APPENDIX A-2

A-2 17.20.815 Linear Facilities Estimated Annual Costs

A-2-A MSTI OM Expenses_2008 15-Year Plan1

APPENDIX A-2

ARM 17.20.815 Linear Facilities, Estimated Annual Costs

Paragraph	Subject Matter	Response
(1)	*An application for a linear facility must contain a detailed analysis of the annual costs of the facility for purposes of comparing the facility with alternatives, as required by 75-20-301, MCA, including detail on the capital and operating costs and operational characteristics of the facility.*	See Appendix A-1 for project costs. See A-2, Attachment A for operating and maintenance costs.
(2)	*All estimated construction costs must be escalated to the appropriate date in the construction schedule as explained in ARM 17.20.811 (6).*	The construction costs are provided in Appendix A-1 and were escalated to the appropriate date in the construction schedule.
(3)	*An application must contain information about the likely methods of financing construction of the facility. For facilities taking longer than one year to construct, allowance for funds used during construction must be added to the escalated construction costs to calculate the capital costs as of the date the facility is placed in commercial operation.*	NorthWestern's sources of funding for the Mountain States Transmission Intertie project (MSTI) will look to free cash flow and both debt and equity markets as a primary source of funding. In the debt markets, the most straight forward approach to establish permanent funding for the large scale MSTI project is the issuance of first mortgage bonds; however, during the construction phase a committed construction facility that allows for multiple draws will provide for a lower effective cost. The company will consider two primary

sources of equity funding to support the permanent capital structure of MSTI: discretionary cash (cash that is available after dividends and funding of organic growth projects) and new stock offerings. During the build out phase of MSTI, the company may consider the use of discretionary cash and hybrid debt products. The use of hybrid debt products will reduce the strain of desired credit ratings and capital structure and also avoid the dilutive effect of premature equity offerings. Since the Company wants to maintain a 50 – 55% debt to capitalization ratio it will need to issue equity if cash flow is insufficient to maintain that level.

Total Construction, Financing, & FUDC		2008
Construction (4% escalation included)	$	7,641,961
Idaho Sales & Use Tax (54% of line at 6%)	$	237,360
AFUDC	$	1,733,379
Total Rate Base	$	9,612,700

Total Construction, Financing, & FUDC		2009
Construction (4% escalation included)	$	25,465,290
Idaho Sales & Use Tax (54% of line at 6%)	$	796,404
AFUDC	$	3,600,458
Total Rate Base	$	29,862,152

Total Construction, Financing, & FUDC		2010
Construction (4% escalation included)	$	171,961,704
Idaho Sales & Use Tax (54% of line at 6%)	$	5,371,824
AFUDC	$	13,525,437
Total Rate Base	$	190,858,965

		Total Construction, Financing, & AFUDC — 2011 Construction (4% escalation included) $ 438,428,691 Idaho Sales & Use Tax (54% of line at 6%) $ 13,691,906 AFUDC $ 43,308,719 Total Rate Base $ 495,429,316 Total Construction, Financing, & AFUDC — 2012 Construction (4% escalation included) $ 315,033,954 Idaho Sales & Use Tax (54% of line at 6%) $ 11,516,708 AFUDC $ 73,706,195 Total Rate Base $ 400,301,857 Total Construction, Financing, & AFUDC — 2013 Construction (4% escalation included) $ 23,502,549 Idaho Sales & Use Tax (54% of line at 6%) $ 0 AFUDC $ 0 Total Rate Base $ 23,502,549 Total Construction, Financing, & AFUDC — Total Construction (4% escalation included) $ 982,034,149 Idaho Sales & Use Tax (54% of line at 6%) $ 31,659,202 AFUDC $ 135,874,188 Total Rate Base $ 1,149,567,539 See A-1, Attachment A for escalation and AFUDC.
(4)	*Amortization costs must be calculated by standard industry practice for the estimated life of the bonds or other borrowing, or for the economic life of the facility.*	Estimated Facility Available $ 500,000,000 Estimated Facility Drawn $ 492,897,508 Amortization Period 30 Years

