
Memorandum

Date: February 27, 2026

To: DOWL

From: Leah Cuyno

Re: Economic Analysis of Proposed Colville Delta 8 (CD8) Development Project

This memorandum transmits the results of the economic analysis of the potential economic impacts of the proposed Colville Delta 8 Development Project (CD8 Project) on the North Slope of Alaska. This memo also describes the approach, assumptions, and data used in the analysis. The analysis will inform the EIS being prepared by the BLM.

Colville Delta 8 (CD8) Project Overview

The Project is an oil development project being proposed by ConocoPhillips Alaska, Incorporated (CPAI). CD8 is in the Colville River Unit (CRU), located within the North Slope Borough (NSB). CPAI is the 100% working interest owner and operator of the producing intervals in the CRU and plans to develop hydrocarbon resources from CD8.

The Project consists of a drillsite, pipelines, a pipeline tie-in pad, gravel access road, ice roads and pads, a tundra access road turnout for subsistence activities, and power and fiber optic cables (CPAI 2025). Project facilities/infrastructure will be constructed on surface lands owned by the Kuukpik Corporation¹, with some of the segments crossing lands owned by the State of Alaska (SOA) and managed by Alaska Department of Natural Resources (ADNR). The subsurface mineral rights of the Project are jointly owned by SOA and Arctic Slope Regional Corporation² (ASRC). None of the facilities will be located on or within 500 feet of Native allotments.

The EIS is considering three action alternatives-- Alternative B is the proponent's preferred alternative, Alternative C is the Northern alternative which involves moving the drill site 1 mile North compared to Alternative B (addressing scoping comments about potential impacts resulting from the proximity of the proposed drill site to Nuiqsut), and Alternative D, the Northwestern alternative, which will be located west of Alternative C, further from lakes known

¹ Kuukpik Corporation is an Alaska Native village corporation established pursuant to the Alaska Native Claims Settlement Act (ANCSA). ANCSA mandated the creation of private, for-profit Alaska Native regional corporations and village corporations, and also mandated that both regional and village corporations be owned by enrolled Alaska Native shareholders. The Alaska Native village corporations own surface estate rights to lands conveyed under ANCSA.

² Arctic Slope Regional Corporation is an Alaska Native regional corporation established pursuant to ANCSA. ASRC own subsurface rights to lands conveyed under ANCSA.

to support nesting yellow-billed loons. Chapter 2 of the EIS provides a more detailed description of the differences in the facilities' design features across alternatives.

The Project is expected to increase oil production in the North Slope and generate benefits to local, state, and national economies through tax revenues, royalties to SOA, ASRC, and Kuukpiik Corporation as subsurface and surface landowners, and create jobs during the construction and operations phases of the proposed Project.

Economic Indicators

This analysis quantifies the potential economic and fiscal benefits or consequences of CPAI's proposed development plan with respect to the following indicators:

1. **Potential Revenues.** This analysis provides estimates of the following potential government and landowner revenue streams:
 - SOA: Royalty Revenue, Property Tax, Production Tax, Oil Surcharge, Corporate Income Tax.
 - Federal Government: Corporate Income Tax
 - North Slope Borough: Property Tax
 - Landowners: Royalty revenue
2. **Potential Employment.** This analysis provides estimates of the direct, indirect, and induced employment³ effects associated with the construction phase and operations phase of the proposed Project. Employment effects reflect the total number of average part-time and full-time jobs resulting from the proposed construction and production (operations) activities.
3. **Potential Labor Income.** This analysis provides estimates of the potential labor income effects associated with the construction phase and operations phase of the proposed Project.

³ Direct jobs are the jobs generated as a result of the initial spending by industry during the construction and the operations phases of the proposed project (jobs in the construction sector and in the oil and gas sector). Indirect jobs are created in supporting industries (the suppliers of materials, equipment, and services) to the construction sector during the construction phase and to the oil and gas industry during the operations phase. Induced jobs are the jobs that arise from increased consumer spending by employees who have jobs created during construction and operations (workers' spending of wages in the regional economy generates induced effects in grocery stores, gasoline stations, utility companies, and other businesses that support households).

