Natural Resource Taxes

Coal Severance Tax   Oil Production Tax
Electrical Energy Tax   US Mineral Royalty
Metalliferous Mines Tax   Wholesale Energy
Natural Gas Production Tax

Legislative Fiscal Division

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Legislative Fiscal Division
Revenue Estimate Profile
Coal Severance Tax

Revenue Description: For large producers, the coal severance tax is imposed on all coal production in excess of 20,000 tons per company per calendar year. However, producers of 50,000 tons or less in any calendar year are exempt from the tax.

Applicable Tax Rate(s):

10.0% - on coal with a heating quality $< 7{,}000$ BTU
15.0% - on coal with a heating quality $\geq 7{,}000$ BTU

Distribution: (Percentage)

Account Name	Fiscal 1998-1999	Fiscal 2000-2007
Permanent Trust	25.00	0.00
Treasure State Endowment	25.00	37.50
TSEP Regional Water	0.00	12.50
General Fund	25.25	26.79
LRBP - Cash Account	12.00	12.00
LRBP - Debt Service	1.30	0.00
Park Acquisition Trust	1.27	1.27
Arts Trust	0.00	0.63
Cultural & Aesthetic Projects	0.87	0.00
Water Development	0.95	0.95
Other Uses:	8.36	8.36

       Local Impact (Coal Board)
       County Land Planning
       Growth Through Agriculture
       State Library
       Conservation Districts

Collection Frequency: Quarterly: The coal severance tax is due 30 days after the end of the quarter.

Applicable Assumptions and/or Relevant Indicators:

Montana Coal Production
Montana Coal Price

Data Source(s): SBAS, SABHRS, Department of Revenue Coal Tax Returns

Contacts: Coal Companies' Financial Personnel, Executive Director - Montana Coal Council

Statute: Title 15, Chapter 35, MCA

% of Total FY 2000 General Fund Revenue: 0.82%

Revenue Estimate Methodology: The LFD uses a number of analytical techniques to develop relevant assumptions for this source of revenue. Historical data trends, economic conditions, input from industry experts, company surveys, and etc., are examples of information used to formulate these assumptions. The techniques used to develop these assumptions may vary from biennium to biennium and are highly dependent on availability of information, professional intuition/judgment, and a detailed analysis of the revenue source. The applicable methodology (formulas) and assumptions used by the LFD to develop a revenue estimate for this source are provided in a subsequent section of this document. The following summarizes the LFD process used to develop the revenue estimate.
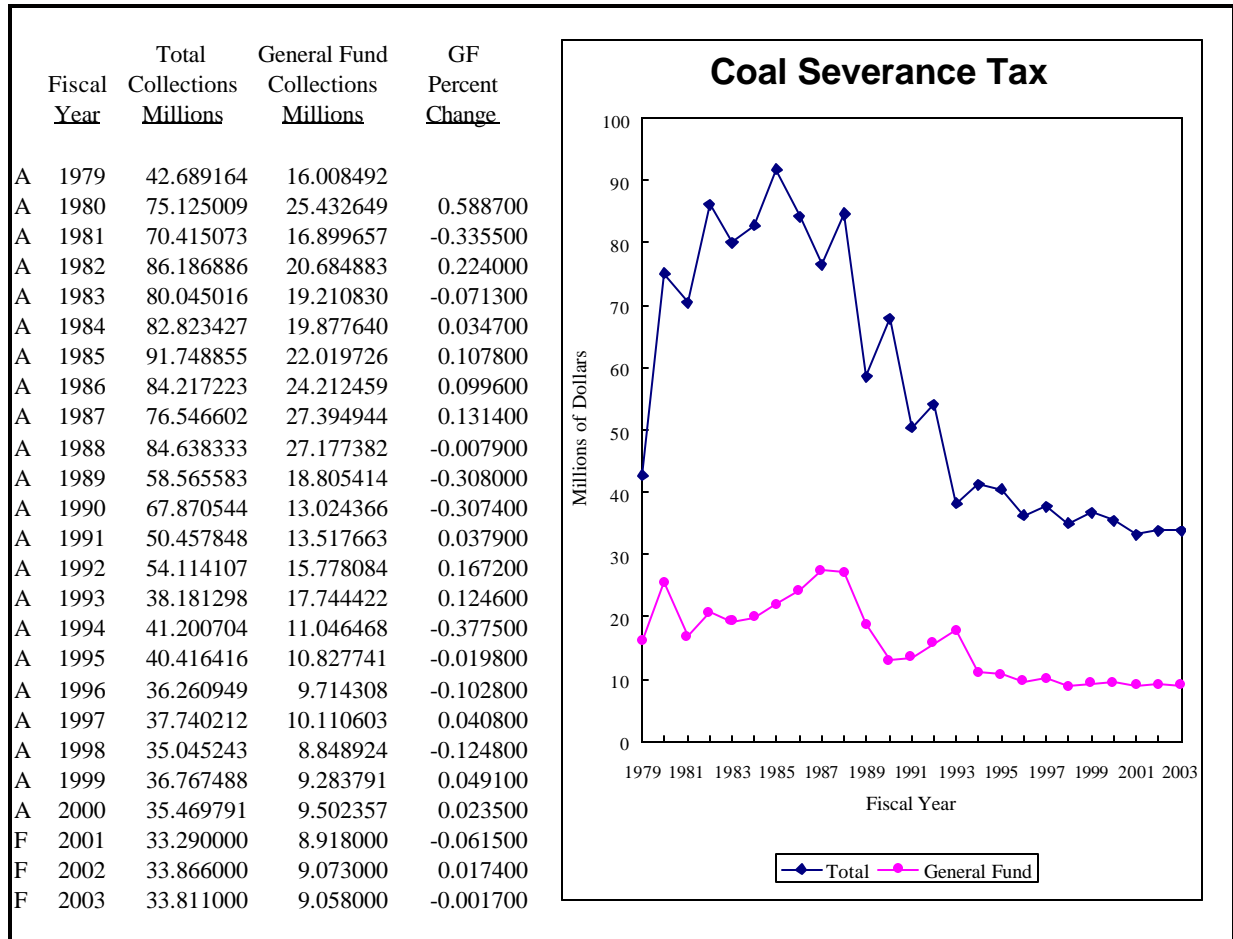
Revenue Estimate Profile

Coal Severance Tax

The LFD surveys major coal companies for anticipated production levels and general indications of coal prices. In addition, a review is performed of historical trends and current literature on coal prices. The taxable value is then computed for each company by taking anticipated production, less the annual tonnage deduction, and multiplying that number by the contract sales price. Taxable value is then multiplied by the applicable tax rate to determine tax revenue. The next step consists of converting total coal severance tax revenue, which is computed by adding the estimated revenue for all coal companies, from a calendar to a fiscal year basis. The final step involves applying the statutory tax distribution to anticipated fiscal year tax revenue.

Revenue Projection:

	Fiscal Year	Total Collections Millions	General Fund Collections Millions	GF Percent Change
A	1979	42.689164	16.008492	
A	1980	75.125009	25.432649	0.588700
A	1981	70.415073	16.899657	-0.335500
A	1982	86.186886	20.684883	0.224000
A	1983	80.045016	19.210830	-0.071300
A	1984	82.823427	19.877640	0.034700
A	1985	91.748855	22.019726	0.107800
A	1986	84.217223	24.212459	0.099600
A	1987	76.546602	27.394944	0.131400
A	1988	84.638333	27.177382	-0.007900
A	1989	58.565583	18.805414	-0.308000
A	1990	67.870544	13.024366	-0.307400
A	1991	50.457848	13.517663	0.037900
A	1992	54.114107	15.778084	0.167200
A	1993	38.181298	17.744422	0.124600
A	1994	41.200704	11.046468	-0.377500
A	1995	40.416416	10.827741	-0.019800
A	1996	36.260949	9.714308	-0.102800
A	1997	37.740212	10.110603	0.040800
A	1998	35.045243	8.848924	-0.124800
A	1999	36.767488	9.283791	0.049100
A	2000	35.469791	9.502357	0.023500
F	2001	33.290000	8.918000	-0.061500
F	2002	33.866000	9.073000	0.017400
F	2003	33.811000	9.058000	-0.001700

Coal Severance Tax

NOTE: Due to the transition to a new state accounting system and other factors, an unusually large number of accounting errors occurred in fiscal 2000. The errors not only impact the general fund, but other funds as well. To correct these errors and ensure an accurate Comprehensive Annual Financial Report for the state, adjustments must be made in fiscal 2001 as prior year adjustments. All of these necessary adjustments may not be known at this time. The actual fiscal 2000 revenue shown in the table above was adjusted for these accounting errors, but has not been audited by the Legislative Auditor.

The general fund adjustment to this general fund revenue source that was known as of November 10, 2000 is $1,607,400.

