Exhibit No.: Issues: Witness: Sponsoring Party: Case No.:

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Monitoring and Accounting Schedules MoPSC Accountant MoPSC Staff EM-96-149

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MISSOURI PUBLIC SERVICE COMMISSION

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UTILITY SERVICES DIVISION

UNION ELECTRIC COMPANY

CASE NO. EM-96-149

STAFF MONITORING AND ACCOUNTING SCHEDULES

Jefferson City, Missouri February 1999

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Staff Calculation of Average Capital Structure and Embedded Cost of Debt and Preferred Year Ending June 30, 1998 (000)

	• • • •		Embedded	Weighted
	Capital S		Cost	Cost
	Dollars	Percent		
Beginning of Sharing Period (June 30, 1997)				
Common Stock Equity	\$2,364,384	54.360%	N/A	N/A
Preferred Stock	155,197	3.568%	5.775%	0.206%
Long Term Debt	1,829,911	42.072%	7.013%	2.950%
Total Capitalization	\$4,349,492	100.000%		
Return portion related to debt and preferred				3.157%
End of Sharing Period (June 30, 1998)				
Common Stock Equity	\$2,415,631	55.334%	N/A	N/A
Preferred Stock	155,197	3.555%	5.775%	0.205%
Long Term Debt	1,794,739	41.111%	6.978%	2.869%
Total Capitalization	\$4,365,567	100.000%		
Return portion related to debt and preferred				3.074%
Average for sharing period				
Common Stock Equity	\$2,390,008	54.848%	N/A	N/A
Preferred Stock	155,197	3.562%	5.775%	0.206%
Long Term Debt	1,812,325	41.591%	6.996%	2.910%
Total Capitalization	\$4,357,529	100.000%		
Return portion related to debt and preferred				3.115%
Return portion related to common equity				54.848%

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Monitoring Schedule 1 Page 1 of 5

Monitoring Schedule 1 Page 2 of 5

Union Electric Company Incentive Regulation Monitoring Case No. EM-96-149

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Staff Calculation of Achieved Cost of Common Equity Year Ending June 30, 1998 (000)

		Missouri
	Total Electric	Jurisdictional
Plant in Service	\$ 8,247,689	\$ 7,386,184
Reserve for Depreciation	3,162,410	2,815,161
Net Plant	\$ 5,085,279	\$ 4,571,023
Add:		
Fuel and Materials & Supplies	197,523	170,633
Cash Working Capital	(27,466)	(24,000)
Prepayments	12,479	10,904
Less:		
Income Tax Offset (Staff Method)	57,971	59,401
Interest Expense Offset (Staff Method)	16,160	14,533
Customer Advances	8,113	8,065
Customer Deposits	10,435	10,435
Accumulated Deferred Income Taxes	836,061	733,777
(A) Total Rate Base	\$ 4,339,075	\$ 3,902,348
(B) Net Operating Income	\$ 457,077	\$ 431,361
(C) Return on Rate Base $((B) / (A))$	10.534%	11.054%
(D) Return Portion Related to Debt & Preferre	ed 3.115%	3.115%
(E) Return Portion Related to Common Equity ((C) - (D))	7.419%	7.939%
(F) Equity Percentage of Capital Structure	54.848%	54.848%
(G) Achieved Cost of Common Equity ((E) / (F))	13.526%	14.474%

Monitoring Schedule 1 Page 2 of 5

Monitoring Schedule 1 Page 3 of 5

Union Electric Company Incentive Regulation Monitoring Case No. EM-96-149

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Staff Calculation Income Statement Year Ending June 30, 1998 (000)

