

## BOOKS, BUILDINGS AND BTUs: The \$600 Million Connection Between Public Education and Colorado's Energy Sector

### BACKGROUND AND MAJOR FINDINGS

The Polis administration and leaders in the state legislature have signaled that public education and oil and natural gas regulation will be major areas of focus in 2019.

In public education, finding more money in the state budget to fund universal full-day kindergarten and higher pay for teachers will be among the top priorities, in line with comments made by Gov. Jared Polis during the 2018 campaign.<sup>i</sup> The policy goals for oil and gas regulation are less clear, after voters rejected a ballot measure to dramatically widen setback distances for new drilling and legalize local bans on energy production. The ballot measure was also opposed throughout the campaign by Gov. Polis and a bipartisan coalition of business leaders, local officials and many state lawmakers.<sup>ii</sup>

In interviews during the transition, Gov. Polis said he wants to “figure out the parameters around local input”<sup>iii</sup> and House Speaker K.C. Becker said she “wants to put the oil and gas wars to bed.”<sup>iv</sup> At the same time, anti-oil and gas groups are issuing ultimatums and making demands of the governor and legislature that go well beyond the terms of the failed ballot measure. These demands even include a statewide shutdown of oil and natural gas permitting.<sup>v</sup>

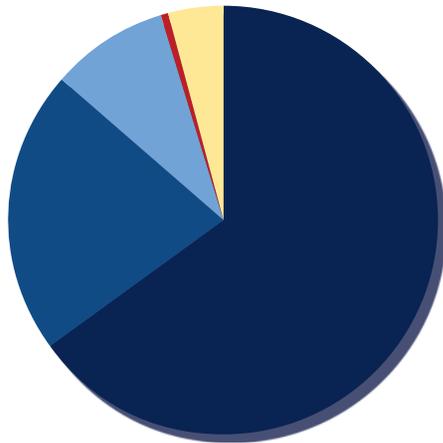
The resolution of these two policy debates – public education and oil and gas regulation – are closely connected. As one of the nation's leading energy producing states, oil and natural gas development is a major source of tax revenue for basic services, and especially public education.

### KEY POINTS

- Colorado oil and natural gas development generates an average of \$669 million per year in K-12 and higher education funding
- Over five years (FY 2012-13 to FY 2016-17) the cumulative total was more than \$3.3 billion
- These are conservative totals based on historical data and estimates of various revenue streams, including property taxes and state and federal mineral development
- The Building Excellent Schools Today program is 70% funded by the Colorado State Land Board, which uses oil and gas revenues to support public education across the state
- In a major energy producing state, policymakers should carefully consider the unintended consequences of measures targeting the oil and natural gas sector and their impacts on K-12 and higher education funding

VITAL FOR COLORADO is a broad coalition of business leaders, public officials and citizens formed to support responsible energy development. Since 2013, more than 85,000 organizations, businesses and citizens have joined our coalition. For more information, visit <http://www.vitalforcolorado.com/about>

## EIA: Colorado Energy Production in BTUs



- Natural Gas (65%)
- Crude Oil (21.5%)
- Coal (8.8%)
- Biofuels (0.6%)
- Other Renewable Energy (4.1%)

As a general proposition, the importance of energy-related revenues to state, local and school district budgets is implicitly understood by policymakers. After all, Colorado is the fifth largest oil-producing state in the country, the sixth largest natural gas producer and the 10<sup>th</sup> largest producer of all forms of energy combined.<sup>vi</sup>

When all of Colorado’s energy sources are converted to a standard measure – British thermal units, or BTUs – the importance of oil and natural gas to the state economy is even clearer. Natural gas accounts for more than 2,000 trillion BTU, or 65 percent of all the energy produced in Colorado, according to 2016 data from the U.S. Energy Information Administration. Oil is the state’s second largest energy source, producing 663 trillion BTU, or 21.5 percent of the total, followed by coal (8.8 percent), renewables (4.1 percent) and biofuels (0.6 percent).<sup>vii</sup>

Therefore, as the largest sources of energy in a major energy-producing state, it is common sense that oil and natural gas are also major sources of taxes and other kinds of public revenue in Colorado.

But beyond this general proposition, the size and scope of these public revenue streams is less well understood. Accordingly, this briefing explores the number and magnitude of K-12 and higher education revenue streams tied to oil and gas development, using published historical data and estimates for local and state assessed property taxes, revenues from energy development on state and federal lands, corporate and personal income taxes and state sales taxes.



