large utilities, but it may be for small utilities.

Revenue Conversion Factor (Net to Gross Factor)

The revenue conversion factor/multiplier, or net to gross factor/multiplier, converts a net income deficiency into a gross revenue deficiency. This recognizes that a utility would need to collect from the customers more than one dollar in gross revenue for each dollar of net operating income it wants to keep for itself, due to the imposition of taxes on those earnings.

In general, the revenue conversion factor/multiplier is computed using the following formula:

1 / (1-tax rate)

Thus, if the tax rate was 40%, the computation would be:

1 / (1-40%) = 1.667

This means that for every additional (or reduced) dollar of net income that the utility is being granted, 1.67 dollars should be added to (or reduced from) rates. This will allow the utility an actual opportunity to earn that additional dollar while also allowing the utility to pay the additional income taxes on that one dollar of income.

While the above represents the basic formula, many additional items may be added to the formula to reflect revenue driven expenses. For example, it is common for the utility to modify the formula to reflect additional uncollectible revenue. In theory, for each additional dollar of revenue billed, there will be a portion that is uncollectible, and this may be appropriate to include in rates. Similarly, some utilities may wish to reflect other revenue based expenses, such as franchise fees and regulatory commission fees, in the revenue conversion factor/multiplier, since these fees are often tied directly to the level of revenues billed.

The auditor will want to become familiar with the individual utility's or individual jurisdiction's policy or practice on what to include or exclude from the formula.

Inter-company Tax Allocation Agreements

A regulated utility that is a member of an affiliated group of companies may participate in the filing of a consolidated income tax return. Typically, the allocation of consolidated income tax liabilities is governed by an inter-company tax allocation or tax sharing agreement that specifies, among other things, the allocation of tax losses and credits among member companies. Such agreements may be subject to SEC and IRS rules and regulations as well as federal/state regulatory approval. Tax sharing agreements are generally structured to provide immediate tax benefits to those entities that generate income tax losses and credits, but only to the extent that no member of the consolidated group is allocated more income tax than what its liability would be on a stand-alone basis. From a ratemaking standpoint, the primary issue is to determine whether any of the benefits derived from the filing of a consolidated tax return are properly allocable to regulated operations. The auditor should ensure that the per book allocation of the consolidated income tax liability is consistent with the provisions of the tax sharing agreement, and also whether this allocation methodology is consistent with the regulatory policies of the state commission.

DEPRECIATION AND AMORTIZATION EXPENSE AND ACCUMULATED RESERVES

Depreciation Expense

The auditor should obtain or prepare a schedule looking at beginning and ending plant balances, the cost of removal rate, estimated lives, and plant retirements. This will provide the auditor a basis for examining the depreciation rates and plant balances that are used to compute the depreciation expense reflected in the utility's filing. The auditor should verify that the depreciation rate in use has been approved by the Commission (or that approval is not required). In this regard, the auditor may also want to look at the last time depreciation rates were reviewed by either the company or the Commission for appropriateness. Some utilities have been known to go a decade or more without reviewing the continuing reasonableness of its depreciation rates, even though the type of plant or technology in use has changed during that time frame without a depreciation rate review.

The auditor will also want to become familiar with SFAS 143, Accounting for Asset Retirement Obligations. If a company has a legal obligation to incur costs to remove an asset at its retirement, the net present value of those costs is part of the ultimate cost of the asset and should be recovered in charges to deprecation expense over the life of the asset. For those assets for which there is a legal obligation of removal, a liability is recorded at fair value. Each accounting period, the liability is increased to its present value. The asset is also increased to reflect the asset retirement obligation, and this is depreciated over the life of the associated tangible asset. With the implementation of this statement, transitional entries may also have been required in order to reflect catch-up transactions such that the transaction would reflect the liability and asset as if they had been recorded at the beginning of the asset's life. The auditor will want to fully understand how the implementation of SFAS 143 impacts the use of more traditional depreciation rates, and especially the previous practice of reflecting cost of removal as an expense over the life of the asset. It will be particularly important to understand which assets carry a legal obligation of removal, as these are the only assets impacted by this particular accounting standard.

Accumulated Reserve for Depreciation

The auditor should generally be able to tie changes in the accumulated reserve for depreciation to other parts of the filing, especially the depreciation expense and plant in service balances. The auditor should look for large or unusual changes to the depreciation reserve and seek explanations of those changes, if any. The auditor should also look to assure that retirements of plant have also been reflected in plant in service. It is most utilities' general accounting practice to remove the original cost of the retired plant from both plant in service and accumulated depreciation – whether or not that retirement was planned or unexpected. (In other words, whether or not the plant was fully depreciated.)

Amortization Expense

Amortization expense is the equivalent to depreciation expense for assets that are not plant in service. Capital leases are an area to investigate to assure that the amortization expense corresponds with the capitalized amount and it is amortized over a reasonable life at the proper rate. Additions or remodeling of capitalized leases (i.e., buildings) should be evaluated to determine if they were properly booked to the asset or expense.