	То	tal Electric	Missouri Jurisdictional				
Operating Revenues	\$	2,133,116	\$	1,916,228			
Operation & Maintenance Expenses: Production:							
Fixed Allocation	\$	90,644	\$	79,025			
Varible Allocation		548,552		468,299			
Directly Assigned		(2,436)		(2,048)			
Total Production Expenses	\$	636,761	\$_	545,276			
Transmission Expenses (Fixed)	\$	14,593	\$	12,715			
Distribution Expenses (Direct)		84,837		79,345			
Customer Accounting, Customer Service							
and Sales Expenses (Direct)		59,428		55,659			
Administrative & General Expense:							
Directly Assigned	\$	3,132	\$	2,763			
Labor Allocation		195,437		171,066			
Total Administrative & General Expense	\$_	198,569	\$_	173,829			
Total Operation & Maintenance Expenses	\$	994,188	\$	866,825			
Depreciation & Amortization Expense:							
Fixed Allocation	\$	66,965	\$	58,346			
Labor Allocation		9,724		8,594			
Directly Assigned		171,632		156,477			
Total Depreciation & Amortization Expense	\$	248,321	\$_	223,417			
Taxes Other Than Income Taxes:							
Fixed Allocation	\$	52,194	\$	45,477			
Varible Allocation		1,848		1,578			
Labor Allocation		3,502		3,095			
Directly Assigned		145,747		134,524			
Total Taxes Other Than Income Taxes	\$_	203,291	\$	184,673			
Income Taxes							
Federal Income Tax	\$	198,112	\$	178,251			
Enviornmental Tax		(445)		(400)			
Misssouri State Income Tax		29,435		32,100			
Other States Income Tax		3,137		0			
Total Income Taxes	\$	230,240	\$_	209,952			
Net Operating Income	\$	457,077	\$_	431,361			

Monitoring Schedule 1 Page 3 of 5

	Monitoring Schedule 1
Union Electric Company Incentive Regulation Monitoring Case No. EM-96-149	Page 4 of 5
Staff Calculation of Customers Sharing Credit Year Ending June 30, 1998 (000)	
Missouri Rate Base	\$3,902,348
Total Return on Rate Base	11.054%
Earned Return on Common Equity	14.474%
50% Sharing for Earned Return > 12.61% but < 14.00% [(14% - 12.61%) x 50% x Rate Base x Common Equity %]	\$14,875
Total 50% Sharing Including Income Taxes **	\$24,144
100% Sharing for Earned Return > 14% [(Achieved Return on Equity - 14%) x 100% x Rate Base x Common Equity %]	\$10,144
Total 100% Sharing Including Income Taxes **	\$16,465.21
Total Customers Sharing Credit for the Current Period Including Income Taxes	\$40,609
Under (Over) Credit of Actual 1997 Customers Sharing Credit	\$41
Total Customers Sharing Credit	\$40,650

** Gross-up factor for income taxes - 1.6231

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Monitoring Schedule 1 Page 4 of 5

Monitoring Schedule 1 Page 5 of 5

Union Electric Company Incentive Regulation Monitoring Case No. EM-96-149

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Allocations 12 Months Ending June 30, 1998

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	Total	Missouri
	Electric	Jurisdictional
Fixed	100.00%	87.13%
Varible	100.00%	85.37%
KWH sales	100.00%	83.56%
Nuclear	100.00%	86.99%
Distribution	100.00%	94.30%
Missouri Distribution	100.00%	99.35%
Labor	100.00%	88.38%
Net Plant	100.00%	89.89%
Operating Revenues	100.00%	89.82%
Operating Expenses	100.00%	87.38%

Monitoring Schedule 1 Page 5 of 5

Average Rate Base Year Ending June 30, 1998

Revenue (Refund) Requirement

		12.61% Equity Return		14.00% quity Return
(A)		(B)		(C)
Net Original Cost Rate Base (From Acctg. Sch. 2)	\$	3,902,348	\$	3,902,348
Rate of Return		10.03%		10.79%
Net Operating Income Requirement	\$	391,465	\$	421,216
Net Income Available (From Acctg. Sch 8)		431,361		431,361
Additional Net Operating Income	-	*************		
Needed Before Income Taxes	\$	(39,895)	\$	(10,144)
Income Tax Requirement: (From Acctg. Sch. 10)				
Required Current Income Tax	\$	211,118	\$	229,655
Test Year Current Income Tax		235,975		235,975
Additional Current Income Tax Required	\$	(24,858)	\$	(6,321)
Revenue Requirement	- 5	48,288	\$	16,465
	· ##14- 17- 141 20 ## 23423			

Revenue Refund : province of the second seco

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Average Rate Base Year Ending June 30, 1998