Approach, Assumptions, and Data

Estimating Potential Revenues

To quantify the potential streams of government and landowner revenues, the cash-flow model developed by the ADNRP for evaluation of oil and gas projects in the Alaska North Slope was adapted and modified to reflect the CD8 development plan.

The ADNRP model is based on the current fiscal regime and contains input cells that are fixed due to statutes or regulations; the major fiscal model parameters are shown in the table below.

Table 1. Alaska Fiscal Model Parameters

Category	Definition (Alaska Statute)	Value
Royalty Rate		16.7%
Conservation Surcharges (\$/barrel)	43.55.201, 43.55.300	\$0.05
North Slope Oil Tax	–	–
Production Tax Rate on PTV	43.55.011 (e)	35%
\$/BOE QCE exclusion (\$/barrel)	43.55.165 (e)(18)	\$0.30
Overhead allowance for lease expenditures	43.55.165 (a)(2), 15 AAC 55.271	4.5%
Minimum tax	–	–
Minimum Gross Tax (applied on GVPP)	43.55.011 (f)	4.0%
Oil and Gas Property Tax	–	–
Property Tax Rate	43.56.010	2.0%
Gross Value Reduction on "New Oil"	–	–
GVR %	43.55.160 (f)	20.0%
Additional GVR % (New field, ROY>12.5%)	43.55.160 (f & g)	30.0%
GVR Year Limit	43.55.160 (f)	7
GVR Oil Price limit: 3 years with ANS price above	43.55.160 (f)	\$70.00
State and Federal Income Tax	–	–
State Income Tax	–	9.40%
Federal Income Tax	–	21.00%

Source: ADNRP, 2025.

Note: Royalty rate is based on publicly available data for the Narwhal Participating Area.

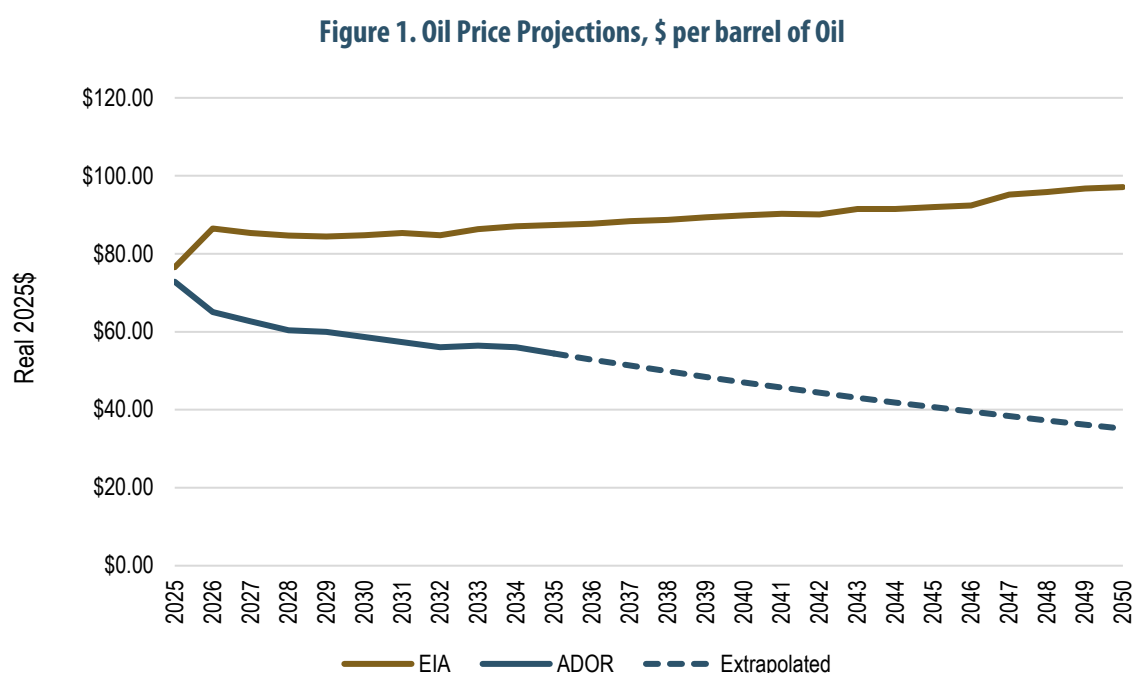
The major inputs and assumptions used in the model to reflect the proposed Project include:

1. Crude Oil Price Forecasts

Two oil price projections were used in this analysis to provide a range of estimates for the potential revenue effects— 1) the latest U.S. Energy Information Administration (EIA) oil price

projections published in the *Annual Energy Outlook 2025*⁴ on April 15, 2025, and 2) the latest Alaska Department of Revenue (ADOR) oil price projections published in the *Spring 2025 Revenue Forecast* on March 12, 2025.

The ADOR oil price forecast (for ANS West Coast) reflects a more conservative price forecast (at \$60.54 per barrel in real 2025\$, average over 2025 to 2034 period) while the EIA price forecast reflects a higher oil price scenario (at \$88.83 per barrel in real 2025\$⁵, average over 2025 to 2050). The ADOR forecast is a 10-year forecast through 2034 and the EIA forecast is through year 2050. Prices beyond the timeframe published were extrapolated using the cumulative annual growth rate provided in the 10-year forecast. Figure 1 below shows the oil price projections used in the analysis. Note that the values are in real 2025 dollars.



Source: Alaska Department of Revenue (ADOR), 2025 and Energy Information Administration (EIA), 2025.

⁴ The Annual Energy Outlook (AEO2025) explores potential long-term energy trends in the United States. AEO2025 is published in accordance with Section 205c of the Department of Energy Organization Act of 1977 (Public Law 95-91), which requires the Administrator of the U.S. Energy Information Administration (EIA) to prepare an annual report that contains trends and projections of energy consumption and supply. These projections are used by federal, state, and local governments; industry; trade associations; and other planners and decisionmakers in the public and private sectors.

⁵ Real price is a price that has been adjusted to remove the effect of changes in the purchasing power of the dollar. Real prices, which are expressed in constant dollars, usually reflect buying power relative to a base year. Real prices in this analysis are expressed in constant 2025 dollars.

2. Netback Costs: Tariffs/Transportation Costs

For royalty calculations, oil is valued at the wellhead, hence, netback costs which include marine transportation cost, quality adjustment, TAPS tariff, and pipeline and feeder line tariffs, are deducted from the projected market price. Estimates of netback costs used in this analysis are from the ADOR's *Revenue Sources Book Fall 2024*.

3. Projected Annual Production Volumes

Figure 2 below shows the total projected oil production per year in millions of barrels of oil under the different action alternatives being considered in the EIS.

Figure 2. Projected Annual Oil Production under Alternatives B, C, and D



Source: CPAI, 2026.

4. Costs

The cost estimates presented in this memorandum are based on data from various CAPEX and OPEX estimates of North Slope oil and gas projects of similar scope. The data are proprietary cost information from company specific projects on the North Slope obtained in the past ten years by Northern Economics from previous economic analyses as well as from surveys of operating companies and businesses in the oil and gas support services sector. These estimates were adjusted to fit the specifications required by the DNR cash-flow model.

Estimating Employment and Income Effects

Direct manpower requirements for the Project were provided by CPAI through Request for Information (RFI). The potential indirect and induced employment and income effects for this analysis were estimated using the IMPLAN model of the Alaska economy. The IMPLAN model is an input-output model that is commonly used in economic impact studies to measure the multiplier effects/stimulus effects of an economic development project.