*We need to have an inclusive conversation about how ... we protect our communities and ensure that we keep the oil and gas industry moving in Colorado. Because we cannot ignore the contributions of oil and gas and energy... If oil and gas pulls out of the state of Colorado, we will go into an automatic recession. We do not have the funds in our budget to backfill the economic impacts that would occur directly and indirectly.<sup>viii</sup>*

**State Sen. Angela Williams (D)**  
**Chair, Business, Labor & Technology Committee**



**Conservatively, these diverse revenue streams poured more than \$3.3 billion into K-12 and higher education between FY 2012-13 and FY 2016-17. During the same five-year period, the annual average from these revenue streams was \$669 million per year.**

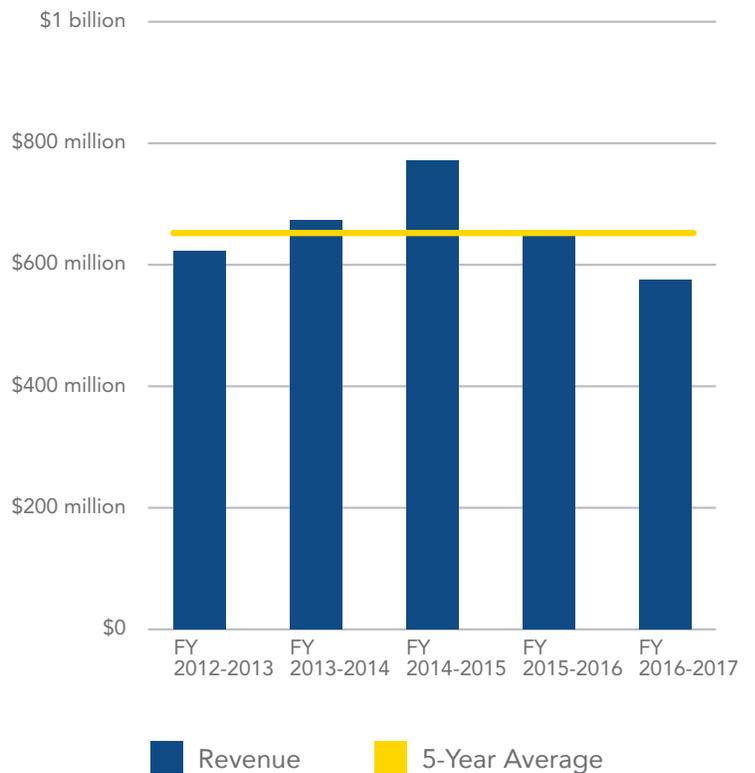
While other revenue sources certainly exist, such as local sales taxes and property taxes on office buildings and other types of commercial real estate, these sources are excluded from the analysis in this briefing due to a lack of readily accessible sector-by-sector data spotlighting the contribution of the oil and gas industry. Severance taxes were also excluded due to the legislative formula that governs how these revenues are spent.

In practical terms, the revenues identified in this briefing provide further confirmation of the close connection between oil and natural gas development and public education funding in Colorado. They are inseparable – as you would expect in one of the country’s top energy producing states.

For policymakers, this means the unintended consequences of measures targeting Colorado’s oil and natural gas sector should be carefully considered as they are reviewed by the legislature, state agencies or local governments. Constructive improvements to the state’s regulatory framework, which is already considered the toughest in the nation,<sup>x</sup> will allow for continued energy production in Colorado and preserve existing revenue sources for K-12 and higher education in our state. But measures that create a hostile regulatory environment for oil and gas development in Colorado have the very real potential to cut public education funding and derail plans for new spending priorities, including higher teacher pay and a more than \$200 million proposal for universal full-day kindergarten.<sup>x</sup>

Moreover, activists working with 350.org, Food & Water Watch and other national anti-oil and gas groups must account for the massive revenue shortfalls their “ban fracking everywhere” and “keep it in the ground” ideology would impose on local governments, state agencies and especially school districts across our state. Refusing to acknowledge the mainstay role of energy development in supporting basic government services, as national anti-oil and gas groups have done for years, is unreasonable and will not lead to public policy outcomes that serve the best interests of our state.

### **Oil and Gas Revenues for K-12 and Higher Education in Colorado**



## REVENUE STREAMS

Colorado has been a leading producer of oil and natural gas for decades. Numerous revenue streams tied to oil and natural gas development have evolved over time, providing longstanding support for state and local budgets and funding for basic services – including K-12 and higher education.

### Property taxes

Oil and natural gas produced in Colorado, production equipment and pipelines that transport oil and natural gas are all subject to property taxes. The tax rate for oil and gas, however, is much higher than other classes of property. To explain why, it is important to review the two-step formula for calculating property tax obligations in Colorado:

$$\text{Actual Value} \times \text{Assessment Rate} = \text{Assessed Value}$$

$$\text{Assessed Value} \times \text{Mill Levy} = \text{Taxes Due}^{\text{xii}}$$

For residential property, the current assessment rate is 7.2 percent. In effect, this means that local mill levies (i.e. property taxes) are applied only to 7.2 percent of the residential property's actual value. For commercial property, the assessment rate is 29 percent of the actual value. Oil and gas production, however, has an assessment rate of 87.5 percent – 12 times higher than the rate applied to residential property and three times higher than commercial property.<sup>xiii</sup>

In practical terms, these different assessment rates produce a wide variation in tax obligations for different classes of property, even when the same local mill levy is applied. For example, under a total levy of 80 mills, residential property with an actual value of \$500,000 would owe \$2,880 in property taxes. For \$500,000 of commercial property, the same mill levy would generate a property tax bill of \$11,600. But \$500,000 in actual oil and gas value results in a dramatically higher property tax bill of \$35,000.