Forecast Methodology

$$TAX_t = SUM(i=1...n)(TTONS_t * CSP_t * TR_t)_i$$
--- where
  TAX = Coal Severance Tax
  TTONS = Taxable Tons Produced
  CSP = Contract Sales Price
  TR = Tax Rate
  t = Calendar Year
  i = Coal Company

$$FY_{t+1} = CY_t * .5 + CY_{t+1} * .5$$
--- where
  FY = Fiscal Year
  CY = Calendar Year

Distribution Methodology

$$GFTAX_t = TAX_t * GF\%_t$$
--- where
  GFTAX = General Fund Allocation of Tax
  TAX = Coal Severance Tax
  GF% = General Fund Statutory Percent
  t = Fiscal Year

	t Fiscal	Total Tax Millions	GF Tax Millions	GF Percent Allocation
Actual	2000	35.469791	9.502357	0.267900
Forecast	2001	33.290000	8.918000	0.267900
Forecast	2002	33.866000	9.073000	0.267900
Forecast	2003	33.811000	9.058000	0.267900

	t Cal	Tons (CY) Millions	CSP (CY) Dollars	Tax Rate	Tax Rate	Calendar Tax
Forecast	2000	33.915000	6.496792	0.150000	0.100000	32.920591
Forecast	2001	34.417000	6.545330	0.150000	0.100000	33.659500
Forecast	2002	34.803000	6.550478	0.150000	0.100000	34.071528
Forecast	2003	34.313000	6.543526	0.150000	0.100000	33.549872

Legislative Fiscal Division
Revenue Estimate Profile
Electrical Energy Tax

Revenue Description: The electrical energy license tax is imposed on each person or organization engaged in generating, manufacturing, or producing electrical energy in Montana. This tax is in addition to the wholesale energy transaction tax enacted by the 1999 legislation (HB 174).

Applicable Tax Rate(s):   The tax of $0.0002 per kilowatt-hour is levied against all electrical energy produced within the state. A deduction is allowed for "actual and necessary" energy use by the plant for the production of the energy. Electrical energy taxes may be reduced by an interest differential credit claimed by the producers. This credit is determined by the difference between the actual interest received on energy conservation loans and the average interest rate for home improvement loans.

Distribution: All proceeds are deposited into the general fund.

Collection Frequency: Quarterly: The electrical energy tax is due 30 days after the end of the quarter.

Applicable Assumptions and/or Relevant Indicators:

> Kilowatt Hours Produced
> Interest Differential Credit

Data Source(s):   SBAS, SABHRS, Department of Revenue Electrical Energy Tax Returns

Contacts: Electrical Companies' Financial Personnel

Statute: Title 15, Chapter 32 and Chapter 51, MCA

% of Total FY 2000 General Fund Revenue: 0.41%

Revenue Estimate Methodology: The LFD uses a number of analytical techniques to develop relevant assumptions for this source of revenue. Historical data trends, economic conditions, input from industry experts, company surveys, and etc., are examples of information used to formulate these assumptions. The techniques used to develop these assumptions may vary from biennium to biennium and are highly dependent on availability of information, professional intuition/judgment, and a detailed analysis of the revenue source. The applicable methodology (formulas) and assumptions used by the LFD to develop a revenue estimate for this source are provided in a subsequent section of this document. The following summarizes the LFD process used to develop the revenue estimate.
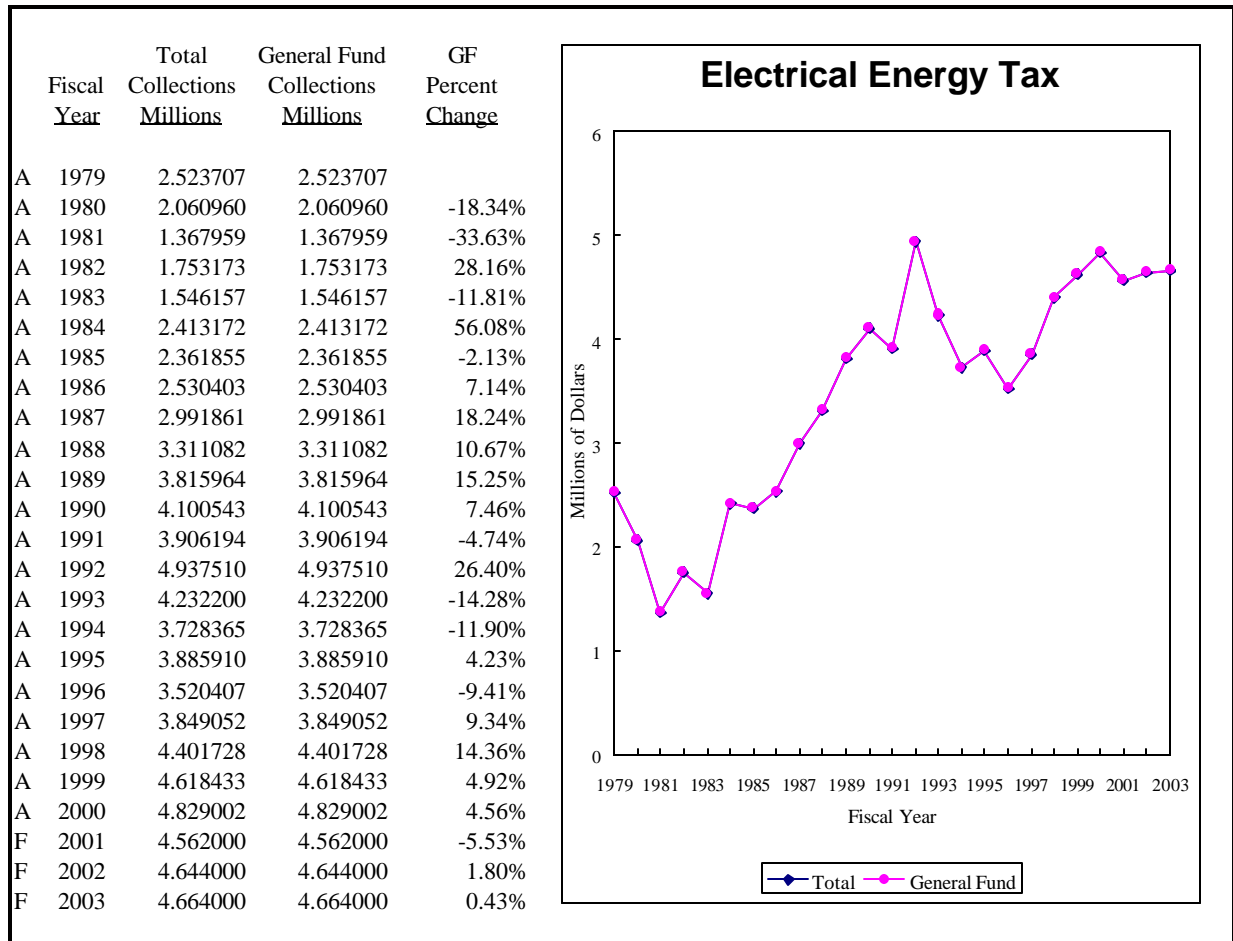
The LFD surveys major companies for anticipated kilowatt hours produced (KWH) and then converts KWH to a fiscal year basis. The estimated tax revenue is computed by multiplying KWH by the tax rate and then subtracting the interest differential credit. All of the revenue is deposited into the general fund.

Revenue Projection:

	Fiscal Year	Total Collections Millions	General Fund Collections Millions	GF Percent Change
A	1979	2.523707	2.523707	
A	1980	2.060960	2.060960	-18.34%
A	1981	1.367959	1.367959	-33.63%
A	1982	1.753173	1.753173	28.16%
A	1983	1.546157	1.546157	-11.81%
A	1984	2.413172	2.413172	56.08%
A	1985	2.361855	2.361855	-2.13%
A	1986	2.530403	2.530403	7.14%
A	1987	2.991861	2.991861	18.24%
A	1988	3.311082	3.311082	10.67%
A	1989	3.815964	3.815964	15.25%
A	1990	4.100543	4.100543	7.46%
A	1991	3.906194	3.906194	-4.74%
A	1992	4.937510	4.937510	26.40%
A	1993	4.232200	4.232200	-14.28%
A	1994	3.728365	3.728365	-11.90%
A	1995	3.885910	3.885910	4.23%
A	1996	3.520407	3.520407	-9.41%
A	1997	3.849052	3.849052	9.34%
A	1998	4.401728	4.401728	14.36%
A	1999	4.618433	4.618433	4.92%
A	2000	4.829002	4.829002	4.56%
F	2001	4.562000	4.562000	-5.53%
F	2002	4.644000	4.644000	1.80%
F	2003	4.664000	4.664000	0.43%

Electrical Energy Tax — line chart, Millions of Dollars vs. Fiscal Year (1979–2003), series: Total, General Fund.