OPERATING REVENUES

Retail Revenues and Sales

The auditor should begin by looking at an analysis of the test year revenues, such as the one recommended above where monthly balances are compared to look for anomalies, seasonality, or other oddities. Additionally, one will want to look at a multi-year comparison of annual revenue to obtain a view of the trend for the utility. Is it growing and if so, is the growth relatively consistent? Is the growth related to new customers or additional usage of existing customers? (The answer to this question may help explain whether the growth in revenue is consistent or inconsistent with growth in plant.) Are revenues and expenses growing together? It will also be useful to look at any anomalies or trends in the data by customer class or type of service to determine if one class or another is a significant driver of the change in income.

The auditor will want to look for seasonality in the revenue data. If seasonality exists, it may be important to then determine whether the data has been normalized, or whether normalization is needed. If usage is seasonal or driven by weather (e.g., changes with the use of air conditioning), then any unusual weather patterns that occurred during the test year will skew the data to either under or over report revenues. This can be corrected by adjusting the usage to reflect normal weather patterns, based on historical weather data and either heating degree days or cooling degree days. The period of historical data used in these normalization adjustments tends to vary by state, with some states using 50 years of data, and others using only ten or twenty years of data.

The auditor will also want to make sure that any other rate changes that occurred during the test year are reflected in the adjusted revenues. Was there a rate change authorized part way through the test year? If so, then the early months of the test year need to be adjusted as if that rate change had been in effect for the entire test year. This should be done not only with major rate case changes, but also with changes in non-recurring charges (e.g., late fees, non-sufficient check charges, etc.).

The auditor will want to examine the actual losses that are occurring on the system. Is the loss reasonable for a system of its size, recognizing density, the age of the plant, and other physical characteristics of the system? If losses have been increasing over time, what has the utility done to try to reduce that line loss or to investigate the cause of the increasing loss? (These system losses could be electric line losses, gas losses, unaccountable water losses, or infiltration into a sewer utility.)

Special contracts are another area of interest in examining revenue. Are there any special retail contracts (generally used to serve larger customers)? Have these been approved by the Commission, or do they require Commission approval? Do the contractual rates continue to recover at least variable costs and is there a contribution to the fixed costs of the system, even if

not at a fully embedded cost level? Why did the utility feel the need to enter into a special contract with this customer, rather than charging the usual tariffed rate?

The auditor may find it useful to spot check some actual customer bills, and verify that the bills comply with any billing rules and regulations of the Commission. Additionally, one would spot check the bills to the approved rates, to assure that customers are being billed at the proper rate.

Other (Miscellaneous) Revenues and Special Charges

In looking at miscellaneous and other revenues, the auditor will first want to determine the nature of these charges. Are they non-recurring charges for utility service? Or, are they for the sale of appliances or other non-regulated services? If non-regulated services have been included in operating revenues and are to be removed through adjustments, one will want to coordinate these revenue adjustments with the expenses, to assure that any related expenses for non-utility services have also been removed from the regulated income computation.

Unbilled Revenues

The purpose of unbilled revenue is to match the period's (e.g., test year's) revenues with expenses applicable to that same period. In other words, this recognizes that service may be provided and expenses may be incurred and recorded before service is billed and revenue is recorded or received. Thus, unless the proper revenue is recorded, there will be a mismatch between revenues and expenses.

The auditor should examine the revenues to determine if unbilled revenues have been reflected, and if not, why not? Additionally, one will want to examine how unbilled revenues are reflected in the adjusted revenues. It is common practice for the unbilled revenues to be accrued at the beginning of a period (or in some cases, each month) and then reversed when the actual revenues are billed. The auditor should examine the records for these accruals and reversals.

Unregulated Revenues

The auditor should examine how the utility has recorded unregulated revenues to keep them separate from regulated revenues. Are they in separate accounts? Are they in subaccounts? Additionally, there should be an examination to make sure that there is a clear understanding of the items that are considered to be regulated versus unregulated by the particular jurisdiction. Also, as noted above, if there are unregulated revenues that are removed from the revenues reflected in the filing, the auditor should make sure that any expenses associated with the unregulated revenues are also removed from the filing.

Uncollectibles

To start the examination of uncollectibles, the auditor should obtain a general understanding of the utility's policy of determining that an account is no longer likely to be recovered. What determines that an account is uncollectible? What attempts are made to recover the funds? How large did the utility allow the account to become before service was disconnected, and is this

consistent with the jurisdiction's policies and rules on disconnections and deposits? What is the actual write-off for the year, versus the amount being accrued for uncollectible revenues? Is the uncollectible rate appropriately reflected in the net to gross factor?

In addition to understanding the utility's practices about this issue, the auditor may also wish to look at the pattern of uncollectibles that has occurred over the past few years. Is there a particular year in which uncollectibles have been particularly large such that it is not representative of on-going operations? If such an anomaly exists, the auditor may wish to consider normalizing this expense through the use of a multi-year average of data.

Sharing Mechanisms

The auditor should become familiar with any sharing or incentive mechanisms that have been approved for the utility being examined. Examples of this might include the opportunity for a utility to keep a portion of the savings if it is able to reduce certain operating costs (e.g., fuel costs). In these instances, the auditor will want to assure that the revenues directly assignable to shareholders have been properly recorded and removed from the regulated income statement. Alternatively, if there was an agreement for a level of cost cutting that was not met, the auditor may need to compute the difference in savings that are not reflected in the actual results of operation.