The structure of Colorado's property tax system, when combined with our state's role as a leading energy producer, makes oil and natural gas development a major source of revenue for basic government services across our state. Oil and gas-related property tax revenue supports county and municipal governments, fire departments, hospitals, parks, recreation and many other public services.

This is especially true for public education. Cumulatively, property taxes tied to oil, natural gas and pipelines in Colorado contributed more than \$2.2 billion to K-12 and higher education between FY 2012-13 and FY 2016-17, according to an analysis of annual

property tax reports from the Department of Local Affairs (DOLA).<sup>xv</sup> Over the same five-year period, the annual average was more than \$441 million.

*Tax revenues tied to that energy production are a major source of funding for education and other critical public services.<sup>xi</sup>*

**Platte Valley Schools  
Superintendent Glenn McClain**

*Much of that tax money goes to our schools, and if anybody needs more tax money, it's our schools.<sup>xiv</sup>*

**Former Denver Mayor  
Wellington Webb (D)**

## Oil, natural gas and pipeline property tax revenues for K-12 and higher education (\$ millions)

| FY 2012-2013 | FY 2013-2014 | FY 2014-2015 | FY 2015-2016 | FY 2016-2017 | 5-YEAR AVG | 5-YEAR TOTAL |
|--------------|--------------|--------------|--------------|--------------|------------|--------------|
| \$408.63     | \$435.97     | \$518.52     | \$472.80     | \$370.01     | \$441.18   | \$2,205.92   |

This is a conservative total, because the oil, gas and pipeline data in DOLA’s annual property tax reports exclude other kinds of real estate that are prevalent across the Colorado energy sector. Significant investments in office space, storage buildings, maintenance facilities and other property directly associated with oil and natural gas development fall within the broad categories of commercial and industrial property, for example.

### State-owned mineral development

A significant share of Colorado’s oil and natural gas development takes place on state-owned land. The Colorado State Board of Land Commissioners is legally responsible for managing these revenues and using them to financially support Colorado’s public schools and a number of other public institutions. Oil and gas development is not the sole source of revenue for the State Land Board, but it does represent the vast majority of revenue.

State Land Board revenues are a major funding source for school renovation and construction projects, through the Building Excellent Schools Today (BEST) program, as well as general K-12 and higher education budget support. Every year, the State Land Board publishes detailed data on oil and natural gas revenues, along with a breakdown of the financial support provided to K-12 schools and universities including the University of Colorado and Colorado State University.

Cumulatively, the development of state-owned oil and natural gas contributed more than \$568 million to K-12 and higher education between FY 2012-13 and FY 2016-17.<sup>xvii</sup> Over the same five-year period, the annual average was more than \$113 million.

*The first part of that mission is to generate revenue for Colorado schoolkids, using the land and resources that were given to us at statehood ... Approximately 80% of the revenues generated by the Colorado State Land Board come from oil and gas. That amounts to about \$1 billion over the last 10 years.<sup>xvi</sup>*

**Matt Pollart**  
**District Manager, North Central Colorado**  
**Colorado State Land Board**

## State-owned oil & gas development revenues for K-12 and higher education (\$ millions)

| FY 2012-2013 | FY 2013-2014 | FY 2014-2015 | FY 2015-2016 | FY 2016-2017 | 5-YEAR AVG | 5-YEAR TOTAL |
|--------------|--------------|--------------|--------------|--------------|------------|--------------|
| \$97.79      | \$145.77     | \$148.03     | \$98.58      | \$78.54      | \$113.74   | \$568.71     |

The role of the BEST program and the support it receives from oil and natural gas development is particularly noteworthy. Since 2008, the State Land Board has contributed almost \$635 million to the BEST program – 70 percent of the program’s budget.<sup>xviii</sup>

Proceeds from the BEST program, administered by the Colorado Department of Education, are used to build new school facilities and support the renovation of existing facilities to improve the health, safety, security and learning environment for students across the state. More than 180,000 students across 139 school districts have benefited from the program, which is primarily supported by revenues from oil and natural gas development.



*I think it’s extremely important that we recognize how many people in Colorado are employed in this industry. I know in my district in East Denver, there are numerous people employed in [oil and gas].<sup>xxi</sup>*

**State Sen. Lois Court (D)  
Senate President Pro Tem  
Chair, Finance Committee**



### Personal income taxes

As a major energy producing state, Colorado has a large community of oil and natural gas professionals. Estimates prepared by the University of Colorado’s Leeds School of Business place the number of jobs supported by the oil and gas sector at more than 100,000.