		Debt Arrangement Fees Construction Debt Arrangement Fee Percent: 1.25% — Total Fee: $ 6,250,000 — Annual Amortization: $ 208,333 Term Debt Arrangement Fee Percent: 1.25% — Total Fee: $ 6,161,219 — Annual Amortization: $ 205,374 Construction Debt Undrawn Fee[1] Percent: 0.38% — Total Fee: $ 5,480,984 — Annual Amortization: $ 182,699 Total Debt Arrangement Fees Total Fee: $ 17,892,203 — Annual Amortization: $ 596,407 [1] Construction debt undrawn fees accumulate over time on the amount of the facility that is undrawn. The total fee represented here is derived from the financial model and cannot be calculated from this worksheet.
(5)	*Costs for the first, fifth and tenth full operational year of the facility must be estimated. If current costs are used as a basis they must be escalated, using an appropriate index or indices of recent cost escalation specified in ARM*	See A-2, Attachment A.

	17.20.811 (6), to the first full operational year. The same index or other department approved index or indices must be used to escalate operating costs over the live of the facility.	
(5)(a)	*Annual costs must be disaggregated by relevant categories including, but not limited to, amortization, depreciation, taxes, insurance, interim replacements, and any other capital-related annual costs, operational labor costs, operational material costs, pumping costs, water costs, waste disposal costs, and maintenance costs. Assistance shall be specified. All assumptions used in estimating the costs must be explained.*	Provided below are the annual expense assumptions. <u>Operating & Maintenance Expense</u> All operational dollars incurred prior to 2013 (first year of operation) are capitalized. 2013 O&M expenses equal 3.5% of final construction capital, which is based on transmission experience. Expenses escalate at 3% per year after 2013. Allocation of costs to specific accounts based on transmission O&M expense experience. <u>Depreciation & Amortization Expense</u> Depreciation assumes 30-year book life on original construction capital plus AFUDC, and 30-year book life on maintenance capital. Amortization expense assumes 30-year amortization of $17.9 million in accumulated financing fees.

		Property Taxes Property taxes are calculated on net rate base (beginning rate base plus maintenance capital less accumulated depreciation) at a rate of 2.08% in 2013 and escalating at 3% thereafter. The property tax rate assumes that 50% of the transmission line is located in Idaho and taxed at 1.025%, and that 50% of the transmission line is located in Montana and taxed at 3.132%. Interest Expense Interest expense is based on 30-year bullet maturity debt of approximately $500 million at an interest rate of 6%. Book Taxes Book taxes assume a 35% federal tax rate plus 50% of the Montana state income tax rate of 6.75% and 50% of the Idaho state income tax rate of 7.6%, which results in an effective tax rate of 39.664%. Maintenance Capital Maintenance capital is a high level estimate based on transmission experience that begins at $500 thousand in the early years and

		gradually escalates to $5 million by year 30. A detailed spreadsheet with various categories of cost is provided in Attachment A.
(6)	*An application must contain a description of design capacity and expected operational characteristics of the facility.*	See A-5, Attachment E for discussion of proposed line ratings for complete information on the system studies.
(7)	*For pipelines, energy transport costs for the first, fifth and tenth full operational year must be calculated by dividing the appropriate year's costs by the expected annual net throughput of the facility during full operation.*	Not applicable.
(8)	*For pipelines, levelized energy transport costs must be calculated by dividing levelized annual costs by the expected annual net throughput of the facility during full operation.*	Not applicable.
(9)	*First, fifth and tenth year and levelized costs must be calculated in constant dollars for a specified year, preferable the year of application. The index used to convert nominal to constant dollars must be specified.*	The constant dollar expenses are calculated based on year 2013 expenses, which is the initial year of operation. The levelized expenses are calculated using the weighted average cost of capital rate of 9.90%. Expenses were escalated at 3.0% per year beginning in 2014 based on historic and projected consumer price index figures. This escalation was removed from each year to illustrate the constant dollar expenses attached. Total operation and maintenance expenses