Additionally, the auditor will want to verify the computation of the sharing amounts, to assure that the proportion of revenues (or cost savings) is being appropriately allocated between ratepayers and shareholders.

Deferred Cost Recovery Mechanisms

The most common type of deferred cost recovery mechanism that exists is a fuel adjustment mechanism or a gas cost adjustment mechanism. (These are known in different jurisdictions by different names and have different formulas associated with them, but mostly have similar principles underlying them. That is, the utility will recover all or a portion of its specified costs on a more expedited basis and in a more singular way than the remaining rate case elements.) Often, these mechanisms have a true-up provision, measuring the difference between anticipated costs and actually incurred costs, and then allowing for future recovery (or refund) of that difference.

Aside from fuel or gas cost recovery mechanisms, utilities are occasionally allowed to defer other costs that would otherwise have been expensed. Examples include: early retirement program costs, early plant closure costs, or demand-side management costs.

The auditor should become familiar with the types of costs that have been permitted to be deferred, and whether or not any recovery mechanism was stated or authorized at the time of the deferral. One should then look for consistency between the previously authorized plan and the current accounting entries relative to that recovery. One might also look at whether the amount

to be recovered is consistent with the original deferral balance, or whether the amount has unexpectedly (and without Commission approval) changed.

Federal Funds and Support Mechanisms

The auditor should be aware of any federal or state support that is provided to a utility and/or its customers. An example of this kind of revenue stream is high cost support (or universal service funding) to support local telecommunications service. The auditor should reach an understanding of the accounting treatment of these funds, since some may be treated as revenue, and others may be treated as negative expenses. The auditor should have a basic understanding of how these funds are derived, and whether the amount tends to vary or remain stable from year to year. Finally, one should understand and verify whether these support mechanisms are intrastate or interstate in nature, such that they are properly reflected in rates and operating income.

OPERATING EXPENSES OTHER THAN DEPRECIATION AND INCOME TAXES

General Review

In reviewing operating expenses, the auditor may wish to begin by again turning to the historical analysis of expenses that was prepared during the preliminary procedures and the analysis of the month by month test year data. An examination of these spreadsheets will assist one in identifying the initial areas upon which to focus during the audit. It will assist in pinpointing anomalies in the expenses, as well as trends in the expenses. Besides the list of hot topics that might be particular to one's individual jurisdiction, one will want to focus on the oddities indicated by the data.

In looking at the numbers that stand out of the analyses, one will want to gather background on the events that occurred during the test year that may have caused unusual expense levels. Was there a major storm that would have caused the need for unusual levels of maintenance and repair? Was there a labor strike that would have impacted salaries and wage levels? Did a new switch (or power plant) come on line that will change the overall operating costs?

One of the overriding principles to remember when reviewing expense related adjustments is the concept of *known and measurable*, particularly when dealing with adjustments to historic test periods. It is widely accepted that adjustments should have a strong degree of certainty associated with them, and that there should be a reasonable ability to measure the item underlying the adjustment. For example, there might be different mindsets about including an adjustment for additional personnel in the administrative expenses if the job descriptions for the people had been prepared and a classified help wanted ad were being run, compared to simply indicating that additional people were needed but they had not yet been included in corporate budgets. Similarly, there might be a world of difference between indicating that it is the utility's general policy to grant cost of living increases to employees and the situation where one can view the Board of Directors' minutes showing that a specific percentage increase has been approved.

Maintenance and Repair Expenses and Practices

The auditor will want to look at general maintenance practices of the utility and determine whether the expenses incurred appear reasonable based on those practices. Has there been an increasing or decreasing trend of maintenance expenses? Is there an indication that maintenance is the victim of cost cutting measures in order to maintain shareholder dividends?

One may also wish to consider whether those maintenance practices are consistent with Commission expectations as well as the provisioning of safe, adequate, and reliable service. For example, does the utility have a practice or policy relative to the testing of meters? How often is it done and how does this compare to the manufacturer recommendations? Does it test them

itself or does it use an outside contractor? What is the cost effectiveness of this decision? Have there been an increasing number of complaints relative to inaccurate meter readings?

Similar questions could be asked of any number of maintenance related items. What is the utility's tree trimming policy? What is the average period between major and minor generating plant overhauls? What policy exists relative to testing for leaks in water lines?

Insurance and Security Costs

Nationally, the utility industry is incurring increased costs for insurance and security of its facilities and operations. However, the auditor should still inquire as to what the utility is doing in an attempt to mitigate these increases. Has self-insurance been considered? Has there been a review of historically incurred costs, to see if current reserves for property damage can be reduced? Have higher deductibles or a different level of coverage been considered?