NOTE: Due to the transition to a new state accounting system and other factors, an unusually large number of accounting errors occurred in fiscal 2000. The errors not only impact the general fund, but other funds as well. To correct these errors and ensure an accurate Comprehensive Annual Financial Report for the state, adjustments must be made in fiscal 2001 as prior year adjustments. All of these necessary adjustments may not be known at this time. The actual fiscal 2000 revenue shown in the table above was adjusted for these accounting errors, but has not been audited by the Legislative Auditor.

The general fund adjustment to this general fund revenue source that was known as of November 10, 2000 is $1,219,535.

Forecast Methodology

FY t+1 = KWH t * .5 + KWH t+1 * .5
--- where
   FY = Fiscal Year
   KWH = Total Kilowatt Hours Produced
   t = Calendar Year

TAX t = KWH t * TR t - IDC t
--- where
   TAX = Electrical Energy Tax
   KWH = Total Kilowatt Hours Produced
   IDC = Total Interest Differential Credit
   TR = Tax Rate
   t = Fiscal Year

Distribution Methodology

GFTAX t = TAX t * 100%
--- where
   GFTAX = General Fund Allocation of Tax
   TAX = Electrical Energy Tax
   t = Fiscal Year

	t Fiscal	Total Tax Millions	GF Tax Millions	KWH CY Millions	KWH FY Millions	Credits Millions	Tax Rate
Actual	2000	4.829002	4.829002	22417.188435	22937.761931	0.000189	0.000200
Forecast	2001	4.562000	4.562000	23199.732354	22808.460395	0.000000	0.000200
Forecast	2002	4.644000	4.644000	23240.932354	23220.332354	0.000000	0.000200
Forecast	2003	4.664000	4.664000	23400.932354	23320.932354	0.000000	0.000200

Legislative Fiscal Division
Revenue Estimate Profile
Metalliferous Mines Tax

Revenue Description: The metalliferous mines license tax is imposed on the production of metals, gems or stones in the state. The tax rate is applied to the gross value of the product, which is defined as the market value of the commodity multiplied by the quantity produced.

Applicable Tax Rate(s): The tax rate is as follows:

For concentrates shipped to a smelter, mill, or reduction work:		For gold, silver, or any platinum group metal that is dore, bullion, or matte and that is shipped to a refinery:	
Gross Value	Rate	Gross Value	Rate
$0-$250,000	Exempt	$0-$250,000	Exempt
$250,001 and Above	1.81%	$250,001 and Above	1.6%

Distribution: The distribution of the metal mines tax has been altered several times during the 1990s. The table below shows recent historical distributions of the metal mines tax.

Distribution of Metalliferous Mines Tax (Percent)			
	Fiscal 1994-1995	Fiscal 1996-1997	Fiscal 1998&Beyond
General Fund	58.0	58.0	58.0
RIT Trust	15.5	0.0	0.0
Groundwater Assessment	0.0	2.2	0.0
Abandoned Mines	0.0	8.5	0.0
Orphan Share	0.0	0.0	8.5
Reclamation & Dev. Grants	0.0	4.8	7.0
Hard Rock Mining	1.5	1.5	2.5
Counties	25.0	25.0	24.0

Collection Frequency: Annually

Applicable Assumptions and/or Relevant Indicators:

Prices for: copper, copper sulfide, silver, gold, lead, zinc, molybdenum, palladium, platinum, nickel, rhodium, sapphires and iron oxide

Production levels for: copper, copper sulfide, silver, gold, lead, zinc, molybdenum, palladium, platinum, nickel, rhodium, sapphires and iron oxide

Data Source(s): SBAS, SABHRS, Department of Revenue, *Wall Street Journal*

Contacts: Major Producers

Statute: Title 15, Chapter 37, MCA

% of Total FY 2000 General Fund Revenue: 0.23%
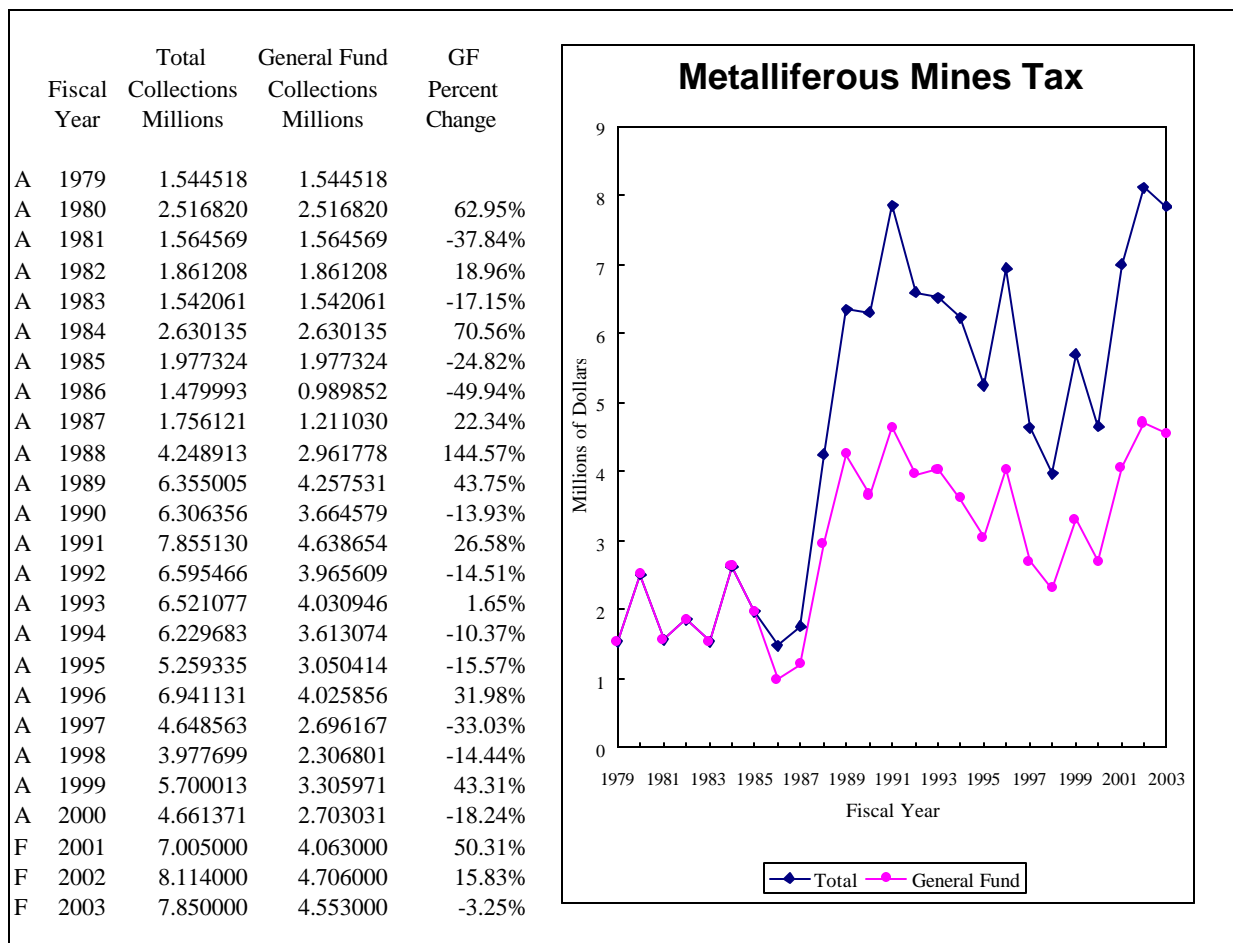
Legislative Fiscal Division
Revenue Estimate Profile
Metalliferous Mines Tax

Revenue Estimate Methodology: The LFD uses a number of analytical techniques to develop relevant assumptions for this source of revenue. Historical data trends, economic conditions, input from industry experts, company surveys, and etc., are examples of information used to formulate these assumptions. The techniques used to develop these assumptions may vary from biennium to biennium and are highly dependent on availability of information, professional intuition/judgment, and a detailed analysis of the revenue source. The applicable methodology (formulas) and assumptions used by the LFD to develop a revenue estimate for this source are provided in a subsequent section of this document. The following summarizes the LFD process used to develop the revenue estimate.

The LFD surveys major producers to get anticipated production by commodity. In addition, a review is made of historical trends and current publications on price directions. The estimated tax is then computed for each commodity by multiplying anticipated production by sales price. This figure is then multiplied by the effective tax rate to determine tax revenue. The next step consists of converting total metalliferous mines tax revenue from a calendar to a fiscal year basis. The final step involves applying the statutory tax distribution to the anticipated fiscal year revenue.

