

# Coal Severance Tax

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PLANNING

# Montana's Coal Industry

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Montana produces primarily subbituminous coal from the Powder River Basin

Powder River Basin coal has a lower heat content compared to other U.S. coal basins, but it burns cleaner due to its low sulfur content

Montana has the largest coal reserves in the country, estimated to be over 100 billion tons

Annual coal production in Montana is about 40 million tons on average (lately it has been less)

There are six major coal mines, five of which are subject to state severance tax

- The Spring Creek Mine in Big Horn County is the largest producer (~12 million tons past couple years)
- The Bull Mountain Mine in Musselshell County exports nearly all of its production (5 – 8 million tons)
- The Rosebud Mine is next to the Colstrip power plant and is the sole supplier of coal for the station (~9 million tons)
- The Absaloka mine on the Crow Reservation does not pay state severance tax

Montana coal is shipped both to domestic and foreign consumers

- Minnesota, Michigan, and Washington receive a large portion of Montana's out-of-state domestic shipments
- Foreign exports go to Canada and Asia

# Montana Coal Taxes

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Montana levies a severance tax on the gross value of coal less exemptions

- This is referred to as the contract sales price
- Exemptions include federal, state, and local taxes

The applicable tax rate is determined by the mining method and the heat content of the coal

COAL DESCRIPTION	TAX RATE
Coal - surface mined w/ btu per pound $\geq 7,000$	15% of value
Coal - surface mined w/ btu per pound $< 7,000$	10% of value
Coal - auger mined w/ btu per pound $\geq 7,000$	5% of value
Coal - auger mined w/ btu per pound $< 7,000$	3.75% of value
Coal - underground mined w/ btu per pound $\geq 7,000$	4% of value
Coal - underground mined w/ btu per pound $< 7,000$	3% of value

# Montana Coal Taxes

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Of Montana's six major mines, five are surface mines and one is an underground mine

- Four of the five surface mines are assessed a 15% state severance tax rate
- Absaloka is exempt from state severance tax
- Bull Mtn. mine is an underground operation taxed at a lower rate, 4%

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## Historical Coal Statistics

(production and tax revenue numbers in millions)

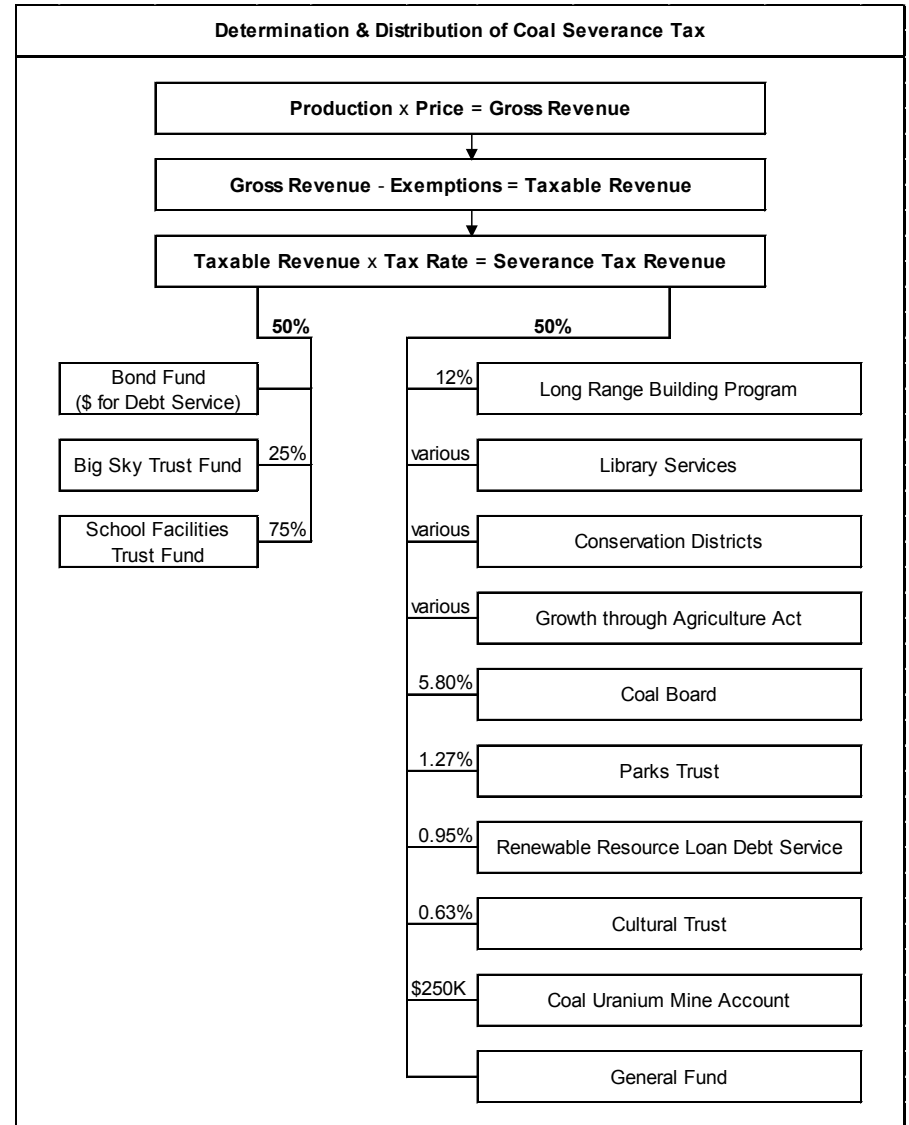
Fiscal Year	Production - All Mines	Production - Taxable Mines	Avg. Price per Ton*	Severance Tax Revenue
2007	33.016	25.740	\$7.64	\$40.759
2008	44.045	37.504	\$8.04	\$45.332
2009	42.502	35.902	\$8.76	\$49.564
2010	40.381	34.809	\$9.78	\$44.177
2011	41.738	36.400	\$10.94	\$54.971
2012	40.833	36.740	\$11.72	\$52.743
2013	38.543	35.566	\$12.23	\$56.482
2014	41.359	35.725	\$12.55	\$57.676
2015	45.726	39.079	\$12.42	\$60.891
2016	35.109	30.920	\$13.15	\$60.359
2017	33.675	29.917	\$13.93	\$58.808
2018	38.244	34.308	\$15.91	\$60.097

