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The Economic Contribution of the Oil and Gas Industry in the Piceance

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Part 2: The Economic Contribution of the Oil and Gas Industry in the Piceance

- This section studies the economic contribution of the oil and gas industry to a six county area that represents the Piceance Basin
 - Mesa
 - Garfield
 - Rio Blanco
 - Delta
 - Gunnison
 - Moffat

What's included in the study?

- The economic contribution analysis takes into account:
 - Employment and Wages
 - Severance Taxes
 - Federal Mineral Lease Royalties
 - Ad Valorem Taxes
 - Sales Taxes
 - Royalties that are spent or distributed in this region.

Economic Contribution

- The economic contribution takes direct effects and adjusts for:
 - Leakages from the economy
 - Supply chain effects
 - Multiplier effects
 - This helps accurately determine the total economic contribution of the oil and gas industry in the Piceance

Employment

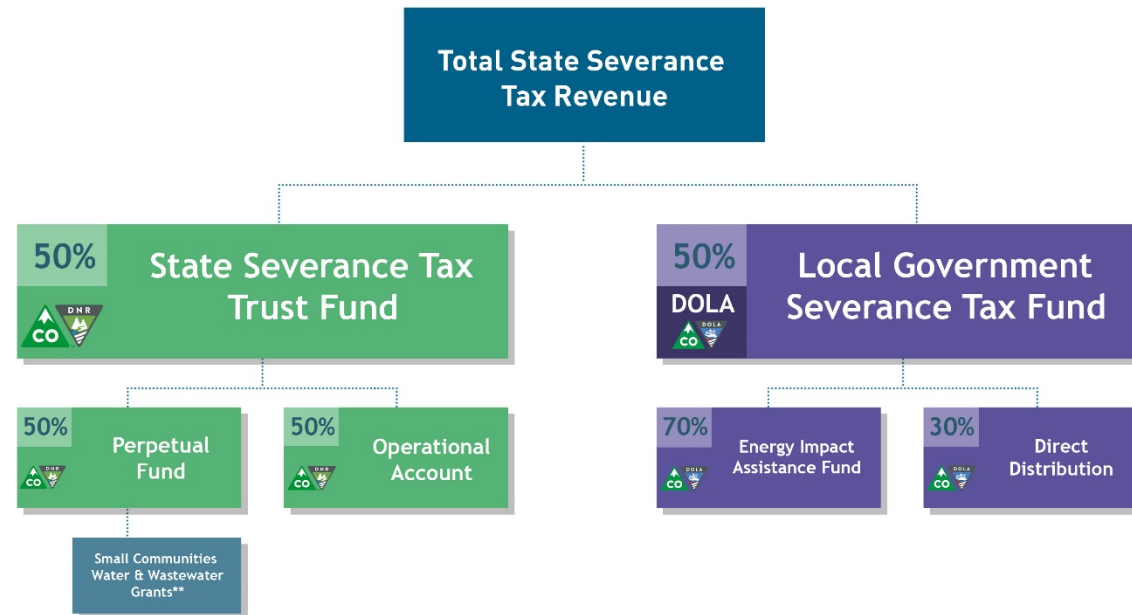
Implan Code	Description
20	Extraction of natural gas and crude petroleum
21	Extraction of natural gas liquids
37	Drilling Oil and Gas
38	Support Activities for oil and gas operation
266	Oil and Gas Field Machinery and Equipment