In 2014, the Leeds School of Business estimated these workers paid \$89.5 million in state income taxes.<sup>xix</sup> Using updated data in 2015, the business school’s researchers increased this estimate to \$109 million.<sup>xx</sup> These taxes are paid into the state’s General Fund, and during the five-year period studied in this briefing, more than 40% of General Fund expenditures went to K-12 and higher education.

Using the lower estimate for state income taxes from oil and gas workers and the percentage of General Fund spending on public education, another major source of K-12 and higher education funding can be identified.

Cumulatively, personal income taxes from Colorado oil and gas workers contributed more than \$198 million to K-12 and higher education between FY 2012-13 and FY 2016-17. Over the same five-year period, the annual average was more than \$39 million.

## Colorado oil and gas worker income tax revenues for K-12 and higher education (\$ millions)

| FY 2012-2013 | FY 2013-2014 | FY 2014-2015 | FY 2015-2016 | FY 2016-2017 | 5-YEAR AVG | 5-YEAR TOTAL |
|--------------|--------------|--------------|--------------|--------------|------------|--------------|
| \$42.01      | \$39.07      | \$39.11      | \$38.43      | \$39.63      | \$39.65    | \$198.25     |

This is a conservative total for two principal reasons. First, the lower of two personal income tax estimates from the Leeds School of Business was used. Second, the CU business school’s estimates for jobs directly supported by oil and gas development and those indirectly supported in other industries across the Colorado economy are lower than other estimates.

For example, in 2017, a PricewaterhouseCoopers study commissioned by the American Petroleum Institute estimated the number of jobs supported by oil and natural gas development in Colorado at more than 230,000.<sup>xxii</sup> Similarly, a study conducted by the REMI Partnership predicted job losses of almost 148,000 under Proposition 112, which would have made oil and natural gas drilling impossible on 85 percent of state and private land in Colorado.<sup>xxiii</sup>

However, even when the lower employment and income tax estimates are used, it is clear that personal income taxes from oil and gas professionals are major sources of revenue for all government services, including tens of millions of dollars per year for K-12 and higher education.

**Corporate income and sales taxes**

Developing oil and natural gas is a capital-intensive business. Annual drilling budgets for individual oil and gas companies in Colorado are measured in the hundreds of millions of dollars and sometimes exceed \$1 billion per year. Using economic models, researchers can estimate how much tax revenue these companies generate in the process of building new wells and selling the oil and natural gas they produce.

In addition to personal income taxes from energy workers, the CU Leeds School of Business also published an estimate in 2014 for state corporate income and sales taxes paid by oil and gas companies in Colorado: \$164 million.<sup>xxv</sup> Once paid into the General Fund, more than 40 percent of these revenues went to K-12 and higher education during the five-year period studied in this briefing.

Cumulatively, corporate income and sales taxes from oil and gas development in Colorado contributed more than \$363 million to K-12 and higher education between FY 2012-13 and FY 2016-17. Over the same five-year period, the annual average was more than \$72 million.

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*When fully funding public education is already a struggle, it would be irresponsible to attack a major source of school funding like oil and gas development. I also represent members who work in the oil and gas sector and who work on school construction projects supported by oil and gas revenues. We can't forget about those jobs, either. I believe positive changes in energy policy are possible – we just have to keep in mind all the connections between the energy sector and other things we care about, including good public schools and good jobs.* <sup>xxiv</sup>

**Gary Arnold**  
**Business Manager,**  
**Denver Pipefitters Local 208**

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**Colorado oil and gas corporate and sales tax revenues for K-12 and higher education (\$ millions)**

| FY 2012-2013 | FY 2013-2014 | FY 2014-2015 | FY 2015-2016 | FY 2016-2017 | 5-YEAR AVG | 5-YEAR TOTAL |
|--------------|--------------|--------------|--------------|--------------|------------|--------------|
| \$76.98      | \$71.60      | \$71.66      | \$70.42      | \$72.62      | \$72.65    | \$363.27     |

## **Federal mineral grants**

Like our state government, the federal government also owns oil and natural gas mineral rights in Colorado. These oil and gas resources are accessed through a combination of surface drilling locations on state, private and federal land, mostly on Colorado’s Western Slope. In order to develop these resources, private companies buy leases from the federal government, submit permitting applications to state and federal regulatory agencies, and if approved, pay royalties to the federal government.

The State of Colorado also receives a share of these revenues, which fund a number of programs, including Federal Mineral Lease (FML) grants to counties, municipalities and school districts. For K-12 schools, these grants provided a cumulative total of \$11.6 million between FY 2012-13 and FY 2016-17.<sup>xvii</sup> Over the same five-year period, the annual average was more than \$2.3 million.