		-	Missouri Jurisdiction
Total Average Plant In Service (From A	Accounting Schedule 3)	\$	7,386,184
Average Depreciation Reserve (From A	Accounting Schedule 5)		2,815,161
Net Average Plant In Service		\$	4,571,023
Add: Stipulated Cash Working Capital Unspent nuclear fuel in reactor Coal Inventory Other fuel and General M&S Average prepayments	(From Accounting Schedule 7) (From Accounting Schedule 7) (From Accounting Schedule 7) (From Accounting Schedule 7)	\$	(24,000) 35,245 50,265 85,124 10,904
Total Additions		\$	157,537
Less: Income tax offset @ 25.13% Interest offset @ 12.80% Customer Advances Accumulated deferred income tax Customer Deposits		\$	59,401 14,533 8,065 733,777 10,435
Total Deductions		\$	826,211
Total Rate Base	(To Accounting Schedule 1)	\$	3,902,348

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Average Plant In Service Year Ending June 30, 1998

		T-4-1			g Schedule 4 ny Adjustments		Adjusted	A 13		
Description		Total Company		Amount	Adjust. No.		Total Electric	Allocation Factor		Missouri Iurisdictional
Intangible Plant	-	••••				-			-	
Account 301	•									
System General	\$	138	\$		- 4	\$	138	88.38%	\$	122
Heating and Gas	<u>^</u> -	5		(5)	P-1	<u>,</u>	0		<u> </u>	
Total Account 301	\$_	143	\$.	(5)		<u> </u>	138		\$_	122
Account 302	•	1.4					16	0 		
Power Pool	\$	16					16	87.13%		14
System General		3					3	88.38%		3
Heating and Gas	<u> </u>	0	<u> </u>	(0)	P-2	<u> </u>	0			
Total Account 302	\$_	19	\$.	(0)		\$_	19		\$_	17
Total Intangible Plant	\$_	162	\$_	(5)		\$_	157		\$_	138
Production Plant										
Nuclear	\$	2,874,945	\$			\$	2,874,945	87.13%	\$	2,504,939
Callaway Disallowances		(268,862)					(268,862)	Direct		(229,235)
Steam		1,950,682					1,950,682	87.13%		1,699,629
Hydraulic		145,190					145,190	87.13%		126,504
Other		41,193					41,193	87.13%		35,891
Total Production	\$_	4,743,147	\$	0		\$_	4,743,147		\$_	4,137,728
Transmission Plant	\$_	428,577	\$	<u></u>		\$_	428,577	87.13%	\$_	373,419
Distribution Plant										
Missouri	\$	2,507,159	\$	1,285	P-4	\$	2,508,444	Direct	\$	2,492,072
Illinois		134,206					134,206	0.00%		0
Iowa		0					ʻ 0	0.00%		0
Total Distribution	\$_	2,641,365	\$	1,285		\$	2,642,650		\$_	2,492,072
General Plant	\$_	437,150	\$	(3,991)	P-3	\$_	433,159	88.38%	\$_	382,826
Plant Held For Future Use	\$_	0	\$			\$_	0		\$_	0
Total Plant In Service	\$	8,250,400	\$	(2,711)		\$	8,247,689		\$	7,386,184

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Accounting Schedule 3

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Union Electric Company				
Incentive Regulation Monitoring				
Case No. EM-96-149				

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Adjustments to Plant In Service Year Ending June 30, 1998

P-1				
Intangible Plant Account 301			\$	(5)
1 To adjust plant in service to exclude steam heating and				
gas operations.	\$	(5)		
P-2				
Intangible Plant Account 302			\$	(0)
•	I		Ф	(0)
		(0)		
gas operations.	\$	(0)		
P-3				
General Plant			\$	(3,991)
1 To adjust plant in service to exclude steam heating and	l			
gas operations.	\$	(6,024)		
2 To capitalize EMPRV and AMRAPS computer		2,033		
systems.		-		
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P-4				
Distridution Plant			\$	1,285
1 To include substation construction associated with				
territorial aggreements	\$	1,285		

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Average Depreciation Reserve Year Ending June 30, 1998