Revenue Projection:

	Fiscal Year	Total Collections Millions	General Fund Collections Millions	GF Percent Change
A	1979	1.544518	1.544518	
A	1980	2.516820	2.516820	62.95%
A	1981	1.564569	1.564569	-37.84%
A	1982	1.861208	1.861208	18.96%
A	1983	1.542061	1.542061	-17.15%
A	1984	2.630135	2.630135	70.56%
A	1985	1.977324	1.977324	-24.82%
A	1986	1.479993	0.989852	-49.94%
A	1987	1.756121	1.211030	22.34%
A	1988	4.248913	2.961778	144.57%
A	1989	6.355005	4.257531	43.75%
A	1990	6.306356	3.664579	-13.93%
A	1991	7.855130	4.638654	26.58%
A	1992	6.595466	3.965609	-14.51%
A	1993	6.521077	4.030946	1.65%
A	1994	6.229683	3.613074	-10.37%
A	1995	5.259335	3.050414	-15.57%
A	1996	6.941131	4.025856	31.98%
A	1997	4.648563	2.696167	-33.03%
A	1998	3.977699	2.306801	-14.44%
A	1999	5.700013	3.305971	43.31%
A	2000	4.661371	2.703031	-18.24%
F	2001	7.005000	4.063000	50.31%
F	2002	8.114000	4.706000	15.83%
F	2003	7.850000	4.553000	-3.25%

Metalliferous Mines Tax

Forecast Methodology

TAX t = SUM(i=1...n) (MUNITt * SP t))i * ETR t

---where
   TAX = Metalliferous Mines Tax
   MUNIT = Mineral Quantity Produced
   SP = Sales Price
   ETR = Effective Tax Rate
   t = Calendar Year
   i = Mineral

FY t+1 = CY t

---where
   FY = Fiscal Year
   CY = Calendar Year

Distribution Methodology

GFTAX t = TAX t * GF% t

---where
   GFTAX = General Fund Allocation of Tax
   TAX = Metalliferous Mines Tax
   GF% = General Fund Statutory Percent
   t = Fiscal Year

	t Fiscal	Total Tax Millions	GF Tax Millions	Tax Value CY Millions	Effective Rate	GF Percent Allocation
Actual	2000	4.661371	2.703031	423.700467	0.016532	57.9879%
Forecast	2001	7.005000	4.063000	490.787994	0.016532	58.0000%
Forecast	2002	8.114000	4.706000	474.827699	0.016532	58.0000%
Forecast	2003	7.850000	4.553000	500.316224	0.016532	58.0000%

Comdty. Value	t Cal	Copper Millions	Silver Millions	Gold Millions	Lead Millions	Zinc Millions	Moly Millions	Palladium Millions
Forecast	2000	1.897665	1.105530	0.312001	13.054000	33.218000	3.800000	0.341199
Forecast	2001	3.080324	1.585336	0.282860	13.764000	41.486000	6.300000	0.379110
Forecast	2002	3.196271	0.845584	0.081553	2.294000	6.914333	7.400000	0.447350
Forecast	2003	3.196271	0.835000	0.009730	0.000000	0.000000	7.700000	0.504216

Legislative Fiscal Division
Revenue Estimate Profile
Metalliferous Mines Tax

	t Cal	Platinum Millions	Nickel Millions	Rhodium Millions	Sapphire Millions	Iron Oxide Millions	Copper Sul Millions	Refining Millions
Forecast	2000	0.102217	0.352865	0.001707	0.000000	0.000000	47.202335	-10.330456
Forecast	2001	0.113574	0.392071	0.001897	0.000000	0.000000	76.619676	-11.478284
Forecast	2002	0.134017	0.462642	0.002239	0.000000	0.000000	79.503729	-13.544375
Forecast	2003	0.151053	0.521452	0.002523	0.000000	0.000000	79.503729	-15.266118

Comdty. Price	t Cal	Copper Dollars	Silver Dollars	Gold Dollars	Lead Dollars	Zinc Dollars	Moly Dollars	Palladium Dollars
Forecast	2000	0.508243	4.915000	273.000000	0.222998	0.526805	2.065045	700.000000
Forecast	2001	0.508243	5.018000	281.950000	0.222998	0.526805	2.065045	745.000000
Forecast	2002	0.508243	5.220000	298.450000	0.222998	0.526805	2.065045	745.000000
Forecast	2003	0.508243	5.297000	312.800000	0.222998	0.526805	2.065045	745.000000

	t Cal	Platinum Dollars	Nickel Dollars	Rhodium Dollars	Sapphire Dollars	Iron Oxide Dollars	Copper Sul Dollars
Forecast	2000	545.000000	3.830674	551.571023	0.000000	0.000000	0.367738
Forecast	2001	545.000000	3.830674	551.571023	0.000000	0.000000	0.367738
Forecast	2002	545.000000	3.830674	551.571023	0.000000	0.000000	0.367738
Forecast	2003	545.000000	3.830674	551.571023	0.000000	0.000000	0.367738

Legislative Fiscal Division
Revenue Estimate Profile
Natural Gas Production Tax

Revenue Description: The natural gas production tax is applied to the gross value of gas produced in the state based on the type of well and type of production.

Applicable Tax Rate(s): The natural gas production tax has many tax rates and distribution percentages depending on several factors. These factors include whether the natural gas is produced from a stripper well, from a well initially drilled before 1999, or after, from a well newly drilled within the last year or two, and whether the interest being taxed is the working interest or the royalty interest. The table below shows tax rates and distribution percentages for each type of oil for pre-1999 natural gas and post-1999 natural gas.

Natural Gas Production Tax and Distribution of Revenue January 1, 2001						
	Tax Rate	Local Share	State Share	RITT Share	P&L Share	Gen. Fund Share
Working Interests						
Pre-99 after 12 months	15.10%	86.00%	14.00%	14.50%	8.70%	76.80%
Post 99 first 12 months	0.80%	0.00%	100.00%	62.50%	37.50%	0.00%
Post 99 after 12 months	9.30%	86.00%	14.00%	14.50%	8.70%	76.80%
Pre 99 stripper wells	11.30%	86.00%	14.00%	14.50%	8.70%	76.80%
Horizontal first 18 months	0.80%	0.00%	100.00%	62.50%	37.50%	0.00%
Horizontal after 18 months	9.30%	86.00%	14.00%	14.50%	8.70%	76.80%
Royalty Interests	11.30%	86.00%	14.00%	14.50%	8.70%	76.80%

Distribution: The natural gas production is divided into a local share and a state share. The state share is further allocated to the general fund, the resource indemnity trust, and to a state special revenue account for use by the Board of Oil and Gas Conservation. Specific distribution percentages are found in the table above.

Collection Frequency: Quarterly: The natural gas production tax is due 60 days after the end of the production quarter.

Applicable Assumptions and/or Relevant Indicators:

      Montana Natural Gas Production
      Montana Natural Gas Prices

Data Source(s): SBAS, SABHRS, Department of Revenue, Wharton Econometrics Forecasting Associates (WEFA), W*all Street Journal*

Contacts: Department of Revenue

Statute: Title 15, Chapter 36, MCA

% of Total FY 2000 General Fund Revenue: .09%
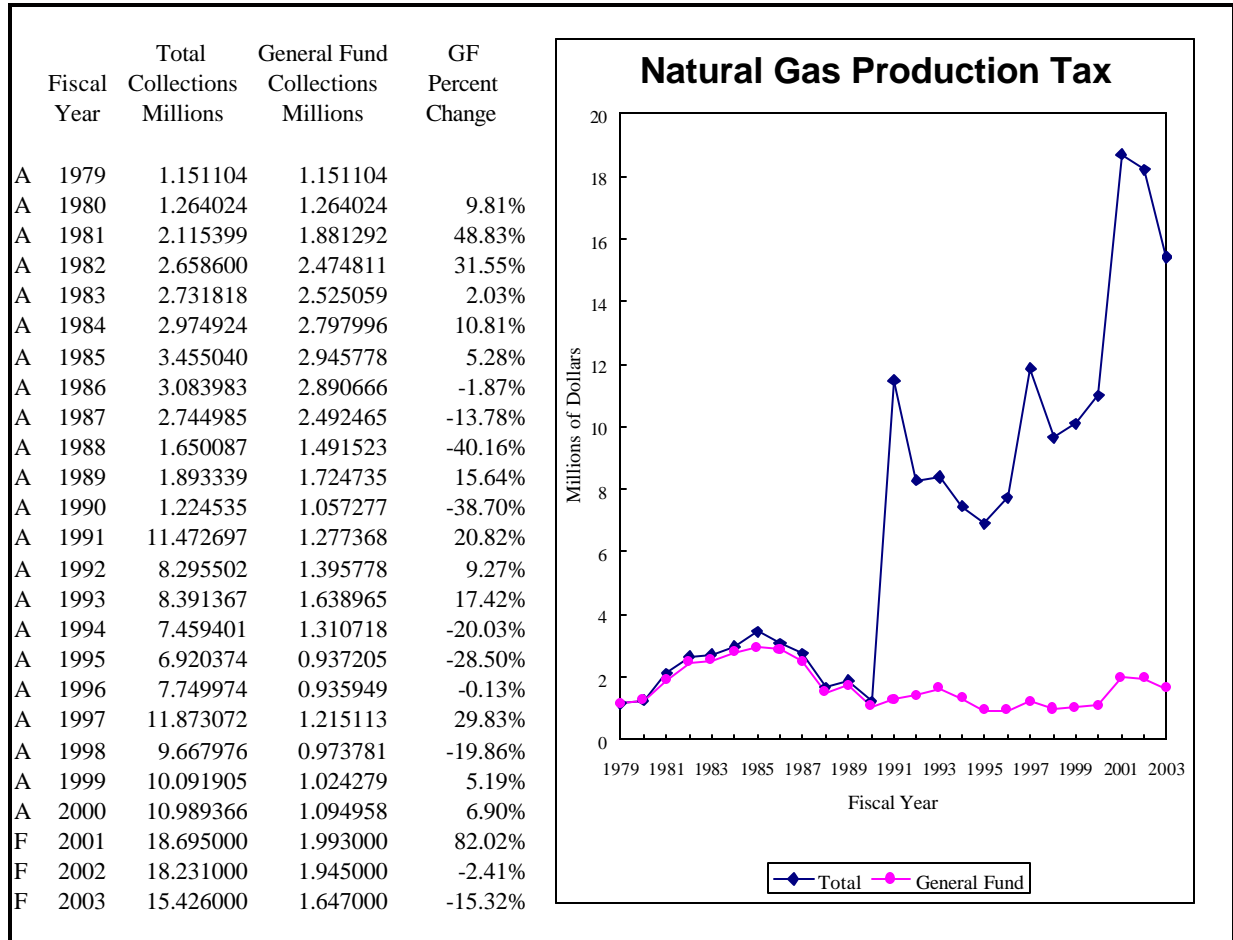
Legislative Fiscal Division
Revenue Estimate Profile
Natural Gas Production Tax