\* Contract sales price

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# Severance Tax Distribution

- 50% to the coal trust fund
- 50% to be allocated among various state special revenue funds and the general fund
- The library services account share of total coal severance tax revenue is:
  - 0.88% in FY 2019
  - 0.90% in FY 2020
  - 0.93% in FY 2021 and thereafter



# Coal Severance Tax Revenue & Projections

Through February, FY 2019 coal production is 3.9% lower than FY 2018 production

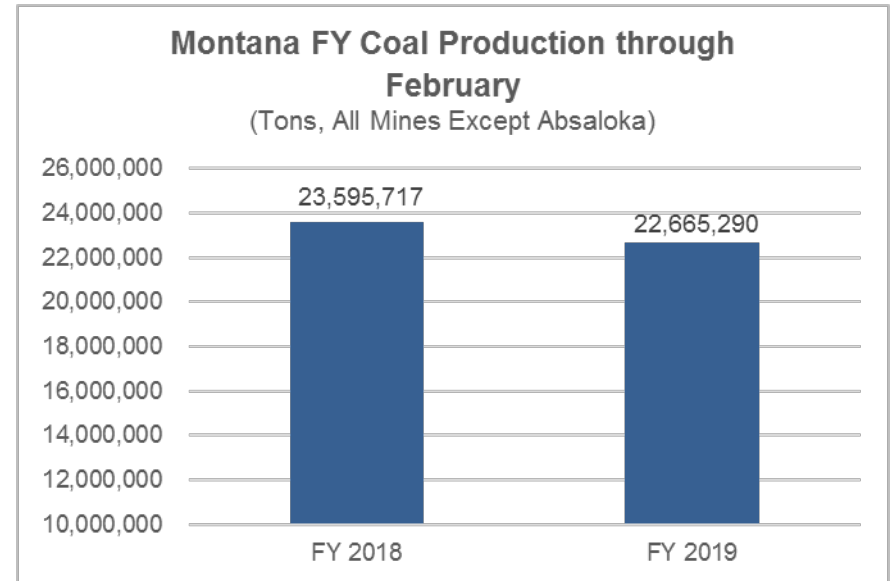
- February production was particularly low
- Nearly 40% lower than historical average production for February