		Total		Total Compar	g Schedule 4 19 Adjustments		Adjusted Total	Allocation		Missouri
Description		Company		Amount	Adjust. No.		Electric	Factor		Jurisdictional
Intangible Plant Account 301						-			-	
System General	\$	0	\$			\$	0		\$	0
Heating and Gas		0				-	0		_	
Total Account 301	\$_	0	\$	0		\$_	0		\$	0
Account 302										
Power Pool	\$	0					0			0
System General		0					0			0
Heating and Gas		0				_	0		_	<u> </u>
Total Account 302	\$_	0	\$_	0		\$_	0		\$	0
Total Intangible Plant	\$ =	0	\$	0		\$_	0		\$ =	0
Production Plant										
Nuclear	\$	741,691	\$			\$	741,691	86.99%	\$	645,197
Callaway Post Operational		17,784					17,784	94.34%		16,777
Steam		921,707					921,707	87.13%		803,083
Hydraulic		59,936					59,936	87.13%		52,222
Other		36,099					36,099	87.13%		31,453
Total Production	\$_	1,777,217	\$ <u></u>	0		\$_	1,777,217		\$	1,548,733
Transmission Plant	\$ =	177,952	\$_	-		\$_	177,952	87.13%	\$_	155,050
Distribution Plant										
Missouri	\$	1,037,622	\$	17	R-2	\$	1,037,638	99.35%	S	1,030,894
Illinois		78,536					78,536	0.00%		0
Iowa		0					0	0.00%		0
Total Distribution	\$_	1,116,158	\$	17		\$_	1,116,174		\$	1,030,894
General Plant	\$_	92,365	\$	(1,298)	R-1	\$_	91,067	88.38%	\$ =	80,485
Total Plant In Service	\$	3,163,691	\$	(1,281)		\$	3,162,410		\$	2,815,161

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Adjustments to Depreciation Reserve Year Ending June 30, 1998

R-1		
General Plant Reserve		\$ (1,298)
1 To adjust plant in service to exclude steam heating and		
gas operations.	\$ (1,298)	
R-2		17
Distribution Plant		
1 To include the depreciation reserve on territorial		
aggreement plant additions.	17	

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Average Fuels, Material & Supplies and Prepayments Year Ending June 30, 1998

Unspent Nuclear Fuel in Reactor

	Missouri	
	Jurisdictional	Missouri
Total Company	Percentage	Jurisdictional
\$41,284	85.37%	\$35,245

Coal

Total Year Burn		75 Day Supply	Current Cost/Ton	Adjusted Coal Inventory (\$) Level
7,681	Labadie	1,578	\$17.335	27,360
2,698	Sioux	554	19.508	10,816
1,289	Meremac	265	26.004	6,886
4,088	Rush Island	840	16.449	13,817
				58,879
		Missouri Jurisdic	tional Percent	85.37%

Missouri Jurisdiction

\$50,265

Other Fuel and General M&S

		Missouri	
		Jurisdictional	Missouri
Total Company		Percentage	Jurisdictional
\$1,826	Oil	85.37%	\$1,559
4	Shredded Tires	85.37%	3
37	Propane/Elec	85.37%	32
437	Propane/Gas		0
74,736	Power Pool M&S	85.37%	63,802
20,757	Direct M&S - Elec	NA	19,728
1,592	Direct M&S - Gas	NA	0

\$99,388			\$85,124

Prepayments

Total Company		Missouri Jurisdictional Percentage	Missouri Jurisdictional
\$12,711	-		····
233	Gas & steam h	eating	
\$12,479	Electric	87.38%	\$10,904

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Union Electric Company Incentive Regulation Monitoring Case No. EM-96-149