Direct Industry Contribution

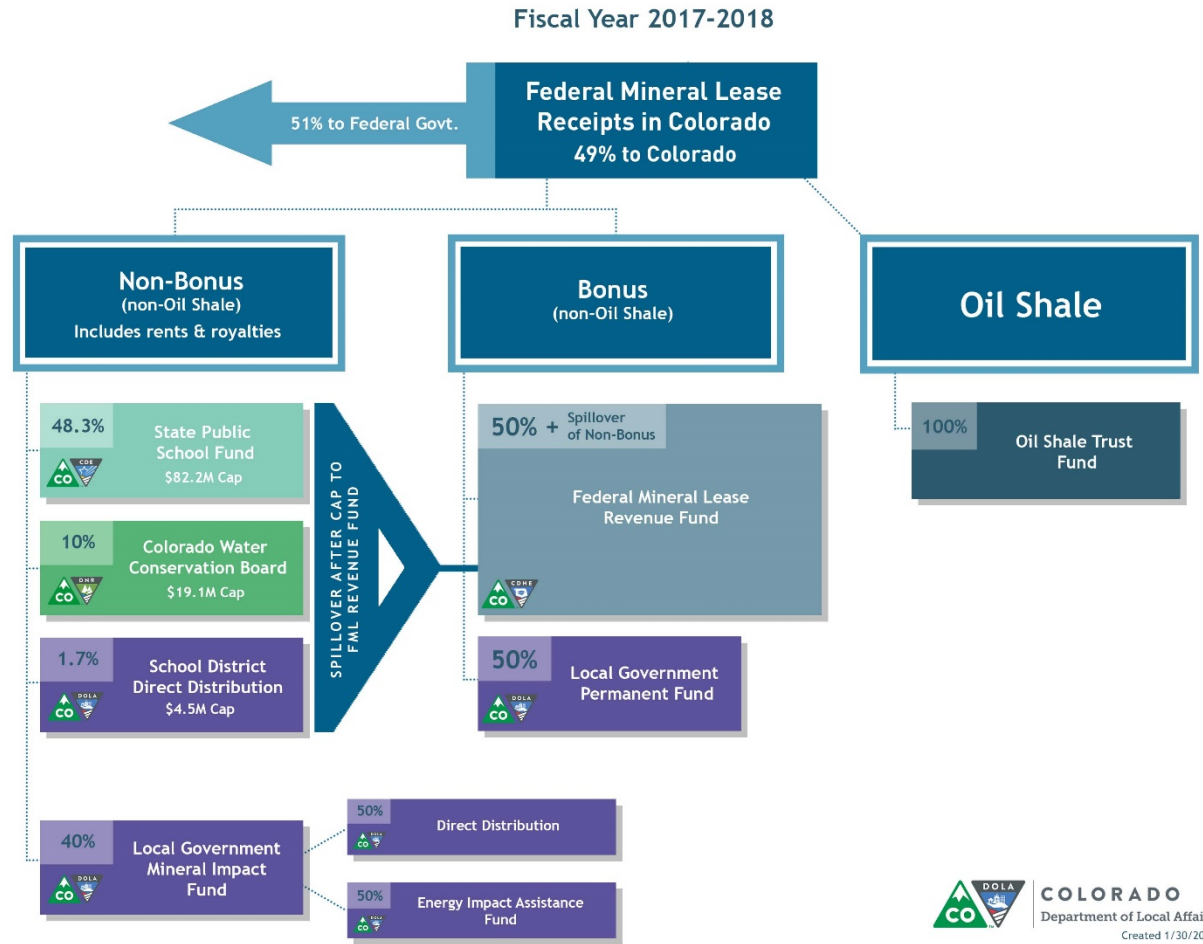
Impact Type	Employment	Labor Income	GRP	Total Output
Direct Effect	5,656	\$504,085,385	\$708,858,022	\$1,099,930,354
Indirect Effect	718	\$48,189,757	\$60,705,217	\$117,851,905
Induced Effect	3,018	\$109,201,084	\$207,964,099	\$377,903,998
Total Effect	9,392	\$661,476,226	\$977,527,338	\$1,595,686,257

Severance Tax Flow Chart

Fiscal Year 2017-2018



FML Flow Chart



Direct Distribution to the Western Slope

	Total Numbers			Adjusted Numbers		
	SDD \$	FML Muni/County \$	FML School District \$	SDD \$	FML Muni/County \$	FML School District \$
Mesa	\$585,727	\$1,288,412	\$109,515	\$553,285	\$1,288,412	\$109,515
Delta	\$141,403	\$172,396	\$14,654	\$133,571	\$68,204	\$5,797
Garfield	\$1,010,954	\$3,222,927	\$273,949	\$954,960	\$3,222,604	\$273,921
Rio Blanco	\$530,594	\$3,500,908	\$297,577	\$501,205	\$2,541,659	\$216,041
Moffat	\$472,683	\$1,319,849	\$112,187	\$446,502	\$414,683	\$35,248
Gunnison	\$399,480	\$762,385	\$64,803	\$377,354	\$47,680	\$4,053
Totals	\$3,140,841	\$10,266,877	\$872,685	\$2,966,876	\$7,583,244	\$644,576
Grand Total			\$14,280,403			\$11,194,696

Energy Impact Assistance Fund

- Awards total \$9,428,143
- Input into IMPLAN based on their expenditure type
 - “The purpose of the EIAF Program is to assist political subdivisions that are socially and/or economically impacted by the development, processing, or energy conversion of minerals and mineral fuels. Funds come from the state severance tax on energy and mineral production and from a portion of the state’s share of royalties paid to the federal government for mining and drilling of minerals and mineral fuels on federally-owned land.”