FY 2019 coal severance tax collections are 4.2% higher through February than in FY 2018

- \$7.8 million compared to \$7.5 million

The legislative revenue estimate projects FY 2019 coal severance tax revenue to decline from FY 2018 by about 6%

- This estimate is likely on track given year-to-date decline in both coal production and prices



# Coal Severance Tax Revenue & Projections

Projections for coal production, price, and tax revenue are from House Joint Resolution 2, the 2019 legislature's official revenue estimate

Through FY 2023, production is forecast to decline steadily while prices trend upward

Severance tax collections are fairly stable for FY 2019 through FY 2022

FY 2023 tax revenue is lower due to the shutdown of Colstrip Units 1 and 2 by July 1, 2022

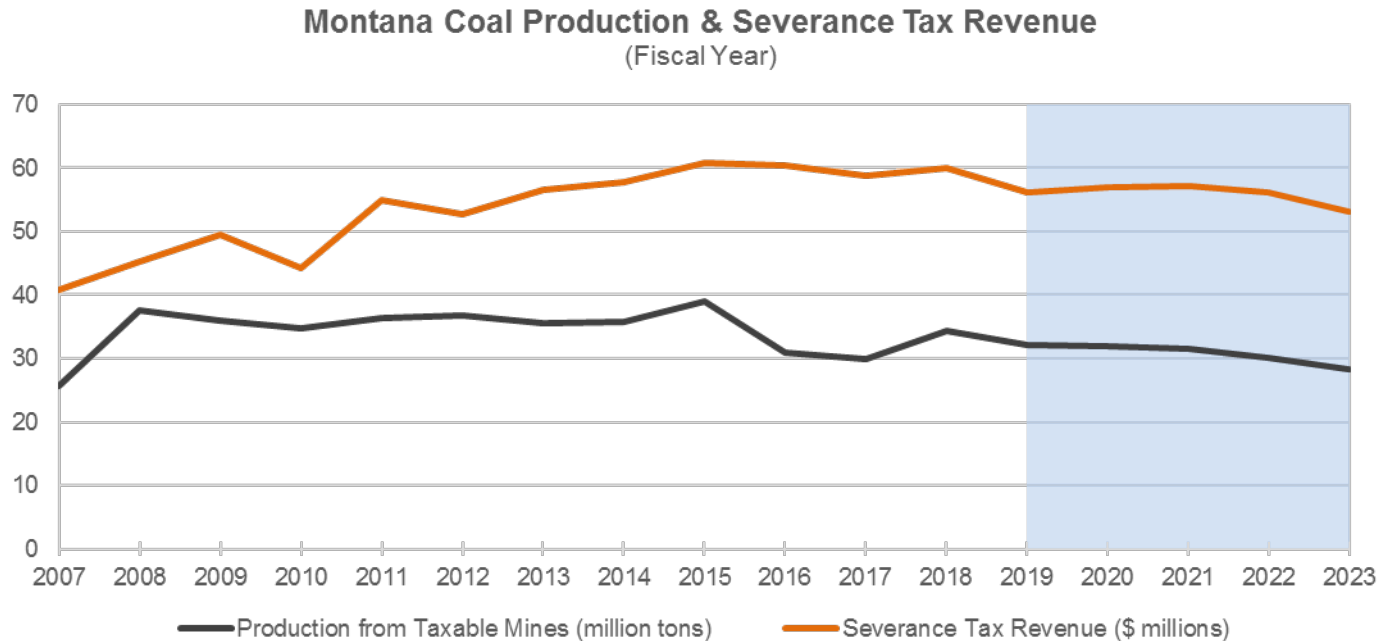
Forecast revenue for the library services account is approximately \$500,000 per year based on HJ 2 projections

## Historical Coal Statistics w/ HJ 2 Projections

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2018	38.244	34.308	\$15.91	\$60.097
2019		32.119	\$16.06	\$56.234
2020		32.018	\$16.19	\$57.043
2021		31.561	\$16.48	\$57.147
2022		30.037	\$16.92	\$56.086
2023		28.217	\$17.17	\$53.135

\* Contract sales price

# Coal Severance Tax Revenue & Projections



Coal severance tax collections can be affected by factors other than price and production in a given year

- Significant audit revenue in FY 2016 and FY 2017
- Dept. of revenue accrues fourth quarter revenue (subject to error)