Income Statement Year Ending June 30, 1998

		Total Electric As Recorded		Total Company Adjustment	Adjustmen t Number	Allocation Factor	_	Missouri Jurisdicational		Jurisdicational		Jurisdictiona Adjustment	Adjustment Number	_	Adjusted Jurisdictiona	
Operating Revenue	\$	2,131,069	\$	0	S-1	NA	\$	1,914,181	\$	2,047	S-1	\$	1,916,228			
Operating & Maintenance Expense	es.															
Production																
Variable	\$	557,794	\$	(9,242)	S-2	85.37%	\$	468,299	\$	0	S-2	\$	468,299			
Direct		(2,436)		0	S-3	NA		(2,048)		0	S-3		(2,048)			
Power Pool		90,285		0	S-4	87.13%		78,666		359	S-4		79,025			
Tranmission		14,593		0	S-5	87.13%		12,715		0	S-5		12,715			
Distribution						_										
Missouri		79,443		0	S-6	99.35%		78,927		419	S-6		79,345			
Other direct		4,975				0.00%		0					0			
Customer Accounting																
Missouri direct		54,551		0	S-7	NA		54,540		1,119	S-7		55,659			
Other direct		3,758				0.00%		0					0			
Administrative and General																
Direct		4,441		0	S-8	NA		4,072		(1,309)	S-8		2,763			
System General		210,062	_	(328)	S-9	88.38%	_	185,363	_	(14,297)	\$-9	_	171,066			
Total Operation & Maintenance	\$	1,017,467	\$	(9,570)			\$	880,535	\$	(13,709)		\$	866,825			
Other Expenses																
Depreciation and Amortization	1															
Power Pool		66,965		0	S-10	87.13%		58,346		0	S-10		58,346			
Direct		171,412		0	S-11	NA		156,257		220	S-11		156,477			
System General		9,724		0	S-12	88.38%		8,594		0	S-12		8,594			
Taxes Other																
Varible		1,848		0	S-13	85.37%		1,578		0	S-13		1,578			
Power Pool		52,194		0	S-14	87.13%		45,477		0	S-14		45,477			
Direct		145,271		0	S-15	NA		134,048		476	S-15		134,524			
System General		3,502		0	S-16	88.38%		3,095		0	S-16		3,095			
Other Expenses	\$	450,915	\$	0			\$	407,394	\$	696		\$	408,091			
Net Operating Inc.Before Inc. Tax	\$	662,686	\$	9,570			\$	626,252	\$	15,060		\$	641,312			
Income Taxes																
Current	\$	230,240	\$	0	S-17	Various	\$	212,120	\$	23,855	S-17	\$	235,975			
Deferred		(48,488)		0	S-18	Various		(37,406)		11,382	S-18		(26,024)			
Total Income Taxes	\$	181,752	\$	0			\$	174,715	\$	35,237		\$	209,952			
Net Operating Income	\$	480,934	\$	9,570			\$	451,537	\$_	(20,177)		\$_	431,361			

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Adjustments To Income Statement Year Ending June 30, 1998

Adj.			
No.	Description	Total Company	Missouri Jurisdictional
Reven 1	ue S-1- S-1- S-1- S-1- S-1- S-1- S-1- S-1	s	S
2	To restore lost revenue resulting from territorial	u and a second s	
	aggreements.		2,047
Consideration of the	ction - Variable, S-2	164 - H. (9,242) (9,242)	<u>10</u>
1	To normalize Callaway refueling.	\$ (9,242)	\$
Produc 1	tion - Direct S-3 To adjust fuel consistent with normalized weather.	s S	\$ 0
Produc 1	ction - Power Pool S-4	s	\$ 359
2	To include fuel cost for territorial aggreement lost revenue		\$ 359
Transt	nission S-S	Sec	S
1	No adjustment.	\$	S
Distrib 1	To restore maintenance expense savings for territorial aggreement plant.	s	\$ 419
Cust A	cotg, Svc and Sales S-7	S 0	С. П. 119
1	To include interest on customer deposits at	\$	\$ 991
2	To include residential insulation program		5
3	To adjust uncollectible accounts for actual write- offs.		123
A&G	-Direct	S	S (1,309)
1	To eliminate goodwill advertising.	\$	\$ (250)
2	To eliminate advertising for corporate name		(1,059)
A&G	System General Second S-9 Street Street Street	a stati ⊒ p. \$ 15 u (328)	\$ (14,297)

Accounting Schedule 9 - 1

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Union Electric Company Incentive Regulation Monitoring Case No. EM-96-149

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Adjustments To Income Statement Year Ending June 30, 1998