		are based on Northwestern Energy's transmission experience and are calculated as 3.5% of final construction capital costs. O&M expenses are then allocated to specific accounts according to experience. In constant dollars, operation expense first, fifth, and tenth year, as well as 30-year levelized expense is $9.8 million. In constant dollars, maintenance expense first, fifth, and tenth year, as well as 30-year levelized expense is $20.7 million. Depreciation & amortization expense remains constant at approximately $33 million for each time period due to low relative maintenance capital requirements projected compared to the initial construction capital amount. Property taxes decline due to declining rate base as a result of depreciation being significantly greater than capital additions. Interest expense remains constant at $30 million due to the fixed 6% interest rate and bullet maturity assumption. Income taxes decline due to lower assumed revenue in the later years of the 30-year time period as a result of declining rate base causing lower returns on rate base, and therefore, lower taxes. Annual maintenance capital increases due to the assumption that the transmission line will

		require increasing levels of maintenance as time goes on. Refer to Attachment B for a spreadsheet with additional information.
(10)	*An application must contain an explanation of the methods, including rules of thumb, used to estimate costs and operating characteristics.*	See Appendix A-1 for an explanation of developing project costs. Operating and maintenance costs are based upon historical averages.
(11)	*An application must contain estimates of the accuracy of all costs and operating characteristics.*	See Appendix A-1 for an explanation of cost development and added contingencies. Operating and maintenance costs are within 20%.

APPENDIX A-2-A

Mountain States Transmission Intertie Project
Annual Expense Forecast

Expenses	2013	2014	2015	2016
Operating Expenses (3% escalation)				
560-Operation Supervision & Engineering	1,829,244	1,884,121	1,940,645	1,998,864
561-SOCC Labor Union	2,743,866	2,826,182	2,910,967	2,998,296
562-Station Expense	304,874	314,020	323,441	333,144
563-Overhead Line Expense	3,048,740	3,140,202	3,234,408	3,331,440
566-Miscellaneous Transmission Expense	1,829,244	1,884,121	1,940,645	1,998,864
Total Operating Expenses	9,755,967	10,048,646	10,350,106	10,660,609
Maintenance Expenses (3% escalation)				
568-Maintenance Supervision & Engineering	2,438,992	2,512,162	2,587,526	2,665,152
570-Maintenance of Station Equipment	6,707,227	6,908,444	7,115,698	7,329,168
571-Maintenace of Overhead Lines	9,755,967	10,048,646	10,350,106	10,660,609
935-Maintenance of General Plant	1,829,244	1,884,121	1,940,645	1,998,864
Total Maintenance Expenses	20,731,430	21,353,373	21,993,974	22,653,793
Depreciation & Amortization				
Depreciation	32,263,427	32,280,094	32,296,760	32,313,427
Amortization	596,407	596,407	596,407	596,407
Total Depreciation & Amortization	32,859,834	32,876,501	32,893,167	32,909,834
Property Taxes	21,243,382	21,151,328	20,432,319	19,712,954
Interest Expense / LC Fees	30,062,434	30,061,566	30,060,671	30,059,750
Book Taxes	36,071,749	35,739,222	35,644,495	35,538,711
Annual Maintenance Capital	-	500,000	500,000	500,000

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2017	2018	2019	2020	2021	2022	2023
2,058,830	2,120,595	2,184,213	2,249,739	2,317,231	2,386,748	2,458,351
3,088,245	3,180,892	3,276,319	3,374,609	3,475,847	3,580,122	3,687,526
343,138	353,432	364,035	374,957	386,205	397,791	409,725
3,431,383	3,534,325	3,640,355	3,749,565	3,862,052	3,977,914	4,097,251
2,058,830	2,120,595	2,184,213	2,249,739	2,317,231	2,386,748	2,458,351
10,980,427	11,309,840	11,649,135	11,998,609	12,358,567	12,729,324	13,111,204
2,745,107	2,827,460	2,912,284	2,999,652	3,089,642	3,182,331	3,277,801
7,549,044	7,775,515	8,008,780	8,249,044	8,496,515	8,751,410	9,013,953
10,980,427	11,309,840	11,649,135	11,998,609	12,358,567	12,729,324	13,111,204
2,058,830	2,120,595	2,184,213	2,249,739	2,317,231	2,386,748	2,458,351
23,333,407	24,033,409	24,754,412	25,497,044	26,261,955	27,049,814	27,861,308
32,346,760	32,380,094	32,413,427	32,463,427	32,513,427	32,563,427	32,630,094
596,407	596,407	596,407	596,407	596,407	596,407	596,407
32,943,167	32,976,501	33,009,834	33,059,834	33,109,834	33,159,834	33,226,501
18,993,231	18,283,500	17,573,054	16,861,896	16,160,371	15,457,775	14,754,109
30,058,801	30,057,824	30,056,817	30,055,781	30,054,713	30,053,613	29,983,396
35,414,922	35,275,290	35,123,704	34,953,185	34,765,862	34,565,592	15,322,232
1,000,000	1,000,000	1,000,000	1,500,000	1,500,000	1,500,000	2,000,000