The estimates of industry spending on capital expenditures (CAPEX; construction costs) and on operating expenditures (OPEX) were used as inputs for the model. The IMPLAN model provides estimates of the number of part-time and full-time indirect and induced jobs required to meet the increase in demand for goods, materials, and services during the construction and the operations phases of the proposed project. These indirect and induced jobs (and associated income) are considered the multiplier effects or stimulus effects that result from the increase in demand in various industries/sectors in the Alaska economy, particularly those that support the construction sector, and the oil and gas extraction/production sector (indirect effects), as well as all the other sectors that provide goods and services to the industry workers (induced effects).

The IMPLAN model provides estimates of indirect and induced labor income based on information on average Alaska wages and salaries in the various sectors of the economy. Prevailing annual average wages for oil and gas jobs are presented below.

Direct effects refer to the new economic activity that can be tied directly to the proposed project. The direct effects during construction include in-state spending associated with the capital investment for construction and installation of the facility, and the direct jobs and labor income associated with the construction activities. During operations, direct jobs are associated with the direct operations and maintenance of the proposed project (jobs in the oil and gas sector).

Indirect effects are those associated with a change in economic activity due to spending on goods and services tied to the Project. During construction, these are the changes in the economy occurring because construction firms purchase goods and related services from other businesses. As construction firms make purchases, this creates an increase in purchases across the supply chain. During the operations phase, indirect effects are generated in sectors that supply goods and services associated with the operations and maintenance of the proposed project.

Induced effects are those associated with a change in economic activity due to spending by the employees of businesses (and by households). These are economic changes related to spending by people directly employed to construct the facility. Once operations begin, spending by employees of the facility will drive induced effects. Induced effects also include household spending related to indirect effects.

Results

Projected Revenues

The proposed Project is projected to generate revenues from royalties, taxes, and other fees to the federal government, the SOA, the NSB, and private landowners.

Royalty revenues from the Project would accrue to the subsurface landowners (the primary royalty owners) - the SOA and ASRC. The allocated royalty revenues will ultimately depend on subsurface data collected during drilling, oil production, and other information. In addition to the primary royalty owners, there are several Overriding Royalty Interest (ORRI) owners that would also receive royalty revenues. The estimated royalty revenues shown below represent dispersal of total royalties between the SOA, ASRC, and ORRI owners as calculated based on the publicly available data for the Narwhal Participating Area ⁶ which provides a reasonable proxy for royalty revenues for the Project. A portion of royalty revenue from the Project allocated to ASRC will also be distributed to other Alaska Native Claims Settlement Act (ANCSA) corporations across the state as required by Sections 7(i) and 7(j) of ANCSA (43 USC 1606).

Property tax revenues would accrue to the SOA and the NSB. The property tax would be based on the assessed valuation of the facilities developed onsite. The annual levy is based on the full and true value of property taxable under AS 43.56. For production property, the full and true value is based on the replacement cost of a new facility, less depreciation. The depreciation rate is based on the economic life of proven reserves. Pipeline property is treated differently; it is valued on the economic value of the property over the life of the proven reserves. The State property tax rate is 20 mills. A local tax is levied on the state's assessed valued for oil and gas property within a city or borough and is subject to local property tax limitations. The current tax rate for the NSB is 18.5 mills (hence, the state portion of the property tax is 1.5 mills). Property tax payments would start to accrue during the construction phase.

Oil produced and sold from lands within Alaska are subject to a severance tax as the resources leave the land. This severance tax is commonly referred to as the "production tax." The production tax applies to oil produced from any area within the boundaries of the state, including lands that are owned by the state, the federal government, or private parties, such as Native corporations. Severance tax or production tax payments are based on the current tax rate of 35 percent of the production value, which is the value at the point of production, less lease expenditures allowable by law (net value). An oil and gas corporation's Alaska income tax liability depends on the relative size of its Alaska and worldwide activities and the corporation's total worldwide net earnings. State corporate income tax is calculated as 9.4 percent of the Alaska

⁶ CPAI's Narwhal Redetermination Application:

<https://dog.dnr.alaska.gov/Document/Download/D73CEF0CF34A4564B6C89177A94008C9/Narwhal%20PA%201st%20Revision%20and%202%20Year%20Redetermination.pdf>

share of worldwide income for each corporation. The ADNRR model, however, does not take into consideration corporate worldwide income (which is unknown at this time) but simply evaluates all the costs and revenues and the resulting state income tax given the 9.4 percent income tax rate.