Adj.						
No.	Description		Total Company			Missouri Jurisdictional
1	To adjust the amortization of merger costs.	\$	0		\$	(232)
2	To eliminate EEI dues.		(745)			
3	To "annualize" FAS 87 & 106		417			
4	To adjust injuries and damages expense		0			(2,250)
5	To eliminate the computer cost associated with Y2K, CSS, EMPRV and AMRAPS					(11,529)
6	To include interest for late decommissioning fund payments.					(287)
Deprex 1	viation - Power Pool, and S-10 Article II and a state of the second state of the secon	\$ \$	er en destan Second	0	5 \$	
Denter	tiation - Direct	-Fille-F				S 220
1	To adjust depreciation expense associated with capitalization of EMPRV and AMRAPS.	\$			5 5	203
2	To include depreciation expense on territorial aggreement plant					17
Deprec 1	nation - System General S-12 No adjustment.	\$ \$	e in AllereSectiv	0	\$	Summer O
Long Contraction Contraction	Other - Variable 111 S-13	210	er Mitan er til Signi	10 0 -		Maranna Statistica O
1	To eliminate property taxes associated with plant held for future use.	\$	0		\$	
Taxes	Other - Power Pool - St14 - Italian Hellin To eliminate property taxes associated with			0.		a - Inc. Sector - O
	plant held for future use.	\$	0		\$	
Taxes 1	Other - Direct S-15 To include enviornmental tax.	\$	S	0	5 8	S 476

Accounting Schedule 9 - 2

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Adjustments To Income Statement Year Ending June 30, 1998

Adj. No.	Description		Total Company		Missouri Jurisdictional
2	To "equalize" GRT in revenue and expense.				476
Taxes (1	Other - System General S-16 Million Million No adjustment.	s		\$ \$	S
Curren 1	t Income Tax S-17 To adjust current income tax expense.	s S	0	\$ \$	S 23,855 23,855
Deferre 1	ed Income Tax S-18 S-18 To eliminate deferred taxes associated with disallowed accellerated depreciation.	s		\$	s 11,382 16,064
2	To eliminate the other deferred tax provision	S			(8,479)
3	To eliminate deferred tax provision for ITC				3,797

Union Electric Company Incentive Regulation Monitoring Case No. EM-96-149 Test Year Ending June 30, 1998

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Income Tax

Description (A)		Test Year (B)		12.61% Return (C)		14.00% Return (D)
Net Operating Income (Acctg. Sch. 1)	\$	431,361	\$	391,465	\$	421,216
Add:						
Current Income Tax		235,975		211,118		229,655
Deferred Income Taxes		(26,024)		(26,024)		(26,024)
Net Income Before Taxes (Acctg. Sch. 8	3)\$	641,312	- \$	576,559	 \$	624,847
Timing diffferences						
Net excluding interest		87,972		87,972		87,972
Interest Expense (2.91%		(113,541)		(113,541)		(113,541)
Net Taxable Income	\$	615,743	\$	550,990	\$	599,278
Provision For Federal Income Tax						<u>· · · · · · · · · · · · · · · · · · · </u>
Net Taxable Income	\$	615,743	\$	550,990	\$	599,278
Deduct:						
Missouri Income Tax 1009	6	32,100		28,725		31,242
Federal Taxable Income	\$	583,643	\$	522,266	\$	568,036
Federal Income Tax @ 359	% \$	204,275	\$	182,793	\$	198,813
Provision For Missouri Income Tax						
Net Taxable Income	\$	615,743	\$	550,990	\$	599,278
Deduct: Federal Income Tax 50%	6	102,138		91,396		99,406
Missouri Taxable Income	\$	513,606	\$	459,594	 \$	499,872
Missouri Income Tax @ 6.259	%\$	32,100	\$	28,725	\$	31,242
Summary of Provision For Income Tax						
Federal Income Tax	\$	204,275	\$	182,793	\$	198,813
Federal Enviornmental Tax	,	(400)		(400)	-	(400)
Missouri Income Tax		32,100		28,725		31,242
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Total Income Tax	(), S	1. 1.235,975	- S -	211,118	\$ ↔	229,655