Furthermore, the auditor should inquire into the general proactive measures that have been instituted by the utility in order to limit damages or problematic situations. The cost of these measures should also be examined for reasonableness and to make sure that the additional actions are warranted. Examples of items to examine include: additional screening of employees, additional security equipment at critical facilities (e.g., central offices, water treatment facilities, dams, or substations), or the creation or major revision of emergency management procedures. Quite often one insurance policy will extend coverage to utility operations, headquarters, affiliates, and deregulated operations. The auditor should review the policies, determine who and what is covered, and evaluate how the costs are assigned. Even if there is no incremental insurance or security cost to cover non-utility operations, evaluate the benefits received and determine the proper sharing and allocation of costs to all entities covered by the policy/security.

Fuel, Purchased Power, and/or Natural Gas Costs

For many electric utilities, the cost of fuel and purchased power can be the largest single expense and in some cases, well exceeds fifty percent of a utility's total operating expenses. Therefore, these costs warrant some special attention either in general rate proceedings or separate proceedings related to the review of costs included in fuel, purchased power, and natural gas cost recovery rate mechanisms.

To begin, the auditor will want to become generally familiar with the utility's general operation. Does the utility have its own natural gas wells used for providing retail gas service, or does it purchase its natural gas on the open market? What is its policy for purchasing contract gas versus using gas from storage versus buying spot market gas? Or, for an electric utility, is all of the power purchased in the open market, or does it own its own power plants, or is there a mix? Are purchase contracts long term or, as for many cooperatives, all requirement contracts?

After reaching a basic understanding, the auditor will want to explore specific cost aspects of not only contracting for the fuel or purchased power, but also issues of transport of the fuel or power (i.e., wheeling costs, pipeline transport, train tariffs); inventory costs and arrangements (i.e., gas storage or coal inventory levels); and measurement (e.g., where is the power metered, who reads and maintains that meter – the buyer or seller; how often are scales calibrated, etc).

From there, the auditor may wish to examine some of the actual contracts and billings from the utility's wholesale suppliers. Do these match the entries in the utility's ledgers and expense accounts? Is the fuel being provided within the heat content and moisture content specifications contained in the contract? One might want to look at reports on the testing of samples of the delivered fuel to verify that tests are being done to assure that the utility is receiving the quality of fuel for which it pays. In another area, one might want to see if any escalators in the contracts have been properly computed and documented. If the fuel or generation is purchased from an affiliate, determine if the purchase price is appropriate. Should it be priced at cost plus a return or at market price? Could it be purchased less expensively from a non-affiliated entity?

Salaries and Benefits

Salaries and benefits are a major expense for most utilities, and there are many aspects of salaries and benefits that can be explored during an audit.

To start, the auditor may wish to discuss with the utility general policies of the company relative to salaries. Are there automatic increases annually? Are increases merit based or cost of living based? How do the salary policies for management differ from those of non-management? What are the general benefits provided to employees (e.g., health care, 401K, pensions)? These discussions will provide some background to then look at more specifics of the costs. It is also useful to understand how the compensation plan has changed, if it has, compared to recent periods. For example, many utilities have in recent years implemented incentive plans wherein a portion of an employee's salary is tied to performance (e.g., bonuses). One would want to ask when this incentive was developed, and how the performance standards are determined. The auditor should find out whether his/her Commission has allowed incentive costs to be included in setting rates. Are cost savings from the condition that created the incentive included in the test year?

Once one has obtained a background of how the compensation plan for the utility works, it then behooves the auditor to find out how reasonable this plan is and one way to start is to ask the company how it determines that salaries remain in a reasonable range. Are salary surveys of others in the industry used to benchmark ranges of salaries? Are general salary surveys used to look at the regional salaries for various employee classifications (e.g., linemen, accountants, drafters, etc.)? Another more broad way to look at salaries is to do some comparison of costs on a per customer basis among utilities of similar characteristics, and see if anything appears to be out of place and worth investigating. Perhaps one company will have more employees at lower

salaries than another with fewer, higher paid employees, but it may be that if the costs are similar, the ratepayers are indifferent.

As to the actual expenses in the filing or utility submission, the auditor could assure that the filing reconciles with various payroll records, such as quarterly tax reports. Also, the auditor will want to look for supporting documentation for any payroll adjustments that are proposed. Is there a union contract denoting the increase reflected in the case? Is there a minute of the Board of Directors' authorizing salary changes? Are there payroll records verifying the number of employees during the test year? The auditor should also remember that as salaries and wages are adjusted, so are payroll taxes.

Another area often examined relates to overtime. One will want to determine if the amount of overtime included in the test year is reasonable and more importantly, typical. Therefore, the auditor may wish to look at the percentage of overtime worked during the past few years (generally three to five years) and compare it to the percentage of overtime in the test year. If there is a large difference between the historical numbers and the test year numbers, one will want to obtain an explanation. Additionally, one may wish to consider using a multiple year average percentage of overtime to use in the computation of the revenue requirement in order to normalize any test year anomalies. One may wish to look at capitalization versus expense ratios, and contract labor levels in a similar manner to that just described for overtime.

The auditor may also find it informative to look at severance costs (e.g., for recent changes of top management) and stock options in terms of the overall reasonableness of compensation packages. It is important to remember that through the audit, the auditor is not trying to manage the company, or even tell the company what the utility policies are to be. Rather, one is attempting to determine what is a reasonable level to be included in revenue requirement for inclusion in customer rates. The auditor should find out whether his/her Commission has allowed severance costs and stock options to be included in setting rates.