### **FML grants to Colorado K-12 school districts (\$ millions)**

| FY 2012-2013 | FY 2013-2014 | FY 2014-2015 | FY 2015-2016 | FY 2016-2017 | 5-YEAR AVG | 5-YEAR TOTAL |
|--------------|--------------|--------------|--------------|--------------|------------|--------------|
| \$2.76       | \$1.97       | \$2.92       | \$2.45       | \$1.53       | \$2.32     | \$11.62      |

## **ASSUMPTIONS AND LIMITATIONS**

This briefing is focused on publicly available historical data and estimates for oil and gas tax revenues that can be connected to K-12 and higher education in a straightforward way. Therefore, conservative assumptions and definitions about what is considered an oil and gas-related source of revenue were applied, including the exclusion of property taxes on commercial and industrial real estate belonging to oil and gas firms.

For the same reason, this briefing excluded oil and gas severance taxes because of the state formula that determines how this revenue is distributed. Broadly speaking, 50 percent of severance taxes are sent to the Department of Natural Resources for various public purposes, including water infrastructure, natural resource and energy-related projects, with the other 50 percent going to DOLA for grants, loans and direct payments to local governments.

However, it is worth noting that in years when severance tax collections are high, fully funding the programs under the formula, this relieves pressure on state and local budgets and frees up money for other priorities, including K-12 and higher education.

The purpose of this briefing, therefore, is not to identify every last dollar of public revenue tied to oil and natural gas that benefits K-12 and higher education in Colorado. Instead, it examines the biggest and easiest to identify revenue streams to provide policymakers with a better sense of the size and scope of K-12 and higher education funding sources tied to oil and gas development in Colorado.

## CONCLUSION

In a major energy producing state like Colorado, it should come as no surprise that energy production is a major source of taxes and other revenues that fund basic services, including public education. However, the number and magnitude of K-12 and higher education revenue sources tied to oil and natural gas production is often overlooked.

In a way, this is understandable. Oil and natural gas revenue sources are diffusely spread throughout the state economy, calculated via complex mechanisms and collected by different public entities at the local, state and federal levels. Without a single line-item to bring all these sources together, they can disappear within the broader tax and revenue base and be taken for granted over time.

At the same time, however, anti-oil and gas groups and their supporters have spent years trying to minimize the economic contributions of one of the state's largest economic sectors as part of a broader campaign to drive the oil and natural gas industry out of Colorado. During the Proposition 112 campaign, for example, anti-oil and gas group Colorado Rising dismissed concerns about tax revenues, economic growth and jobs in the energy sector as a mere "scare tactic."<sup>xxvii</sup> Former State Rep. Joe Salazar, a Colorado Rising spokesman and now the group's executive director, went even further, claiming the oil and gas industry "has no business in the State of Colorado" and "our state will be fine without them."<sup>xxviii</sup>

This claim, however, is demonstrably untrue – especially when it comes to K-12 and higher education. As demonstrated in this briefing, over the past five years alone, oil and natural gas development has conservatively generated \$3.3 billion for public education in Colorado – an average of \$669 million per year.

Policy proposals that create a hostile regulatory environment for oil and gas development and trigger a long-term reduction in oil and gas-related tax revenues would have a negative impact on public education in Colorado. Such proposals would cut existing budgets and put new spending proposals – such as higher teacher pay and universal full-day kindergarten – out of reach.

By the same token, constructive improvements to Colorado's regulatory oil and gas framework that allow for continued energy production will protect existing public education budgets and bring expanded services closer to reality. In practice, this means policymakers should carefully consider the unintended consequences of measures targeting Colorado's oil and natural gas sector and their impacts on K-12 and higher education funding.

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*ABOUT THE AUTHOR: Simon Lomax is the research fellow with Vital for Colorado. He is a former Bloomberg News reporter and previously served as a congressional fellow with the American Political Science Association. Prior to joining Vital for Colorado, he was a managing director with global business advisory firm FTI Consulting.*