List of Programs

Program	Amount to Western Slope	Description	Details
Direct Distribution	\$2,966,876.06	Severance	
Direct Distribution: Municipality/County	\$7,583,244.00	FML	
Direct Distribution: School Districts	\$644,575.90	Severance and FML	
Energy Impact Assistance Fund	\$8,577,377	Severance and FML	
State Public School Fund	2,603,668.27	FML	See below
Small Communities Water and Wastewater Grants	No Funding for 2017	Severance	Reduced severance due to previous overpayment and reduction in oil and gas prices means that severance taxes did not reach sufficient levels to fund this program for 2017. 2016 contribution to the Western Slope was \$534,078.
Federal Mineral Lease Revenue Fund	No Funding for 2017	FML Overflow (Bonus Funds)	

Tier 1 Programs

Tier 1 Programs			
COGCC	\$1,700,000	Severance	Estimated amount of COGCC's \$11,389,629 expenditures in Western Slope. (DNR Estimate)
Colorado Water Conservation Board	\$79,301	Severance and FML	Federal Mineral Lease money goes to this organization to help their operational costs. They have a large fund and provide highly subsidized loans for water improvement efforts.
Division of Reclamation, Mining, and Safety	\$358,732	Severance	Estimated amount of \$2,522,594 budget that was spent in Western Slope. (DNR estimate)
Avalanche Information Center	\$48,450	Severance	Estimated amount of \$549,487 that was spent in the Western Slope.
Colorado Parks and Wildlife	\$960,642	Severance	Estimated amount of \$2,341,732 that was spent in the Western Slope. (DNR Estimate)
Colorado Geological Survey	N/A		Did not respond to phone/e-mail requests for data.

Tier 2 Programs

Tier 2 Programs			
Water Supply Reserve Fund	\$902,500*	Severance	(DNR estimate) https://www.colorado.gov/pacific/cowaterplan/water-supply-reserve-fund
Species Conservation Trust Fund	\$825,640*	Severance	(DNR estimate)
Aquatic Nuisance Species	\$528,276*	Severance	(DNR estimate)
Soil and Water Conservation Grants	Funded	Severance	2016/2017: 0 2017/2018: \$65,510
Water Efficiency Grant Program	No Funding	Severance	
Low Income energy Assistance (LEAP)	No Funding	Severance	
Agriculture Value Added Cash Fund	No funding	Severance	
Interbasin Compacts	No funding	Severance	
Forestry Grants	No funding	Severance	2016/2017: 0 2017/2018: \$363,944
Invasive Phteatphyte Management	No funding	Severance	Program not in existence anymore.
Wildfire Risk Reduction Grants	No funding	Severance	Zero both years
Forfeited Mine Site Reclamation	No funding	Severance	Zero both years.

State Public School Fund FML local proportion

	Total School Funding	Proportion from FML	Proportion from Oil/gas
Mesa	\$116,943,609	\$1,839,230	\$1,377,951
Delta	\$25,955,493	\$408,215	\$305,835
Gunnison	\$5,987,358	\$94,166	\$70,549
Rio Blanco	\$3,395,585	\$53,404	\$40,010
Garfield	\$62,293,423	\$979,720	\$734,006
Moffat	\$6,391,993	\$100,530	\$75,317
Total	\$220,967,460	\$3,475,265	\$2,603,668

Economic Contribution of Severance and FML

Impact Type	Employment	Labor Income	Gross Regional Product	Total Output
Direct Effect	230	\$12,488,705	\$15,185,781	\$21,166,778
Indirect Effect	24	\$974,970	\$1,615,384	\$3,421,270
Induced Effect	74	\$2,674,708	\$5,088,338	\$9,252,971
Total Effect	328	\$16,138,383	\$21,889,504	\$33,841,019