Pensions

A basic understanding of SFAS 87, Employers' Accounting for Pensions, will want to be held by the auditor. This accounting standard requires that pension plans be accounted for on an accrual basis rather than on a cash basis. In other words, the cost of an employee's pension is recognized over that employee's approximate service life, and the books reflect those expenses over that life, rather than basing it on the amount the employer decides to contribute to that plan for any particular period. The statement also requires immediate recognition of a liability when the accumulated benefit obligation exceeds the fair value of plan assets. This later provision of recognizing an additional liability may have ratemaking relevance with continued dramatic movements in stock values and thus, the value of pension plans. The auditor will want to see what has transpired with the pension plan relative to recent changes in the stock market.

The auditor will also want to gain some understanding of where the pension plan stands relative to the actuary's view of pension funding requirements. Is the plan over or under funded? Is there a provision or adjustment in the utility's filing for some catch-up funding to recognize current under funding?

Postretirement Benefits Other than Pensions

Before 1993, most companies recognized the cost of providing postretirement benefits other than pensions when they actually made the payments. When health care costs were not thought to be very significant, this "pay-as-you-go" method was considered to be in accordance with generally accepted accounting principles. As health care costs escalated, Financial Accounting Standards Board (FASB) reconsidered how to account for postretirement benefits other than pensions.

In December 1990, FASB issued SFAS 106, Employers' Accounting for Postretirement Benefits Other than Pensions. FASB concluded that companies should stop cash accounting and begin accruing retiree welfare benefits (medical, dental, and life insurance) just as they accrue pensions; and they should recognize the accumulated postretirement benefit obligation not recorded during prior periods (i.e., transition benefit obligation). SFAS 106 required companies to amortize the transition benefit obligation over 20 years or less. Many commissions objected to making these changes because of the rate impact.

The auditor should be familiar with SFAS 106, Employers' Accounting for Post Retirement Benefits Other than Pensions, and SFAS 112, Employers' Accounting for Postemployment Benefits. One will want to make sure that any interplay of these standards with the payroll entries is fully understood.

Customer Sales Expense

The auditor will want to look at customer sales expense, which includes not only labor costs, but also costs of operating service centers, advertising and customer information expenses, merchandising costs, and other related items. These costs include a mix of the more routine with items that can and do become controversial.

Advertising is an item that warrants a look based on the individual jurisdiction's current regulatory stance. In the past, many regulators disallowed any promotional advertising from rates, since there was a common belief that a monopoly service did not require promotional advertising. However, regulators did commonly allow the cost of informational advertising (e.g., conservation) and safety ads to be included in revenue requirement. Thus, it was common practice to obtain a break out of advertising costs by category, such as legal notices, promotional ads, safety ads, and other, such as ads of new programs that might be put into effect. It was also common for the auditor to obtain copies of the ads in order to check the categorization and make sure that they actually related to the provision of utility service.

However, there is a new twist to this whole issue of advertising with the introduction of competition, or customer choice, in some jurisdictions. In a competitive world, there may be more of a need for companies to advertise to obtain and keep customers. However, many jurisdictions have required the competitive service to be offered by an affiliate or separate division. Thus, the auditor should determine if there are reasons to allow competitive advertising in the case, or whether those costs should be being separately tracked by a separate entity of the company.

Another item that has warranted considerable discussion is the replacement of local customer offices with regional service centers. While much of the transition to regional service centers has already occurred for many utilities, there are still questions about their effectiveness and efficiency. In other words, are customers being served as well or better, and what indicators or documentation exists to make that comparison? Additionally, are there cost savings that have occurred with the establishment of a service center and the closure of local offices, and if so, are those savings properly reflected in rates?

Billing and Collection Expense

Much of the detail used in analyzing this account has been described earlier relative to looking at uncollectibles and meter maintenance. Overall, the auditor should fully understand the utility's policies on shut offs, determining late fees, and the nature of its billing format (and the customers' ability to understand the billing format). Otherwise, the numbers should be verified for reasonableness and accuracy.

Dues and Donations

The auditor should focus on identifying those dues and donations that are reasonably included in rates relative to the provision of service. Dues to trade organizations may assist in the provision of service. However, one might look to question whether donations to a political candidate are necessary for the provision of service. Are charitable donations or golf club memberships necessary? Again, it is not the intent to direct where the utility can spend its money, but rather, to decide how much of that expense should be paid by ratepayers rather than shareholders. Do ratepayers benefit in some way from the expenditure?

One source of information on breaking out these expenses is the Audit Report on the Expenditures of the Edison Electric Institute (for electric) or Audit Report on the Expenditures of the American Gas Association (for natural gas). These reports break out the utilities' payments to these trade associations, and assist in identifying the portion of the expense that may be troubling to a particular jurisdiction. One should also examine the invoices for the dues paid, since these invoices often indicate what portion of the dues is for the support of political activity.