## APPENDIX: DATA TABLES AND METHODOLOGY

### 1. Property taxes (\$ millions)

|   | FY 2012-2013 | FY 2013-2014 | FY-2014-2015 | FY 2015-2016 | FY 2016-2017 |
|---|--------------|--------------|--------------|--------------|--------------|
| Oil & Gas Assessed Value  | \$9,263.40   | \$9,944.77   | \$12,226.65  | \$10,796.37  | \$7,881.43   |
| Fluid Pipelines Assessed Value                                  | \$135.44     | \$143.38     | \$183.84     | \$244.71     | \$330.70     |
| Transmission Pipelines Assessed Value                           | \$722.87     | \$708.24     | \$717.65     | \$729.16     | \$699.89     |
| Total Oil, Gas & Pipeline Assessed Value                        | \$10,121.71  | \$10,796.39  | \$13,128.15  | \$11,770.24  | \$8,912.02   |
| Total Assessed Value: All Classes                               | \$88,997.45  | \$90,087.95  | \$98,426.20  | \$103,348.05 | \$106,524.27 |
| Oil, Gas & Pipeline % of Total Assessed Value                   | 11.4%        | 12.0%        | 13.3%        | 11.4%        | 8.4%         |
| Property Tax Revenue: Schools                                   | \$3,507.79   | \$3,547.31   | \$3,781.10   | \$4,046.26   | \$4,326.32   |
| Property Tax Revenue: Community Colleges                        | \$85.17      | \$90.52      | \$106.39     | \$105.15     | \$96.33      |
| Oil, Gas & Pipeline Share of School & Community College Revenue | \$408.63     | \$435.97     | \$518.52     | \$472.80     | \$370.01     |

Data was sourced from Department of Local Affairs (DOLA) Division of Property Taxation annual reports from 2012 to 2017 (publication of annual data for 2018 is not expected until mid-2019). Oil and gas, fluid pipeline and transmission pipeline values were calculated as a percentage of total assessed value. The percentage was then applied to school revenue and community college revenue derived from property taxes, per DOLA's annual reports. Calendar-year data was converted to fiscal-year data to align with the reporting conventions of other revenue streams detailed in this briefing.

### 2. State-owned mineral development (\$ millions):

|                                  | FY 2012-2013 | FY 2013-2014 | FY 2014-2015 | FY 2015-2016 | FY 2016-2017 |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|
| Oil & Gas Royalties              | \$47.85      | \$100.08     | \$105.37     | \$59.55      | \$64.74      |
| Oil & Gas Bonuses                | \$53.19      | \$50.04      | \$50.70      | \$42.68      | \$20.29      |
| Oil & Gas Rents                  | \$2.62       | \$2.35       | \$1.97       | \$1.62       | \$1.19       |
| Total Oil & Gas Revenue          | \$103.66     | \$152.46     | \$158.04     | \$103.85     | \$86.22      |
| State Land Board Revenue         | \$124.94     | \$173.60     | \$191.35     | \$137.28     | \$119.40     |
| Oil & Gas % of Total Revenue     | 83.0%        | 87.8%        | 82.6%        | 75.6%        | 72.2%        |
| School Trust Distributions       | \$116.90     | \$164.85     | \$178.12     | \$129.56     | \$108.04     |
| CSU Trust Distributions          | \$0.92       | \$1.07       | \$1.02       | \$0.69       | \$0.68       |
| CU Trust Distributions           | \$0.03       | \$0.04       | \$0.04       | \$0.05       | \$0.04       |
| Hesperus Trust Distributions     | \$0.02       | \$0.02       | \$0.04       | \$0.01       | \$0.00       |
| Oil & Gas Share of Distributions | \$97.79      | \$145.77     | \$148.03     | \$98.58      | \$78.54      |

Data was sourced from Colorado State Land Board Income and Inventory annual reports from FY 2012-13 to FY 2016-17. Oil royalties, natural gas royalties and oil and gas rents were calculated as a percentage of total State Land Board revenue. The percentage was then applied to annual distributions from a series of trusts administered by the Land Board: The School Trust, CSU Trust, Hesperus Trust and CU Trust.

### 3. Personal income taxes (\$ millions):

|   | FY 2012-2013 | FY 2013-2014 | FY 2014-2015 | FY 2015-2016 | FY 2016-2017 |
|---|--------------|--------------|--------------|--------------|--------------|
| General Fund: K-12 Spending   | \$3,015.44   | \$3,100.52   | \$3,357.90   | \$3,567.99   | \$3,764.63   |
| General Fund: Higher Education  | \$619.26     | \$659.06     | \$761.98     | \$857.42     | \$871.03     |
| General Fund: Total Spending  | \$7,743.57   | \$8,611.91   | \$9,429.18   | \$10,306.49  | \$10,469.26  |
| K-12 and Higher Ed % of General Fund Spending                                     | 46.9%        | 43.7%        | 43.7%        | 42.9%        | 44.3%        |
| CU Estimated Oil & Gas Employee Income Taxes (2014)                               | \$89.50      | \$89.50      | \$89.50      | \$89.50      | \$89.50      |
| CU Estimated Oil & Gas Employee Income Taxes (2015)                               | \$109.00     | \$109.00     | \$109.00     | \$109.00     | \$109.00     |
| K-12 and Higher Ed Revenue from Employee Income Taxes (Based on 2014 CU Estimate) | \$42.01      | \$39.07      | \$39.11      | \$38.43      | \$39.63      |
| K-12 and Higher Ed Revenue from Employee Income Taxes (Based on 2015 CU Estimate) | \$51.16      | \$47.58      | \$47.63      | \$46.80      | \$48.26      |

The University of Colorado Leeds School of Business has estimated the personal income taxes paid by oil and gas employees to the State of Colorado at \$89.5 million per year (2014) and \$109 million per year (2015). The lower of these two estimates was used for this analysis. Next, historical data from Colorado budget requests (fiscal years 2012-13 through 2016-17) were used to calculate the percentage of General Fund appropriations directed toward K-12 and higher education every year. This annual percentage was then applied to the lower estimate of state personal income taxes.