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2024	2025	2026	2027	2028	2029	2030
2,532,101	2,608,064	2,686,306	2,766,895	2,849,902	2,935,399	3,023,461
3,798,152	3,912,096	4,029,459	4,150,343	4,274,853	4,403,099	4,535,192
422,017	434,677	447,718	461,149	474,984	489,233	503,910
4,220,169	4,346,774	4,477,177	4,611,492	4,749,837	4,892,332	5,039,102
2,532,101	2,608,064	2,686,306	2,766,895	2,849,902	2,935,399	3,023,461
13,504,540	13,909,676	14,326,967	14,756,776	15,199,479	15,655,463	16,125,127
3,376,135	3,477,419	3,581,742	3,689,194	3,799,870	3,913,866	4,031,282
9,284,371	9,562,902	9,849,790	10,145,283	10,449,642	10,763,131	11,086,025
13,504,540	13,909,676	14,326,967	14,756,776	15,199,479	15,655,463	16,125,127
2,532,101	2,608,064	2,686,306	2,766,895	2,849,902	2,935,399	3,023,461
28,697,148	29,558,062	30,444,804	31,358,148	32,298,893	33,267,859	34,265,895
32,696,760	32,763,427	32,846,760	32,930,094	33,013,427	33,113,427	33,213,427
596,407	596,407	596,407	596,407	596,407	596,407	596,407
33,293,167	33,359,834	33,443,167	33,526,501	33,609,834	33,709,834	33,809,834
14,059,720	13,363,904	12,666,661	11,978,338	11,288,231	10,596,340	9,913,012
29,982,229	29,981,027	29,979,789	29,978,514	29,977,201	29,975,848	29,974,455
15,084,136	14,831,994	14,558,756	14,266,479	13,958,942	13,629,055	13,278,833
2,000,000	2,000,000	2,500,000	2,500,000	2,500,000	3,000,000	3,000,000

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2031	2032	2033	2034	2035	2036	2037
3,114,165	3,207,590	3,303,818	3,402,932	3,505,020	3,610,171	3,718,476
4,671,248	4,811,385	4,955,727	5,104,399	5,257,531	5,415,256	5,577,714
519,028	534,598	550,636	567,155	584,170	601,695	619,746
5,190,275	5,345,984	5,506,363	5,671,554	5,841,701	6,016,952	6,197,460
3,114,165	3,207,590	3,303,818	3,402,932	3,505,020	3,610,171	3,718,476
16,608,881	17,107,147	17,620,362	18,148,973	18,693,442	19,254,245	19,831,872
4,152,220	4,276,787	4,405,090	4,537,243	4,673,360	4,813,561	4,957,968
11,418,606	11,761,164	12,113,999	12,477,419	12,851,741	13,237,294	13,634,412
16,608,881	17,107,147	17,620,362	18,148,973	18,693,442	19,254,245	19,831,872
3,114,165	3,207,590	3,303,818	3,402,932	3,505,020	3,610,171	3,718,476
35,293,872	36,352,688	37,443,269	38,566,567	39,723,564	40,915,271	42,142,729
33,313,427	33,430,094	33,546,760	33,663,427	33,796,760	33,930,094	34,063,427
596,407	596,407	596,407	596,407	596,407	596,407	596,407
33,909,834	34,026,501	34,143,167	34,259,834	34,393,167	34,526,501	34,659,834
9,227,543	8,539,934	7,860,531	7,178,631	6,494,232	5,817,684	5,138,281
29,973,019	29,971,541	29,926,672	29,925,103	29,923,488	29,921,824	29,920,111
12,912,012	12,521,458	173,005	(257,389)	(713,041)	(1,192,033)	(1,690,726)
3,000,000	3,500,000	3,500,000	3,500,000	4,000,000	4,000,000	4,000,000