Outside or Contract Services

The auditor will first want to identify the types of costs contained in this account. Is it primarily legal fees for outside counsel? Is it consulting fees related to a rate case or other regulatory

matters? Are the fees related to the local jurisdiction? Is it independent audit fees? Once there has been some identification of the types of costs included in this account, then one can begin to question and explore the need and reasonableness of the various expenses. Review of professional fees, such as legal and accounting, may also provide insight into issues not previously disclosed, such as condemnation proceedings or lawsuits by customers.

The auditor may also find it useful to verify some of the monthly transactions to invoices, in order to assure that the expense is reasonably associated with the jurisdiction's activities. For instance, there could be legal or consulting expenses associated with corporate restructuring that appear would be more appropriately assigned to an unregulated subsidiary.

Regulatory Expenses

The auditor will want to identify the type of expenses included in this account, since the account may include everything from salaries to filing fees to annual regulatory assessments fees. The auditor will want to verify the costs to invoices or other supporting documentation. Additionally, one will want to verify whether these costs are included in rates as an operating expense, or whether some or all of them are treated as separate line items on customers' bills and simply passed through without impacting the income statement. (This might be the case with a municipal franchise fee or a public utility commission assessment.)

The auditor may also wish to determine the appropriateness of any adjustment that is made in a rate filing tying payments in this account to the level of revenues. In other words, one will want to determine the appropriateness of increasing this expense as a function of increasing rates, assuming that some of the expenses may be based on a percentage of revenue.

Taxes Other than Income Taxes

This account may contain a variety of items including property taxes, franchise fees, and sales taxes. Each of these items may have a different rate or regulatory treatment than the others. The auditor will want to identify the major categories of items included in this account, and understand the regulatory treatment of each of the major categories. For example, sales taxes may be treated as a pass through to customer rates as a line item on the bill, and therefore, have no impact on the utility's earnings. On the other hand, property taxes may be treated as an operating expense, and be subject to adjustments in rate proceedings as plant is added.

In looking at any adjustment for property taxes, the auditor will want to determine if the adjustment is being caused by the addition of plant or a change in the assessment rate. The auditor will want to generally understand the formula used to derive property tax expense, which will then assist in determining whether any adjustment to property taxes is reasonably computed.

If there are any adjustments proposed to plant, the auditor should consider the effects on property tax expense. If the jurisdiction's property taxes are based primarily on original cost net book value, then one would expect that the property tax assessment base roughly equal the utility's

total state net cost (the jurisdiction's plant in service less accumulated depreciation) at the beginning of the fiscal year times the average tax rate. Thus, one could look to an adjustment to tax expense based on:

Property Tax = (Average Tax Rate) x (Plant in Service – Accumulated Depreciation)

However, each jurisdiction's assessment may consider other factors, such as economic obsolescence or a measurement of capitalized earnings. This is why the auditor should become familiar with the general computation of property taxes for his/her jurisdiction.

CAPITAL STRUCTURE

Debt and Associated Interest Rates

The auditor will want to find resources (such as the C.A. Turner Utility Reports) to determine if the proportion of the capital structure associated with debt is similar to that for the industry being examined as a whole. Additionally, one will want to look at the pieces of the portfolio. Why has the debt been issued (e.g., is it all to finance utility plant or are there cash flow needs or other non-utility plant investments)? Has debt been called and refinanced, and if so, why? Has the utility refinanced its higher cost debt? Similarly, one will want to look at the interest rate, and determine whether it is consistent with the interest rates seen for other, similar utilities. One will want to look for resources that might assist in these comparisons (such as Mergent Bond Record).

If the utility's proportion or cost of debt is significantly different than that indicated as industry averages, the auditor may wish to consider using a *hypothetical* capital structure, in lieu of the actual capital structure. In doing this, one would look to base the capital structure on industry averages for similarly situated utilities, in effect, using a more normal capital structure for rates than that indicated by the actual capital structure. This is sometimes done when either the proportion of debt or proportion of equity is an unusually large portion of the capital structure.

Another item to examine is the treatment of the debt issuance costs. Have these costs been included in the overall cost of the debt, and if so, has this been done in a way that amortizes that cost over the life of the debt? Or, has some other means (such as expensing) been used to reflect the cost of the debt in rates, and if so, has that been done on a normalized basis?

Finally, if the jurisdiction has over authority for approval of debt issuances, have all of the issuances received the proper approval from regulatory bodies?

Preferred Stock

Similar to the analysis done on debt issuances, the auditor will want to examine the proportion of, and cost of, preferred stock relative to general industry average comparisons.

Equity

The auditor will want to again look at the reasonableness of the proportion of equity contained in the capital structure. Additionally, one may want to look at the pattern of issuances – how often is equity issued and for what purposes (e.g., as part of stock options for employees or officers, to finance non-utility operations or payroll, other). Are the company's policies on dividends and its earnings retention policy such that it is able to do a reasonable amount of internal financing for new projects and capital needs?

The auditor may also find it helpful to read comments and materials issued by securities and Wall Street analysts, such as Value Line, along with Reports to Shareholders. Reading these kinds of items may offer an insight to what is going on in the business and can lead to further questions for the company. Furthermore, the auditor may find it useful to look at ratios such as market to book, price to earnings, the change in price of the stock in question versus the change in price of other stocks within the peer group, and other similar items.