Revenue Estimate Methodology: The LFD uses a number of analytical techniques to develop relevant assumptions for this source of revenue. Historical data trends, economic conditions, input from industry experts, company surveys, and etc., are examples of information used to formulate these assumptions. The techniques used to develop these assumptions may vary from biennium to biennium and are highly dependent on availability of information, professional intuition/judgment, and a detailed analysis of the revenue source. The applicable methodology (formulas) and assumptions used by the LFD to develop a revenue estimate for this source are provided in a subsequent section of this document. The following summarizes the LFD process used to develop the revenue estimate.

Taxable value is calculated for each natural gas type by multiplying anticipated production by the relevant natural gas price. Taxable value is then multiplied by the tax rate and allocated according to the state allocation percent for natural gas type to determine tax revenue. The next step consists of converting natural gas revenue from a calendar to a fiscal year basis. The final step involves applying the statutory tax distribution to the state's share of anticipated fiscal year revenue.

Revenue Projection:

	Fiscal Year	Total Collections Millions	General Fund Collections Millions	GF Percent Change
A	1979	1.151104	1.151104	
A	1980	1.264024	1.264024	9.81%
A	1981	2.115399	1.881292	48.83%
A	1982	2.658600	2.474811	31.55%
A	1983	2.731818	2.525059	2.03%
A	1984	2.974924	2.797996	10.81%
A	1985	3.455040	2.945778	5.28%
A	1986	3.083983	2.890666	-1.87%
A	1987	2.744985	2.492465	-13.78%
A	1988	1.650087	1.491523	-40.16%
A	1989	1.893339	1.724735	15.64%
A	1990	1.224535	1.057277	-38.70%
A	1991	11.472697	1.277368	20.82%
A	1992	8.295502	1.395778	9.27%
A	1993	8.391367	1.638965	17.42%
A	1994	7.459401	1.310718	-20.03%
A	1995	6.920374	0.937205	-28.50%
A	1996	7.749974	0.935949	-0.13%
A	1997	11.873072	1.215113	29.83%
A	1998	9.667976	0.973781	-19.86%
A	1999	10.091905	1.024279	5.19%
A	2000	10.989366	1.094958	6.90%
F	2001	18.695000	1.993000	82.02%
F	2002	18.231000	1.945000	-2.41%
F	2003	15.426000	1.647000	-15.32%

Natural Gas Production Tax

Legislative Fiscal Division
Revenue Estimate Profile
Natural Gas Production Tax

Forecast Methodology

TAX t = SUM(i=1...n)((GMCF t * DEC t + NEW t) * GP t * TR t * SPER t)i

--- where

    TAX = Natural Gas Tax
    GMCF = Montana Natural Gas Production for Type
    DEC =Decline Rate for Existing Production by Type
    NEW = New Production by type
    GP = Montana Natural Gas Price for Type
    TR = Tax Rate for Type
    SPER = State Allocation Percent for Type
    t = Calendar Year
    i = Gas Type

FY t+1 = CY t * .5 + CY t+1 * .5
--- where
    FY = Fiscal Year
    CY = Calendar Ye ar

Distribution Methodology

GFTAX t = TAX t * GF% t
--- where
    GFTAX = General Fund Allocation of Tax
    TAX = Natural Gas Tax
    GF% = General Fund Statutory Percent
    t = Fiscal Year

	t Fiscal	Total Tax Millions	GF Tax Millions	Composite GF Allocation
Actual	2000	10.989366	1.094958	0.099638
Forecast	2001	18.695000	1.993000	0.106606
Forecast	2002	18.231000	1.945000	0.106686
Forecast	2003	15.426000	1.647000	0.106768

	t Cal	MCF's Millions	Price Per MCF	Gross Value Millions	Exempt Value Millions	Effective Tax Rate	Total Tax Millions
Forecast	2000	61.501887	2.740749	168.561235	8.773141	0.111624	17.672992
Forecast	2001	64.914323	2.949978	191.495824	9.632734	0.110167	19.716229
Forecast	2002	67.387156	2.448199	164.977169	8.076438	0.109031	16.745404
Forecast	2003	69.048885	2.036155	140.594232	6.732002	0.108120	14.107425

Legislative Fiscal Division
Revenue Estimate Profile
Oil Production Tax

Revenue Description: The oil production tax is imposed on the production of petroleum and other mineral or crude oil in the state. Gross taxable value of oil production is based on the type of well and type of production.

Applicable Tax Rate(s):   The oil production tax has numerous tax rates and distribution percentages depending on several factors. These factors include whether the oil is produced from a stripper well, an incentive well, from a well initially drilled before 1999 or after, from a well newly drilled within the last year or two, and whether the interest being taxed is the working interest or the royalty interest. The following table shows tax rates and distribution percentages for each type of pre-1999 oil and post-1999 oil.

Oil Production Tax Rates and Distribution of Revenue Beginning January 1, 2000						
	Tax Rate	Local Share	State Share	RIT Share	P&L Share	Gen. Fund Share
Working Interests						
Pre 99 after 12 Months	12.80%	60.70%	39.30%	8.62%	5.17%	86.21%
Post 99 First 12 Months	0.80%	0.00%	100.00%	62.50%	37.50%	0.00%
Post 99 after 12 months	9.30%	60.70%	39.30%	8.62%	5.17%	86.21%
Stripper 4-10 barrels per day	5.80%	86.20%	13.80%	62.50%	37.50%	0.00%
Stripper 11-15 barrels per day	9.30%	60.70%	39.30%	8.62%	5.17%	86.21%
Stripper Well Exemption	0.80%	0.00%	100.00%	0.625	0.375	0.00%
Pre99 Horizontal after 18 months	12.80%	60.70%	39.30%	8.62%	5.17%	86.21%
Post 99 Horizontal first 18 months	0.80%	0.00%	100.00%	62.50%	37.50%	0.00%
Post 99 Horizontal after 18 months	9.30%	60.70%	39.30%	8.62%	5.17%	86.21%
Incremental - secondary	8.80%	60.70%	39.30%	8.62%	5.17%	86.21%
Incremental - tertiary	6.10%	60.70%	39.30%	8.62%	5.17%	86.21%
Pre99 Horizontal Recomp - after 18 months	12.80%	60.70%	39.30%	8.62%	5.17%	86.21%
Post99 Horizontal Recomp - first 18 months	5.80%	0.00%	100.00%	8.62%	5.17%	86.21%
Post99 Horizontal Recomp - after 18 months	9.30%	60.70%	39.30%	8.62%	5.17%	86.21%
Royalty interests	15.10%	60.70%	39.30%	8.62%	5.17%	86.21%

Distribution: Once the oil production tax has been collected, it is divided into a local share and a state share. The state share is further allocated to the general fund, the resource indemnity trust, and a state special revenue account for use by the Board of Oil and Gas Conservation. Specific distribution percentages are found in the table above.

Collection Frequency: Quarterly: The oil production tax is due 60 days after the end of the production quarter.