Ad Valorem Taxes

County	Ad Valorem Tax Received
Mesa	\$2,644,361
Delta	\$104,343
Rio Blanco	\$9,655,318
Garfield	\$70,869,554
Moffat	\$2,624,738
Gunnison	\$591,218
Total	\$86,489,534

Sales Taxes

County	Sales Tax
Mesa	\$1,336,194
Garfield	\$1,144,138
Gunnison	\$2852.71
Total	\$2,483,185

Ad Valorem and Sales Tax Economic Contribution

Impact Type	Employment	Labor Income	Regional GDP	Output
Direct Effect	766	\$41,963,884	\$51,436,720	\$70,192,766
Indirect Effect	75	\$3,026,733	\$4,923,426	\$10,332,037
Induced Effect	247	\$8,939,301	\$17,005,431	\$30,924,547
Total Effect	1,087	\$53,929,918	\$73,365,577	\$111,449,350

State Royalties: Best Fund

Type	Project Description	Amount	Adjusted Amount
Garfield	ES Security Vestibule	\$148,274	\$66,710
Garfield	HS Sitework, HVAC, ADA and Security Project	\$2,125,286	\$956,190
Garfield	ES Partial Roof Replacement	\$226,253	\$101,794
Mesa	PK-12 RTU Replacement	\$494,139	\$222,319
Total		\$2,993,951.63	\$1,347,012.85

Private Landowner Royalties

- Top natural gas producing companies in the Piceance were contacted and asked to provide a list of royalty payments.
 - Approximately 40% production was represented.
 - With this, I extrapolated to find total royalties based on production values.
 - Since there is no data on the income level of the royalty recipient, the royalty amount of \$22,857,142.26 was spread through IMPLAN's various income spending patterns in order to capture different spending patterns of different income ranges.
 - Note that IMPLAN spending patterns account for taxes.

Economic Contribution of Royalties

Impact Type	Employment	Labor Income	Regional GDP	Total Output
Direct Effect	9	\$497,427	\$655,593	\$1,383,935
Indirect Effect	3	\$110,261	\$192,732	\$394,188
Induced Effect	140	\$5,088,345	\$9,730,997	\$17,634,469
Total Effect	152	\$5,696,034	\$10,579,323	\$19,412,594

Total Economic Contribution

Impact Type	Employment	Labor Income	Regional GDP	Total Output
Direct Effect	6,660	\$559,035,402	\$776,136,117	\$1,192,673,833
Indirect Effect	820	\$52,301,721	\$67,436,760	\$131,999,401
Induced Effect	3,479	\$125,903,438	\$239,788,866	\$435,715,986
Total Effect	10,959	\$737,240,560	\$1,083,361,743	\$1,760,389,220

Total Economic Contribution

- The total economic contribution resulting from the oil and gas industry in the Piceance six county region is \$1,083,361,742.
- As a comparison point, total Regional GDP for the six county area is \$11,819,208,514, equating to 9.2% of total GRP.
- Total employment resulting from the oil and gas industry totals 10,959. For scale purposes, there are 164,956 total jobs estimated by Implan in the region equating to 6.6% of total jobs.

Industry Impact from Oil/Gas

<u>Description</u>	<u>Total</u>
Total	10,959.0
Support activities for oil and gas operations	2,180.1
Extraction of natural gas and crude petroleum	1,435.2
Drilling oil and gas wells	1,069.0
Extraction of natural gas liquids	954.4
* Employment and payroll of local govt, non-education	556.9
Real estate	334.8
Limited-service restaurants	241.5
Full-service restaurants	228.9
Maintenance and repair construction of nonresidential structures	164.2
Hospitals	156.5
Wholesale trade	133.2
Retail - Food and beverage stores	110.6
Retail - General merchandise stores	110.4
Individual and family services	97.4
Offices of physicians	96.4
Services to buildings	96.1
All other food and drinking places	93.7
Retail - Nonstore retailers	91.9
Other financial investment activities	83.5
Automotive repair and maintenance, except car washes	79.7
Architectural, engineering, and related services	79.1
Legal services	75.9
Personal care services	73.6
Accounting, tax preparation, bookkeeping, and payroll services	72.5
Monetary authorities and depository credit intermediation	71.1