AFFILIATE TRANSACTIONS

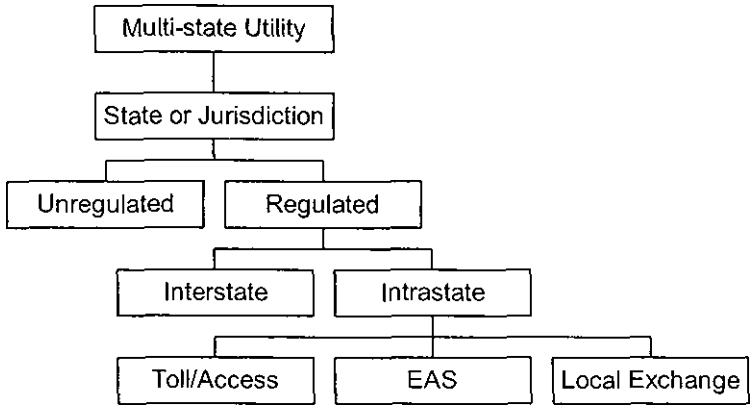
Many state jurisdictions have laws, rules, and policies about affiliate transactions and transfer pricing. The auditor should determine whether the utility needs approval for its affiliated interest transactions and transfer prices, and whether it has met its legal obligation.

ALLOCATIONS

Cost allocations are used to determine:

(1) The level of total state costs for multi-state utilities;
(2) The regulated (versus unregulated) component of total state costs,
(3) The intrastate (versus interstate) regulated component of total state costs, and
(4) The revenue requirement by category of service.

An example of how the allocation process may work is shown below:



Interjurisdictional Allocations

For multi-state utilities, it is necessary to allocate the common costs of headquarters and other centralized operations to the various state jurisdictions. Where common facilities cross state boundaries or provide service outside the state in which they are located, the utility must make allocations to develop state-basis rate base and expenses. There are no uniform procedures for these allocations. During the rate case investigation, the auditor should review the utility's allocation procedures. For telecommunications utilities, the FCC has extensive rules for jurisdictional separations.

Regulated/Unregulated Allocations

FERC, FCC, SEC, and state rules and laws govern the allocation of costs between regulated and unregulated operations. Part of the general rate case investigation is to review the utility's cost allocation procedures and associated financial results to ensure that unregulated costs are properly allocated to unregulated (non-operating) accounts. The auditor will also want to look for "incidental" uses of regulated plant to determine whether a proper assignment of costs has been determined. For instance, the utility may propose that regulated operations could pay for new fiber, when the fact is that the new fiber will be used to generate substantial revenues for unregulated operations or unregulated services.

JURISDICATIONAL ALLOCATIONS

The Commission may require utilities to record certain events differently than the FCC or FERC allow, due to state laws or Commission policies. Because some utilities must follow the federal system of accounts, they must track the Commission's requirements through jurisdictional side records. A common accounting difference is when the FCC and state do not authorize the same depreciation rates. Another example of a difference that may occur relates to a jurisdiction's imputation of directory (yellow page) revenue, due to affiliated publishing arrangements that do not comply with the jurisdiction's affiliated interest rules. Side records generally create temporary tax differences that result in deferred income taxes for ratemaking purposes.

FINAL PROCEDURES

It is normal for the auditor to have a closing discussion with the utility representatives at the end of the on-site visit or audit. During this discussion, one can recap some of the concerns that might exist, items that the utility has agreed to change as a result of found errors, and review items that are still in the follow-up process. As to the follow-up items, it is important to review what one believes the utility has agreed to provide, and to establish an estimated (or actual) date by which the information is to be provided.

The auditor may have also created a separate list of to-do items that will require follow-up back in the office. For instance, during a discussion, it may have been mentioned that the utility followed a certain procedure because of direction that it received in a case from the past. The auditor might look up that order and see if the utility is interpreting the Commission's action in the same manner that the auditor does. In other instances, one might have been told that this was the understanding received from discussions with others at the Commission. Again, it might be worthwhile for the auditor to verify that discussion point.

The auditor will want to identify the documents that it would like copies of from the audit, and make sure that those are provided either at the exit interview or as follow-up in the mail. The auditor will then want to review and study those documents and ask any further questions that arise after the close of the site visit.

Lastly, the auditor will want to follow the jurisdiction's practice for completing the documentation and recommendations. Perhaps, this step involves compiling workpapers that are then used by others in preparing recommendations. Perhaps it involves preparing a report to staff management or the Commission. In other instances, it may culminate in filing testimony and exhibits. During the step the auditor may also wish to separately flag any information received that may be of interest in future cases such that it can be stored or filed separately.