### 4. Corporate income and sales taxes (\$ millions):

|   | FY 2012-2013 | FY 2013-2014 | FY 2014-2015 | FY 2015-2016 | FY 2016-2017 |
|---|--------------|--------------|--------------|--------------|--------------|
| General Fund: K-12 Spending   | \$3,015.44   | \$3,100.52   | \$3,357.90   | \$3,567.99   | \$3,764.63   |
| General Fund: Higher Education  | \$619.26     | \$659.06     | \$761.98     | \$857.42     | \$871.03     |
| General Fund: Total Spending  | \$7,743.57   | \$8,611.91   | \$9,429.18   | \$10,306.49  | \$10,469.26  |
| K-12 and Higher Ed % of General Fund Spending                                     | 46.9%        | 43.7%        | 43.7%        | 42.9%        | 44.3%        |
| CU Estimated Oil & Gas Corporate and Sales Taxes (2014)                           | \$164.00     | \$164.00     | \$164.00     | \$164.00     | \$164.00     |
| K-12 and Higher Ed Revenue from Employee Income Taxes (Based on 2014 CU Estimate) | \$76.98      | \$71.60      | \$71.66      | \$70.42      | \$72.62      |

In 2014, the University of Colorado Leeds School of Business estimated the corporate and sales taxes by oil and gas firms to the State of Colorado at \$164 million per year. This estimate was used as a starting point. Next, historical data from Colorado budget requests (fiscal years 2012-13 through 2016-17) were used to calculate the percentage of General Fund appropriations directed toward K-12 and higher education every year. This annual percentage was then applied to the estimate of state corporate and sales taxes.

## 5. Federal mineral grants (\$ millions):

|  | FY 2012-2013 | FY 2013-2014 | FY 2014-2015 | FY 2015-2016 | FY 2016-2017 |
|--|--------------|--------------|--------------|--------------|--------------|
| Direct Federal Mineral Lease Grants to Colorado School Districts | \$2.76       | \$1.97       | \$2.92       | \$2.45       | \$1.53       |

DOLA publishes annual data on Federal Mineral Lease Grants to school districts and local governments. This analysis uses the school district totals from FY 2012-13 through FY 2016-17.

## ENDNOTES

- i. Colorado Public Radio. (Sept. 28, 2018) Democratic Candidate Jared Polis On What He'd Do As Governor: <http://www.cpr.org/news/story/democratic-candidate-jared-polis-on-what-he-d-do-as-governor>
- ii. Protect Colorado. (2018) Who opposes Proposition 112? <https://www.protectcolorado.com/prop-112-opposition/>
- iii. Colorado Public Radio. (Nov. 15, 2018) One-To-One, John Hickenlooper And Jared Polis Discuss Transition In The Governor's Office: <https://www.cpr.org/news/story/johnhickenlooper-and-jared-polis-discuss-transition-in-the>
- iv. Colorado Politics (Nov. 26, 2018) INSIGHTS | Oil and gas poised to fight back over rules and politics: [https://www.coloradopolitics.com/news/insights-oil-and-gas-poised-to-fight-back-over-rules/article\\_74d172a0-ec4d-11e8-8d46-27c2520261a2.html](https://www.coloradopolitics.com/news/insights-oil-and-gas-poised-to-fight-back-over-rules/article_74d172a0-ec4d-11e8-8d46-27c2520261a2.html)
- v. 350.org. (2019) Petition to Governor-Elect Jared Polis: <http://world.350.org/colorado/files/2018/11/Petition-to-Governor-Elect-Jared-Polis-2.pdf>
- vi. U.S. Energy Information Administration. (2019) Colorado State Profile and Energy Estimates: <https://www.eia.gov/state/?sid=CO>
- vii. U.S. Energy Information Administration. (2019) Colorado State Profile and Energy Estimates: <https://www.eia.gov/state/?sid=CO#tabs-3>
- viii. Senator Angela Williams Facebook post, Jan. 16, 2019: <https://www.facebook.com/COSenWilliams/videos/373228926588357/>
- ix. Denver Post. (Oct. 15, 2018) Ritter: I've been a champion of oil and gas regulation and I'm voting "no" on Prop. 112: <https://www.denverpost.com/2018/10/15/ritter-ive-been-a-champion-of-oil-and-gas-regulation-and-im-voting-no-on-prop-112/>
- x. Denver Post. (Nov. 7, 2018) Gov.-elect Jared Polis, after Prop 112 defeat, talks drilling setbacks: <https://www.denverpost.com/2018/11/07/gov-elect-jared-polis-drilling-setbacks/>
- xi. Colorado Springs Gazette. (Oct. 29, 2018) Possible damage to Colorado public education from 112: [https://gazette.com/opinion/columnists/guest-column-possible-damage-to-colorado-public-education-from/article\\_b9b0c636-d8a8-11e8-bd2d-c38ffdbb169c.html](https://gazette.com/opinion/columnists/guest-column-possible-damage-to-colorado-public-education-from/article_b9b0c636-d8a8-11e8-bd2d-c38ffdbb169c.html)
- xii. Boulder County. (2017) Calculating Your Property Taxes: <https://assets.bouldercounty.org/wp-content/uploads/2017/08/ar-property-tax-calculation.pdf>
- xiii. RE/MAX Country. (2018) <http://rmcrealestate.com/resources/property-tax-assessment-tool/>
- xiv. Western Wire. (Oct. 16, 2018) Mayors Hold Rally, Call Colo's Proposition 112 'Reckless': <http://westernwire.net/mayors-hold-rally-call-colos-proposition-112-reckless/>
- xv. DOLA Division of Property Taxation calendar-year reports can be accessed here: <https://www.colorado.gov/pacific/dola/annual-reports>
- xvi. Colorado State Land Board. (Oct. 18, 2018) Oil and Gas Leasing on Trust Lands: <https://www.youtube.com/watch?v=GbbxPh7kIs4&feature=youtu.be>
- xvii. Colorado State Land Board Income and Inventory reports can be accessed here: <https://www.colorado.gov/pacific/statelandboard/reports-2>