# Risks for Coal Severance Tax Collections

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1. The uncertain future of the Colstrip power plant and the adjacent Rosebud mine
2. U.S. domestic coal market economics
3. International exports

# Risks for Coal Severance Tax Collections - Colstrip

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The plant's two older generators, Units 1 and 2, are scheduled to be shutdown no later than July 1, 2022

- 307 MW of generating capacity each
- About 30% of the station's total capacity

Units 3 and 4 do not currently have a scheduled timeline for closure

- Newer units with more pollution controls
- 740 MW of generating capacity each

Output from the Rosebud mine could be reduced once Units 1 and 2 cease operation unless the mine is able to secure another buyer

If Rosebud production declines, so will severance tax revenue



# Risks for Coal Severance Tax Collections – Colstrip

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A recent development is the bankruptcy filing of Westmoreland Coal Co. in October 2018

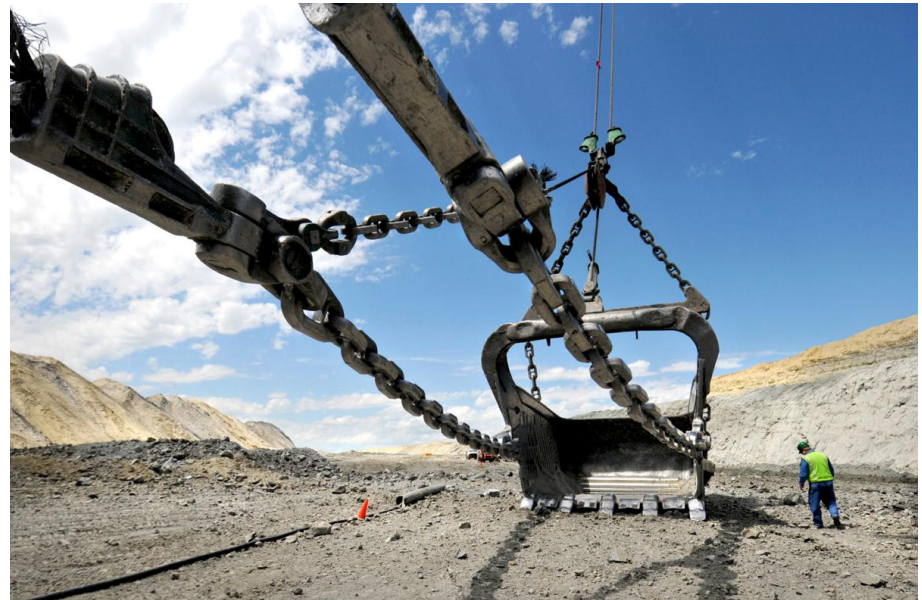
- Westmoreland's creditors took over the company in March

Westmoreland operates three mines in Montana, including the Rosebud mine

Westmoreland's new ownership has created uncertainty surrounding the company's sales contract between the Rosebud mine and the Colstrip station

- Current contract will be honored through 2019
- Unclear if there will be a contract post-2019
- Colstrip has been seeking a potential new supply source

Westmoreland's Savage mine also faces a murky future



# Risks for Coal Severance Tax Collections – U.S. Domestic Energy Market

U.S. electric power sector coal consumption has been on a downward trajectory since peaking in 2007

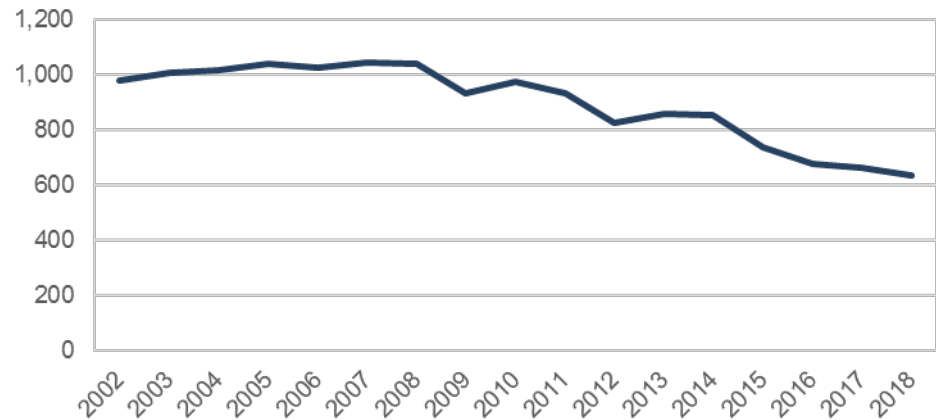
- 2018 consumption was the lowest since 1979