Applicable Assumptions and/or Relevant Indicators:
> Montana Oil Production
> Montana Oil Price

Data Source(s): SBAS, SABHRS, Department of Revenue, Wharton Econometrics Forecasting Associates (WEFA), *Wall Street Journal*

Contacts: Department of Revenue

Statute: Title 15, Chapter 36, MCA

% of Total FY 2000 General Fund Revenue: 0.88%

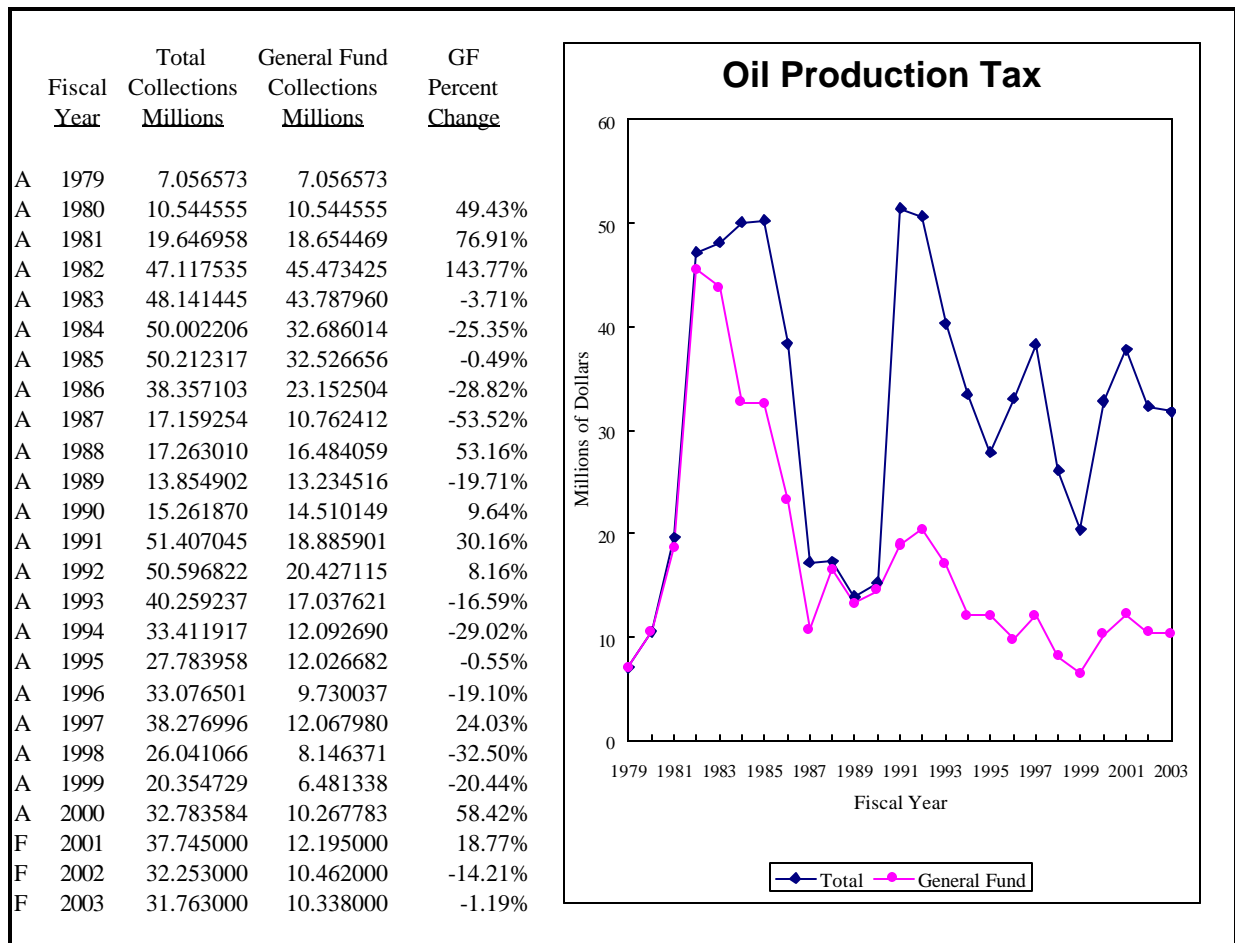# Legislative Fiscal Division
Revenue Estimate Profile
Oil Production Tax

Revenue Estimate Methodology: The LFD uses a number of analytical techniques to develop relevant assumptions for this source of revenue. Historical data trends, economic conditions, input from industry experts, company surveys, and etc., are examples of information used to formulate these assumptions. The techniques used to develop these assumptions may vary from biennium to biennium and are highly dependent on availability of information, professional intuition/judgment, and a detailed analysis of the revenue source. The applicable methodology (formulas) and assumptions used by the LFD to develop a revenue estimate for this source are provided in a subsequent section of this document. The following summarizes the LFD process used to develop the revenue estimate.

Taxable value is calculated for each oil type by multiplying anticipated production by the relevant oil price. Taxable value is then multiplied by the tax rate and allocated according to the state allocation percent for oil type, to determine total tax revenue. The next step consists of converting oil production tax revenue from a calendar to a fiscal year basis. The final step involves applying the statutory tax distribution to the state's share of anticipated fiscal year revenue.

Revenue Projection:

	Fiscal Year	Total Collections Millions	General Fund Collections Millions	GF Percent Change
A	1979	7.056573	7.056573	
A	1980	10.544555	10.544555	49.43%
A	1981	19.646958	18.654469	76.91%
A	1982	47.117535	45.473425	143.77%
A	1983	48.141445	43.787960	-3.71%
A	1984	50.002206	32.686014	-25.35%
A	1985	50.212317	32.526656	-0.49%
A	1986	38.357103	23.152504	-28.82%
A	1987	17.159254	10.762412	-53.52%
A	1988	17.263010	16.484059	53.16%
A	1989	13.854902	13.234516	-19.71%
A	1990	15.261870	14.510149	9.64%
A	1991	51.407045	18.885901	30.16%
A	1992	50.596822	20.427115	8.16%
A	1993	40.259237	17.037621	-16.59%
A	1994	33.411917	12.092690	-29.02%
A	1995	27.783958	12.026682	-0.55%
A	1996	33.076501	9.730037	-19.10%
A	1997	38.276996	12.067980	24.03%
A	1998	26.041066	8.146371	-32.50%
A	1999	20.354729	6.481338	-20.44%
A	2000	32.783584	10.267783	58.42%
F	2001	37.745000	12.195000	18.77%
F	2002	32.253000	10.462000	-14.21%
F	2003	31.763000	10.338000	-1.19%

Oil Production Tax

Forecast Methodology

$TAX\ t = SUM(i=1..n)((OBAR\ t\ *\ DEC\ t + NEW\ t)\ *\ OP\ t\ *\ TR\ t\ *\ SPER\ t)i$

--- where

TAX = Oil Tax
OBAR = Montana Oil Production for Type
DEC = Production Decline Rate for Type
NEW = New Production for Type
OP = Montana Oil Price for Type
TR = Tax Rate for Type
SPER = State Allocation Percent for Type
t = Calendar Year
i = Oil Type

$FY\ t+1 = CY\ t\ *\ .5 + CY\ t+1\ *\ .5$

--- where

FY = Fiscal Year
CY = Calendar Year

Distribution Methodology

$GFTAX\ t = TAX\ t\ *\ GF\%\ t$

--- where

GFTAX = General Fund Allocation of Tax
TAX = Oil Tax
GF% = General Fund Statutory Percent
t = Fiscal Year

	t Fiscal	Total Tax Millions	GF Tax Millions	Composite GF Allocation
Actual	2000	32.783584	10.267783	0.313199
Forecast	2001	37.745000	12.195000	0.323089
Forecast	2002	32.253000	10.462000	0.324373
Forecast	2003	31.763000	10.338000	0.325473

	t Cal	Barrels Millions	Price Per Barrel	Gross Value Millions	Exempt Value Millions	Effective Tax Rate	Total Tax Millions
Forecast	2000	15.771800	26.383378	416.113366	15.177573	0.106842	42.840302
Forecast	2001	16.170691	19.883378	321.527955	11.560435	0.105318	32.649910
Forecast	2002	16.537671	19.203378	317.579152	11.273582	0.103982	31.856786
Forecast	2003	16.875292	18.913378	319.168785	11.201649	0.102805	31.668808

Legislative Fiscal Division
Revenue Estimate Profile
US Mineral Royalty

Revenue Description: Under the federal Mineral Lands Leasing Act (30 USC, Section 191), 50.0 percent of all sales, bonuses, royalties, and rentals received from federal lands in Montana must be paid to the state. The money is to be used as the legislature may direct giving priority to those subdivisions of the state socially or economically impacted by development of minerals leased under the federal act. The revenue produced on federal public lands includes royalties and bonuses from oil, gas, coal, and other mineral exploration and extraction.

Applicable Tax Rate(s): N/A

Distribution: All receipts are deposited into the general fund.