- xviii. Colorado State Land Board. (Sept. 12, 2018) Fact Sheet: Impact of Proposition 112 on Colorado School Funding from State Trust Lands: [https://camro.us/resources/Documents/Fact%20Sheet\\_%20Impact%20of%20Proposition%20112%20on%20Colorado%20School%20Funding%20from%20State%20Trust%20Lands%20\(1\).pdf](https://camro.us/resources/Documents/Fact%20Sheet_%20Impact%20of%20Proposition%20112%20on%20Colorado%20School%20Funding%20from%20State%20Trust%20Lands%20(1).pdf)
- xix. University of Colorado Leeds School of Business. (May 2014) Oil and Gas Industry Economic and Fiscal Contributions in Colorado by County, 2008-2012: <https://www.api.org/~media/Files/News/2014/14-October/Colorado-API-Economic-Impact-Study.PDF>
- xx. University of Colorado Leeds School of Business. (December 2015) Oil and Gas Industry Economic and Fiscal Contributions in Colorado by County, 2014: <https://www.coga.org/wp-content/uploads/2015/12/COGA-2014-OG-Economic-Impact-Study.pdf>
- xxi. Vital for Colorado Facebook post, Jan. 17, 2019: <https://www.facebook.com/VitalforColorado/videos/372400366648211/>
- xxii. PricewaterhouseCoopers. (July 2017) Impacts of the Oil and Natural Gas Industry on the US Economy in 2015: <https://www.api.org/~media/Files/Policy/Jobs/Oil-and-Gas-2015-Economic-Impacts-Final-Cover-07-17-2017.pdf>
- xxiii. REMI Partnership. (July 2018) Increasing the Oil and Gas Setback Requirement to 2,500-feet in Colorado: The Economic and Fiscal Impacts of 2018 Proposition 112: <https://commonsensepolicyroundtable.org/oil-gas-setback-study/>
- xxiv. Comment provided by Gary Arnold, Denver Pipefitters Local 208
- xxv. University of Colorado Leeds School of Business. (May 2014) Oil and Gas Industry Economic and Fiscal Contributions in Colorado by County, 2008-2012: <https://www.api.org/~media/Files/News/2014/14-October/Colorado-API-Economic-Impact-Study.PDF>
- xxvi. DOLA Federal Mineral Lease Distribution data to school districts can be accessed here: <https://dola.colorado.gov/sdd/ddFMLTier2.jsf?fy=2012&jfwid=01285141c6e23df71fb8f88c298f0%202017%20data>
- xxvii. Denver Post. (Oct. 17, 2018) How would Proposition 112 impact Colorado's economy? <https://www.denverpost.com/2018/10/17/proposition-112-economic-impacts-jobs-taxes/>
- xxviii. Vital for Colorado. (Oct. 15, 2018) 'Our State Will Be Fine Without Them': Prop 112 Campaign's Shameful Comments on Energy Workers: [https://www.vitalforcolorado.com/prop112\\_shameful\\_comments\\_on\\_energy\\_workers](https://www.vitalforcolorado.com/prop112_shameful_comments_on_energy_workers)