U.S. coal-fired generators have ramped up closures

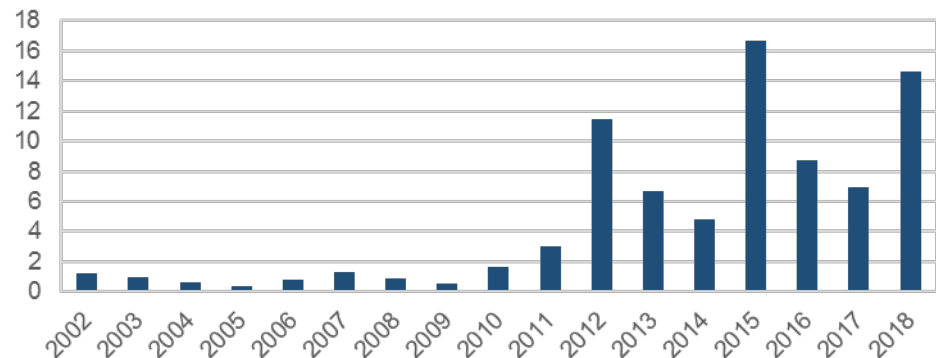
- Over 70 GW has been shuttered since 2007
- More planned for 2019

Stricter emissions regulations (MATS in 2015) and competition from natural gas have spurred the flood of coal plant retirements

**U.S. Coal Consumption - Electric Power Sector**  
(million short tons)



**U.S. Coal-Fired Generation Retirements**  
(Gigawatts)



# Risks for Coal Severance Tax Collections – U.S. Domestic Energy Market

U.S. natural gas production has been rising rapidly since 2005

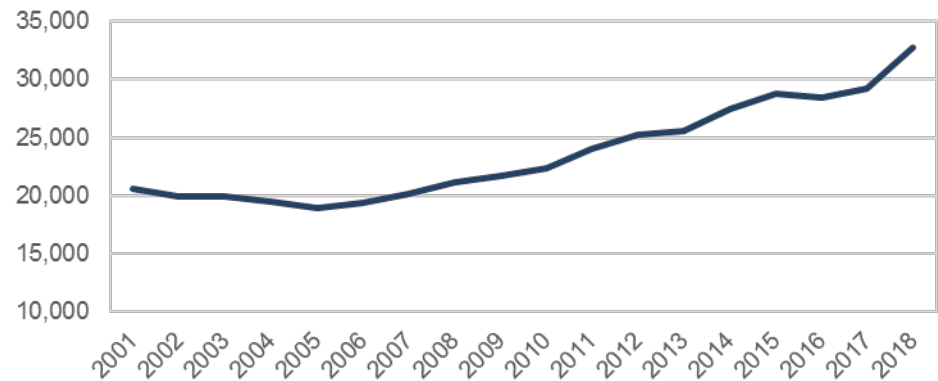
- New sources of supply from shale plays across the country

The price of natural gas for electricity generation has declined considerably over the past decade

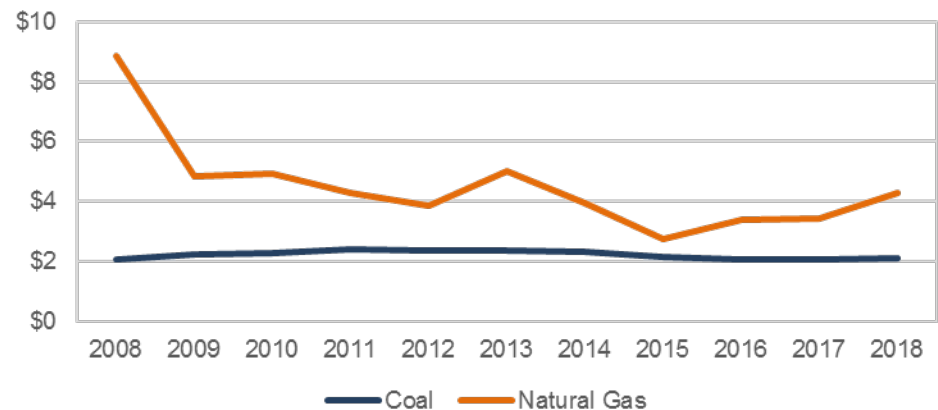
Coal prices for electricity generation have remained stable, but costs associated with emissions have risen