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2038	2039	2040	2041	2042
3,830,030	3,944,931	4,063,279	4,185,178	4,310,733
5,745,046	5,917,397	6,094,919	6,277,766	6,466,099
638,338	657,489	677,213	697,530	718,455
6,383,384	6,574,885	6,772,132	6,975,296	7,184,555
3,830,030	3,944,931	4,063,279	4,185,178	4,310,733
20,426,829	21,039,633	21,670,822	22,320,947	22,990,576
5,106,707	5,259,908	5,417,706	5,580,237	5,747,644
14,043,445	14,464,748	14,898,690	15,345,651	15,806,021
20,426,829	21,039,633	21,670,822	22,320,947	22,990,576
3,830,030	3,944,931	4,063,279	4,185,178	4,310,733
43,407,011	44,709,221	46,050,498	47,432,013	48,854,973
34,213,427	34,363,427	34,513,427	34,680,094	34,846,760
596,407	596,407	596,407	596,407	596,407
34,809,834	34,959,834	35,109,834	35,276,501	35,443,167
4,456,024	3,684,921	2,910,607	2,133,082	1,351,988
29,918,346	29,916,528	29,914,655	29,912,727	29,910,740
(2,216,356)	(2,728,849)	(3,262,834)	(3,825,604)	(4,411,110)
4,500,000	4,500,000	4,500,000	5,000,000	5,000,000

APPENDIX A-2-B

Mountain States Transmission Intertie Project
First, Fifth, and Tenth Year Constant Dollar Costs; and Levelized Costs
2013 Base Year

Levelizing Rate (weighted cost of capital)	9.90%

Expenses	30-Year Levelized Costs	Year 1 2013	Year 5 2017	Year 10 2022
Operating Expenses (3% escalation)				
560-Operation Supervision & Engineering	1,829,244	1,829,244	1,829,244	1,829,244
561-SOCC Labor Union	2,743,866	2,743,866	2,743,866	2,743,866
562-Station Expense	304,874	304,874	304,874	304,874
563-Overhead Line Expense	3,048,740	3,048,740	3,048,740	3,048,740
566-Miscellaneous Transmission Expense	1,829,244	1,829,244	1,829,244	1,829,244
Total Operating Expenses	9,755,967	9,755,967	9,755,967	9,755,967
Maintenance Expenses (3% escalation)				
568-Maintenance Supervision & Engineering	2,438,992	2,438,992	2,438,992	2,438,992
570-Maintenance of Station Equipment	6,707,227	6,707,227	6,707,227	6,707,227
571-Maintenace of Overhead Lines	9,755,967	9,755,967	9,755,967	9,755,967
935-Maintenance of General Plant	1,829,244	1,829,244	1,829,244	1,829,244
Total Maintenance Expenses	20,731,430	20,731,430	20,731,430	20,731,430
Depreciation & Amortization				
Depreciation	32,668,681	32,263,427	32,346,760	32,563,427
Amortization	596,407	596,407	596,407	596,407
Total Depreciation & Amortization	33,265,088	32,859,834	32,943,167	33,159,834
Property Taxes	15,584,193	21,243,382	18,440,030	15,007,549
Interest Expense / LC Fees	30,025,053	30,062,434	30,058,801	30,053,613
Book Taxes	26,440,381	36,071,749	35,414,922	34,565,592
Subtotal Expenses	135,802,113	150,724,796	147,344,318	143,273,985
Annual Maintenance Capital	1,532,028	-	1,000,000	1,500,000
Total Expenses and Maintenance Capital	**137,334,140**	**150,724,796**	**148,344,318**	**144,773,985**