Collection Frequency: Monthly

Applicable Assumptions and/or Relevant Indicators:

Federal Lands:

Montana Oil Price	Federal Royalty Rate for Oil
Montana Oil Production	Federal Royalty Rate for Natural Gas
Montana Natural Gas Price	Federal Royalty Rate for Coal
Montana Natural Gas Production	Other Federal Royalty Revenue
Montana Coal Price	Federal Rent and Bonus Payments
Montana Coal Production	Federal Administrative Fees

Data Source(s): SBAS, SABHRS, Department of Revenue

Contacts: U.S. Minerals Management Service

Statute: N/A

% of Total FY 2000 General Fund Revenue: 1.65%

Revenue Estimate Methodology: The LFD uses a number of analytical techniques to develop relevant assumptions for this source of revenue. Historical data trends, economic conditions, input from industry experts, company surveys, and etc., are examples of information used to formulate these assumptions. The techniques used to develop these assumptions may vary from biennium to biennium and are highly dependent on availability of information, professional intuition/judgment, and a detailed analysis of the revenue source. The applicable methodology (formulas) and assumptions used by the LFD to develop a revenue estimate for this source are provided in a subsequent section of this document. The following summarizes the LFD process used to develop the revenue estimate.

The revenue estimate for this source is calculated in several steps:

Federal royalty revenue is calculated for each of the minerals produced on federal land, as follows:
1. Federal coal royalty revenue = (Montana coal production x Montana coal price x federal royalty rate for coal)
2. Federal oil royalty revenue = (Montana oil production x Montana oil price x federal royalty rate for oil)
3. Federal natural gas royalty revenue = (Montana natural gas production x Montana natural gas price x federal royalty rate for natural gas)

Federal royalty revenue is then calculated for other federal royalty revenue. The sum of these four sources provides total federal royalty revenue.
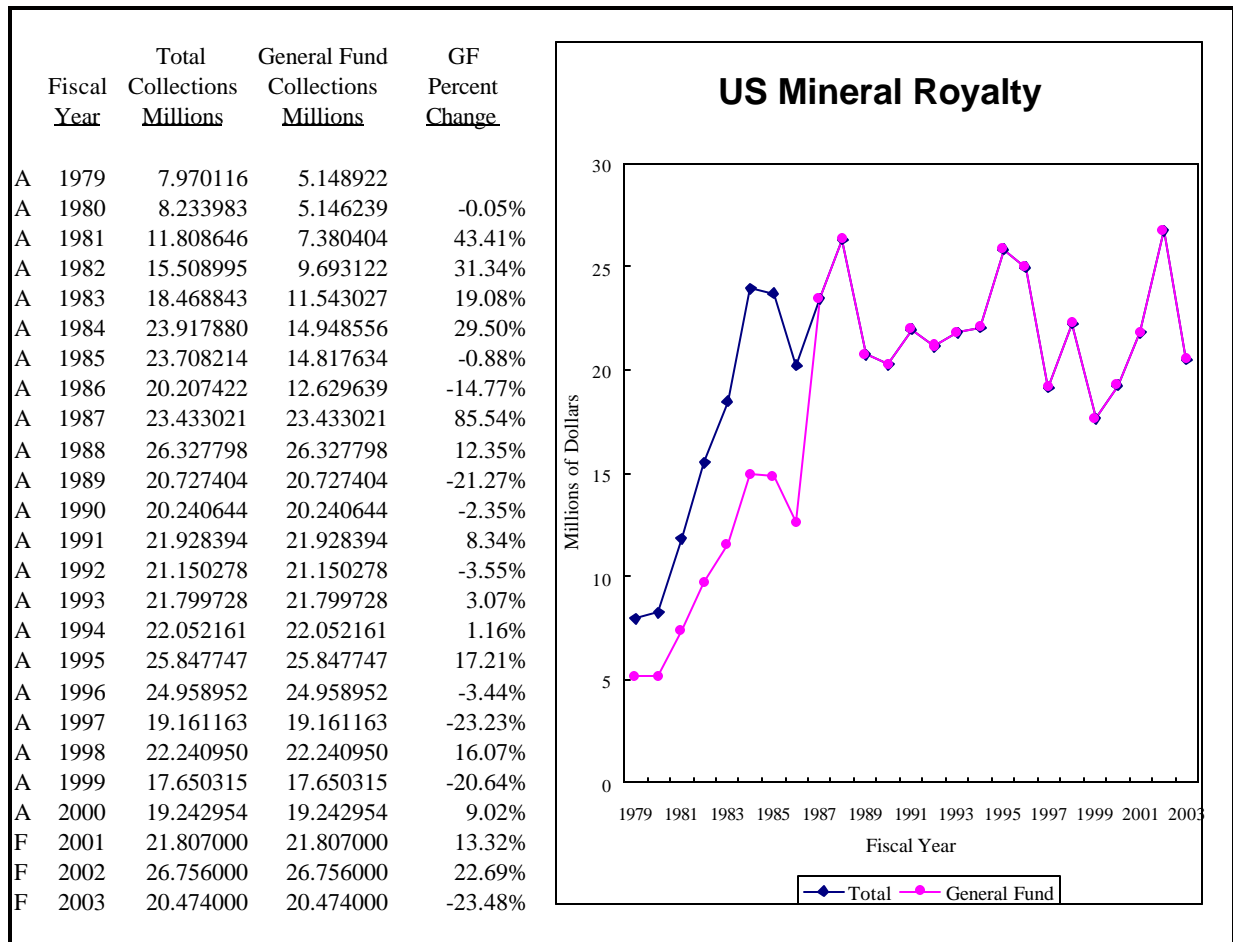
Legislative Fiscal Division
Revenue Estimate Profile
US Mineral Royalty

Next, total federal royalty revenue is added to federal rent and bonus revenue, and the sum multiplied by 0.50 to determine the state's share. In the past, federal administrative fees were deducted from the state's share to compute the anticipated state revenue. However with the passage of federal legislation HR 2389, administrative fees are no longer deducted beginning October 2000. Finally, the anticipated state revenue is converted from a calendar to a fiscal year basis.

Revenue Projection:

	Fiscal Year	Total Collections Millions	General Fund Collections Millions	GF Percent Change
A	1979	7.970116	5.148922	
A	1980	8.233983	5.146239	-0.05%
A	1981	11.808646	7.380404	43.41%
A	1982	15.508995	9.693122	31.34%
A	1983	18.468843	11.543027	19.08%
A	1984	23.917880	14.948556	29.50%
A	1985	23.708214	14.817634	-0.88%
A	1986	20.207422	12.629639	-14.77%
A	1987	23.433021	23.433021	85.54%
A	1988	26.327798	26.327798	12.35%
A	1989	20.727404	20.727404	-21.27%
A	1990	20.240644	20.240644	-2.35%
A	1991	21.928394	21.928394	8.34%
A	1992	21.150278	21.150278	-3.55%
A	1993	21.799728	21.799728	3.07%
A	1994	22.052161	22.052161	1.16%
A	1995	25.847747	25.847747	17.21%
A	1996	24.958952	24.958952	-3.44%
A	1997	19.161163	19.161163	-23.23%
A	1998	22.240950	22.240950	16.07%
A	1999	17.650315	17.650315	-20.64%
A	2000	19.242954	19.242954	9.02%
F	2001	21.807000	21.807000	13.32%
F	2002	26.756000	26.756000	22.69%
F	2003	20.474000	20.474000	-23.48%

US Mineral Royalty

NOTE: Due to the transition to a new state accounting system and other factors, an unusually large number of accounting errors occurred in fiscal 2000. The errors not only impact the general fund, but other funds as well. To correct these errors and ensure an accurate Comprehensive Annual Financial Report for the state, adjustments must be made in fiscal 2001 as prior year adjustments. All of these necessary adjustments may not be known at this time. The actual fiscal 2000 revenue shown in the table above was adjusted for these accounting errors, but has not been audited by the Legislative Auditor.

The general fund adjustments to this general fund revenue source that were known as of November 10, 2000 are: 1) $3,275,550; and 2) $1,666,859.