Renewable energy sources are becoming increasingly competitive

**U.S. Natural Gas Marketed Production**  
(billion cubic feet)



**Cost of Fossil Fuel Inputs for Electricity Generation**  
(\$ per million BTUs)



# Risks for Coal Severance Tax Collections – U.S. Domestic Energy Market

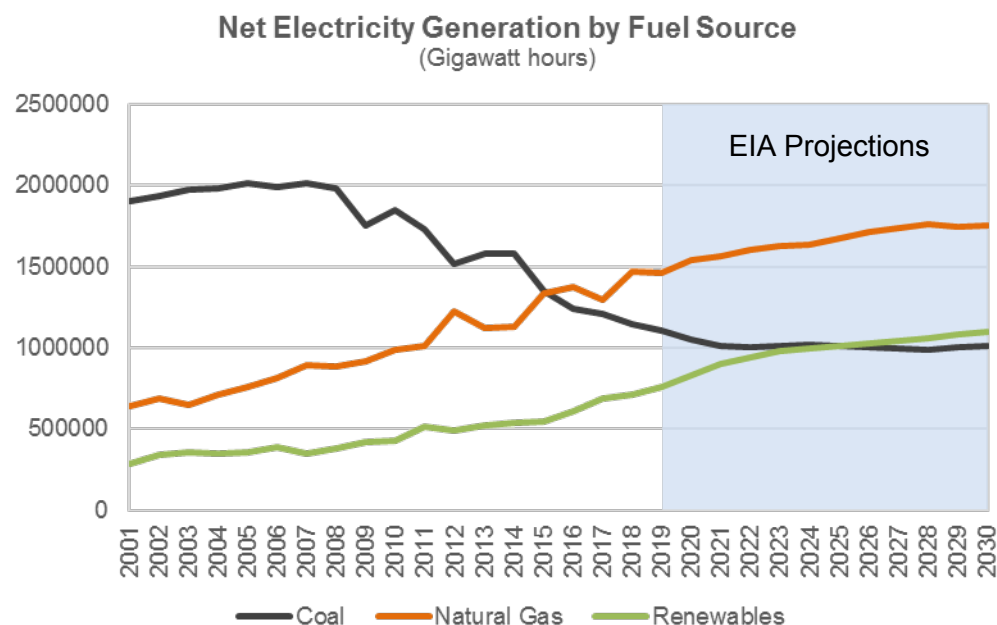
Natural gas has overtaken coal as the primary input for electricity generation in the U.S.

Energy Information Administration projections (AEO – 2019) show a continued decline in coal as an electric fuel source domestically, while natural gas and renewables rise further