REVENUE REQUIREMENT COMPUTATION

The *rate base, rate of return* approach to ratemaking measures a utility's revenue requirement using the following basic formula:

$R = E + (V \times r)$

R = Total revenue requirements
E = Total operating expenses, including deprecation and taxes
V = Value of rate base
r = rate of return

Therefore, as the auditor looks at the impact that any particular adjustment will have on revenue requirement, he/she should take into account the income tax impact, as well as the impact of the revenue conversion factor. For example, the revenue requirement impact of a rate base adjustment would be computed as:

(Adjustment to Rate Base x after-tax rate of return on rate base[4]) x net to gross factor

A revenue requirement impact of a change in revenues would be computed as:

[Adjustment to Revenues – (Adjustment to Revenues x Income Tax Rate)] x net to gross factor

In computing the revenue requirement of an expense change, one would use the same formula as that designated above for a revenue change.

The following tables provide examples of the computation of rate base, rate of return on rate base, net operating income, and revenue deficiency. They are meant to be illustrative only.

[4] When interest synchronization is used, the revenue requirement impact of a rate base adjustment would be computed as: [(Adjustment to rate base x **after tax** rate of return on rate base) x net to gross factor].

Example Computation of Revenue Deficiency

	Company Adjusted	Staff Adjusted
Rate Base	$792,534,826	$775,266,347
Recommended Return on Rate Base	9.79%	9.49%
Calculated Allowed Return	$77,589,159	$73,572,776
Net Operating Income	$57,006,682	$59,995,491
Income Deficiency	$20,582,477	$13,577,286
Net to Gross Tax Multiplier	1.61	1.61
Revenue Deficiency	$33,137,789	$21,859,430
Deficiency as Percent of Retail Revenue	15.3%	9.94%

Example Computation of Rate of Return

	Dollar Amounts	Percentage of Total	Cost of Capital	Weighted Cost
Debt	$400,987,632	47.15%	7.93%	3.74%
Preferred Stock	$20,009,700	2.35%	8.65%	0.20%
Equity	$429,453,568	50.50%	11.00%	5.55%
Total / Overall Rate of Return	$850,450,900	100%		9.49%

Example Computation of Rate Base

	Company Books	Company Adjustments	Company As Adjusted	Staff Adjustments	Staff As Adjusted
Plant in Service	$1,018,148,893	$178,432,801	$1,196,581,694	($7,163,680)	$1,189,418,014
Plant Held for Future Use	930,274	0	930,274	(678,985)	251,289
Misc. Deferred Debits	13,770,053	142,108	13,912,161	(8,014,433)	5,897,728
Acquisition Adjustment	23,758,411	0	23,758,411	0	23,758,411
Prepayments	4,717,479	0	4,717,479	(874,544)	3,842,935
Fuel Stock	6,838,332	879,042	7,717,374	0	7,717,374
Materials and Supplies	14,772,467	0	14,772,467	270,502	15,042,969
Working Capital	2,909,838	578,401	3,488,239	(230,872)	3,257,367
Rate Base Additions	$1,085,845,751	$180,032,352	$1,265,878,103	($16,692,012)	$1,249,186,091
Accumul. Depreciation	379,123,702	$1,764,842	380,888,544	(175,566)	380,712,978
Accumul. Amortization	12,311,595	0	12,311,595	0	1,2311,595
Accumulated DIT	67,390,960	678,421	68,069,381	(66,469)	68,002,912
Unamortized ITC	5,896,865	0	5,896,865	0	5,896,865
Customer Advances	6,176,892	0	6,176,892	0	6,176,892
Customer Deposits	0	0	0	818,502	818,502
Rate Base Deductions	$470,900,014	$2,443,263	$473,343,277	$576,467	$473,919,744
TOTAL RATE BASE	$614,945,737	$177,589,089	$792,534,826	($17,268,479)	$775,266,347

Example Computation of Net Operating Income

	Company Books	**Company Adjustments**	**Company As Adjusted**	**Staff Adjustments**	**Staff As Adjusted**
Operating Revenues	**$300,758,598**	**$14,792,403**	**$315,551,001**	**($3,309,272)**	**$312,241,729**
Production Expenses	$144,432,920	$8,428,074	$152,860,994	($6,215,353)	$146,645,641
Transmission Expenses	7,128,703	1,987,043	9,115,746	(135,513)	8,980,233
Distribution Expenses	4,565,278	988,804	5,554,082	(11,571)	5,542,511
Customer Account. Exp.	2,792,364	1,980,432	4,772,796	0	4,772,796
Customer Service Exp.	173,923	150,043	323,966	0	323,966
Sales Expenses	123,047	0	123,047	0	123,047
Admin. and General Exp.	14,342,433	4,010,092	18,352,525	(255,164)	18,097,361
Depreciation	26,614,782	1,764,842	28,379,624	(175,566)	28,204,058
Amortization	4,132,364	0	4,132,364	(110,335)	4,022,029
Taxes Other than Income	11,594,559	689,741	12,284,300	(696,000)	11,588,300
Income Taxes	24,145,852	(1,500,987)	22,644,875	1,301,422	23,946,297
Investment Tax Credit Adjust.	0	0	0	0	0
Total Operating Expenses	**$240,046,235**	**$18,498,084**	**$258,544,319**	**($6,298,081)**	**$252,246,238**
NET OPERATING INCOME	**$60,712,363**	**($3,705,681)**	**$57,006,682**	**$2,988,809**	**$59,995,491**
Return on Rate Base	**9.87%**		**7.19%**		**7.74%**