Forecast Methodology

$CROY_t = FTON_t * CP_t * FCRR_t$
--- where
  CROY = Federal Coal Royalty Revenue
  FTON = Tons Produced on Federal Land
  CP = Coal Price
  FCRR = Federal Coal Royalty Rate
  t = Calendar Year

$OROY_t = FBAR_t * OP_t * FORR_t$
--- where
  OROY = Federal Oil Royalty Revenue
  FBAR = Barrels Produced on Federal Land
  OP = Oil Price
  FORR = Federal Oil Royalty Rate
  t = Calendar Year

$GROY_t = FMCF_t * GP_t * FGRR_t$
--- where
  GROY = Federal Gas Royalty Revenue
  FMCF = Gas Produced on Federal Land
  GP = Gas Price
  FGRR = Federal Gas Royalty Rate
  t = Calendar Year

$OTROY_t = SUM(i{=}t{-}1...{-}n)\ OTROY_i\ /\ |{-}n|$
--- where
  OTROY = Federal Other Royalty Revenue
  t = Calendar Year
  i = Calendar Year

$RBON_t = SUM(i{=}t{-}1...{-}n)\ RBON_i\ /\ |{-}n|$
--- where
  RBON = Federal Rent and Bonus Revenue
  t = Calendar Year
  i = Calendar Year

$AFEE_t = AFEE_{t-1}$
--- where
  AFEE = Federal Administrative Fee
  t = Calendar Year

$$TROY_t = CROY_t + OROY_t + GROY_t + OTROY_t$$
--- where
   TROY = Total Federal Royalty Revenue
   CROY = Federal Coal Royalty Revenue
   OROY = Federal Oil Royalty Revenue
   GROY = Federal Gas Royalty Revenue
   OTROY = Federal Other Royalty Revenue
   t = Calendar Year

$$SREV_t = (TROY_t + RBON_t) * .5 - AFEE_t$$
--- where
   SREV = State US Mineral Royalties
   TROY = Total Federal Royalty Revenue
   RBON = Federal Rent and Bonus Revenue
   AFEE = Federal Administrative Fee
   t = Calendar Year

$$FY_{t+1} = CY_t * 7/12 + CY_{t+1} * 5/12$$
--- where
   FY = Fiscal Year
   CY = Calendar Year

Distribution Methodology

$$GFREV_t = SREV_t * 100\%$$
--- where
   GFREV = General Fund Allocation of Revenue
   SREV = State US Mineral Royalties
   t = Fiscal Year

	t Fiscal	Total Rev. Millions	GF Rev. Millions	One-Time Settlement Millions
Actual	2000	19.242954	19.242954	
Forecast	2001	21.807000	21.807000	
Forecast	2002	26.756000	26.756000	5.000000
Forecast	2003	20.474000	20.474000	

	t Cal	Oil Barrels	Coal Tons	Gas MCF's	Oil Price	Coal Price	Gas Price
Forecast	2000	2.857544	25.253000	15.080351	22.187915	9.206901	3.565913
Forecast	2001	2.778309	25.194000	14.757572	16.721540	9.174540	3.838135
Forecast	2002	2.841360	22.350337	15.319747	16.149673	9.550366	3.185284
Forecast	2003	2.899366	22.045337	15.697517	15.905789	9.499382	2.649185

Legislative Fiscal Division
Revenue Estimate Profile
US Mineral Royalty

	t Cal	Oil Roy. Rate	Coal Roy. Rate	Gas Roy. Rate	Oil Revenue	Coal Revenue	Gas Revenue
Forecast	2000	0.109451	0.122845	0.123153	6.939516	28.561693	6.622580
Forecast	2001	0.109593	0.123490	0.123186	5.091428	28.543893	6.977446
Forecast	2002	0.109691	0.123400	0.122814	5.033395	26.340211	5.993046
Forecast	2003	0.109445	0.123229	0.122909	5.047243	25.806258	5.111248

	t Cal	Other Royalty	Rent&Bonus Revenue	Total Revenue	Adm. Fee Revenue	State Share
Forecast	2000	0.106007	2.538708	44.768504	1.039176	21.345076
Forecast	2001	0.110419	4.701795	45.424981	0.259794	22.452697
Forecast	2002	0.107805	4.084318	41.558775	0.000000	20.779388
Forecast	2003	0.108077	4.019119	40.091945	0.000000	20.045973

Legislative Fiscal Division
Revenue Estimate Profile
Wholesale Energy Tax

Revenue Description: The wholesale energy transaction tax, enacted by the 1999 legislature (HB 174) and effective January 1, 2000, is imposed on the amount of electricity transmitted by a transmission services provider in the state.

Applicable Tax Rate(s): The current tax rate of 0.015 cent is applied to the number of kilowatt hours transmitted. If the electricity is produced in-state and sold out-of-state, the taxpayer is the person(s) owning the electrical generation property, and the tax is collected by the transmission services provider. If the electricity is produced in-state for delivery in-state, or is produced outside the state for delivery in-state, the taxpayer is the distribution services provider, and the tax is collected by the transmission services provider. The tax does not apply to: 1) electricity that is transmitted through the state that is neither produced nor consumed in the state; 2) electricity generated in the state by an agency of the federal government for delivery outside the state; 3) electricity delivered to a distribution services provider that is a municipal utility or a rural electric cooperative which opts out of competition under HB 390 (1997 legislature); 4) electricity delivered to a purchaser that received its power directly from a transmission or distribution facility owned by an entity of the US government; 5) electricity meeting certain contractual requirements that is delivered by a distribution services provider that was first served by a public utility after December 31, 1996; and 6) electricity that has been subject to the transmission tax in another state.

Distribution: All proceeds are deposited into the general fund.

Collection Frequency: Quarterly

Applicable Assumptions and/or Relevant Indicators:

  Kilowatt Hours Produced
  Line Loss
  Growth in electricity demand (WEFA)

Data Source(s): SABHRS, Department of Revenue Wholesale Energy Tax Returns, Wharton Econometrics Forecasting Associates (WEFA), *Wall Street Journal*

Contacts: Department of Revenue

Statute: Title 15, Chapter 72, MCA

% of Total FY 2000 General Fund Revenue: 0.16%

Revenue Estimate Methodology: The LFD uses a number of analytical techniques to develop relevant assumptions for this source of revenue. Historical data trends, economic conditions, input from industry experts, company surveys, and etc., are examples of information used to formulate these assumptions. The techniques used to develop these assumptions may vary from biennium to biennium and are highly dependent on availability of information, professional intuition/judgment, and a detailed analysis of the revenue source. The applicable methodology (formulas) and assumptions used by the LFD to develop a revenue estimate for this source are provided in a subsequent section of this document. The following summarizes the LFD process used to develop the revenue estimate.

The LFD surveys major companies for anticipated total kilowatt hours produced (KWH) on a calendar basis and then converts KWH to a fiscal year basis. The survey results are for companies producing electricity in the state. The KWH estimates are grown by 4.0 percent in fiscal 2000, 2.6 percent in fiscal 2002, and 1.3 percent in fiscal 2003 to account for growth in electricity imports. The estimated tax revenue is computed by multiplying total KWH, less line loss, by the tax rate.

Revenue Projection:

	Fiscal Year	Total Collections Millions	General Fund Collections Millions	GF Percent Change
A	1979	0.000000	0.000000	
A	1980	0.000000	0.000000	Not App.
A	1981	0.000000	0.000000	Not App.
A	1982	0.000000	0.000000	Not App.
A	1983	0.000000	0.000000	Not App.
A	1984	0.000000	0.000000	Not App.
A	1985	0.000000	0.000000	Not App.
A	1986	0.000000	0.000000	Not App.
A	1987	0.000000	0.000000	Not App.
A	1988	0.000000	0.000000	Not App.
A	1989	0.000000	0.000000	Not App.
A	1990	0.000000	0.000000	Not App.
A	1991	0.000000	0.000000	Not App.
A	1992	0.000000	0.000000	Not App.
A	1993	0.000000	0.000000	Not App.
A	1994	0.000000	0.000000	Not App.
A	1995	0.000000	0.000000	Not App.
A	1996	0.000000	0.000000	Not App.
A	1997	0.000000	0.000000	Not App.
A	1998	0.000000	0.000000	Not App.
A	1999	0.000000	0.000000	Not App.
A	2000	1.894704	1.894704	Not App.
F	2001	3.500000	3.500000	84.73%
F	2002	3.568000	3.568000	1.94%
F	2003	3.614000	3.614000	1.29%

Wholesale Energy Tax — line chart, Millions of Dollars vs Fiscal Year (1979–2003), Total and General Fund series.

Forecast Methodology

FY t+1 = (KWH t - LL t) * GR t * .5 + (KWH t+1 - LL t+1) * GRT t+1 * .5

---where
FY = Fiscal Year
KWH = Total Kilowatt Hours Produced
LL = Line Loss Kilowatt Hours
GRT t = Growth Rate for Net Kilowatt Hours
t = Calendar Year

TAX t = KWH t * TR t
---where
TAX = Electrical Energy Tax
KWH = Total Kilowatt Hours Produced
TR = Tax Rate
t = Fiscal Year

Distribution Methodology

GFTAX t = TAX t * 100%

--- where

GFTAX = General Fund Allocation of Tax

TAX = Wholesale Energy Tax

t = Fiscal Year

	t Fiscal	Total Tax Millions	GF Tax Millions	KWH CY Millions	KWH FY Millions	Credits Millions	Tax Rate
Actual	2000	1.894704	1.894704	22630.597269	4804.247601	0.000000	0.000150
Forecast	2001	3.500000	3.500000	23564.316416	23335.510153	0.000000	0.000150
Forecast	2002	3.568000	3.568000	23562.631416	23788.606055	0.000000	0.000150
Forecast	2003	3.614000	3.614000	23562.631416	24097.857934	0.000000	0.000150

Revenue Estimates as adopted by the
Revenue and Taxation Committee   76   **November 17, 2000**