- New generating capacity will be supplied by natural gas and renewables

Roughly two-thirds of Montana coal is shipped to domestic consumers

Any erosion in domestic demand for Montana coal could be mitigated by exports



# Risks for Coal Severance Tax Collections – International Exports

International thermal coal prices are highly volatile

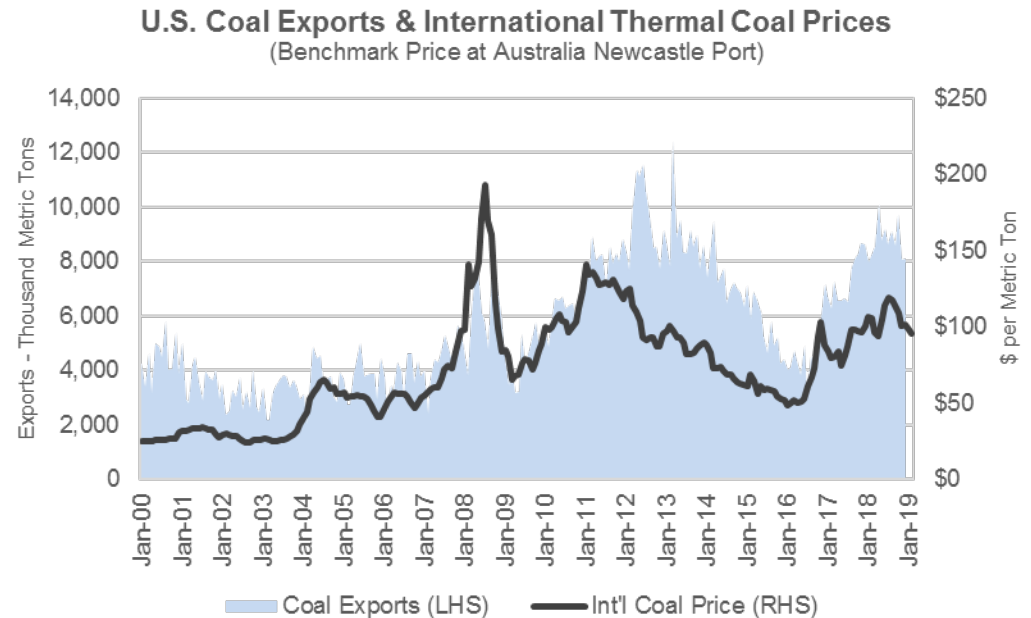
- Influenced by Chinese demand and supply, but to a lesser degree moving forward
- Growing demand in India

The EIA estimates a leveling of Chinese coal consumption

- Other fuels are projected to make up an increasing share of China's electrical generation moving forward

Long-term growth is not expected for U.S. coal exports

- Major international coal markets are distant from the U.S. and competition from other global suppliers is increasing



## Risks for Coal Severance Tax Collections – International Exports

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Montana Exports declined alongside international prices from 2013 – 2016, but have since rebounded

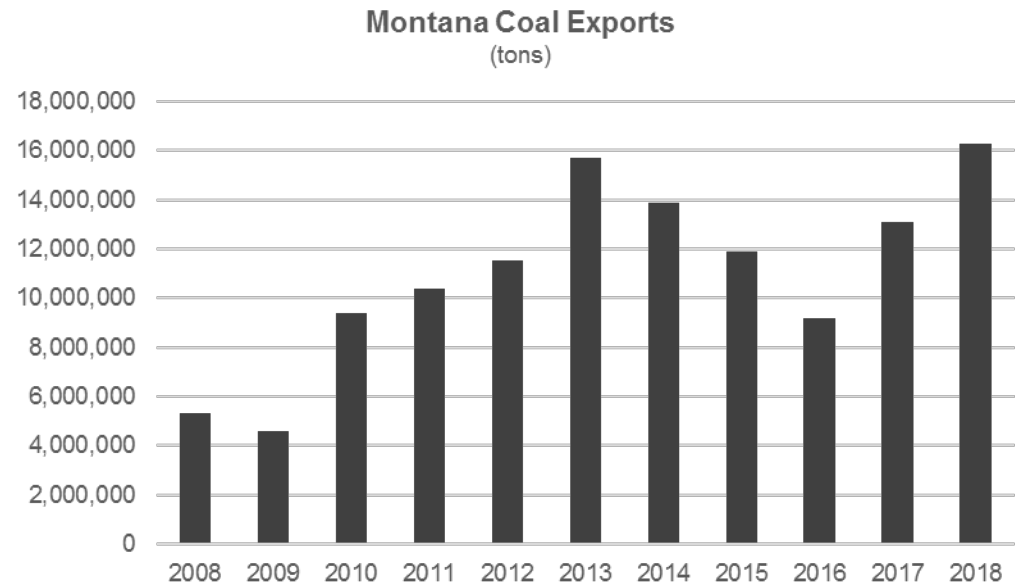
Spring Creek mine and Bull Mountain mine are Montana's primary exporters

There are significant transportation costs incurred for Montana producers to supply international markets

- Export volumes are shipped by rail to terminals in western Canada

Environmental concerns in Washington and Oregon relating to coal shipments pose a risk

- Rejection of coal terminal in Washington





## Further Information

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- U.S. Energy Information Administration  
<https://www.eia.gov/>
- Montana Dept. of Environmental Quality “Understanding Energy in Montana”  
<https://leg.mt.gov/content/Committees/Interim/2017-2018/Energy-and-Telecommunications/Understanding%20Energy%202018.pdf>
- Montana Dept. of Revenue Biennial Report  
<https://mtrevenue.gov/publications/biennial-reports/>

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