Conservation surcharges apply to all oil production in Alaska and are in addition to oil and gas production taxes. Revenues derived from these surcharges are intended to be used for oil and hazardous substance release prevention and response

The projected revenues by revenue stream and under the different price regimes and alternatives are presented below. The values shown in the table reflect the estimated total cumulative revenues through the end of the production life of the field.

Table 2. Estimated Potential Government Revenues by Revenue Stream, in millions of dollars

Revenue Category	Alt C		Alt D		Alt B	
	DOR Price	EIA Price	DOR Price	EIA Price	DOR Price	EIA Price
Royalty Owners						
SOA (8.5%)	\$217	\$422	\$270	\$552	\$304	\$620
ASRC (7.1%)	\$182	\$353	\$226	\$461	\$254	\$518
Other (ORRI) (1.1%)	\$28	\$55	\$35	\$71	\$39	\$80
Total:	\$427	\$829	\$531	\$1,084	\$598	\$1,217
SOA						
Property Tax	\$18	\$18	\$16	\$16	\$17	\$17
Production Tax	\$45	\$684	\$75	\$869	\$77	\$1,005
Oil Surcharge	\$3	\$3	\$3	\$3	\$4	\$4
Corporate Income Tax	\$66	\$195	\$78	\$242	\$86	\$290
Total:	\$131	\$900	\$172	\$1,129	\$183	\$1,315
Federal Government						
Corporate Income Tax	\$135	\$420	\$162	\$525	\$170	\$551
NSB						
Property Tax	\$157	\$157	\$143	\$143	\$153	\$153

Source: Northern Economics estimates.

The City of Nuiqsut could also potentially benefit from higher bed tax revenues from higher hotel occupancy during the initial construction years while mobilization of construction equipment is occurring and even during operations. The City of Nuiqsut currently has a 12 percent bed tax. The change in the level of hotel occupancy, however, is difficult to quantify at this point because the timing and level of activities are uncertain and may vary. The City also has a tobacco tax that could generate additional revenues for the City.

Projected Employment and Income Effects

Table 3 presents the estimated direct manpower requirements during the construction and drilling phase of the project. These jobs will be required on the project site on the North Slope and do not include fabrication jobs. Pre-construction activities are estimated to require 20 jobs. Construction of facilities is anticipated to occur over a period of two years, with peak employment occurring in the winter seasons—525 workers in Year 1 and 400 in Year 2. Summer construction activities on the other hand, are expected to require 50 workers in Year 1 and 280 workers in Year 2. In total, 1,275 workers are estimated to be engaged on the North Slope for pre-construction and construction activities.

Drilling activities are planned to occur over a period of 5 years starting in Year 2, with an annual average of 195 workers, or a total of 975 jobs over the entire drilling phase. North-Slope based workers would be on a 2-week rotation so the number of workers on-site would be half of the numbers noted.

Drilling will be conducted year-round and will progress at a rate of about 25 to 50 days per well. The initial phase of drilling is expected to take approximately 2.5 years with subsequent drilling occurring over up to 2.5 additional years based on reservoir performance and execution efficiency. For the purposes of analysis, the drilling phase includes both phases of drilling for a drilling period of approximately 5 years. It is assumed that the CD8 wells will be drilled consecutively, however, CPAI will determine the timing of drilling based on drilling results, economics, rig availability, and any other relevant factors that arise during the drilling program.

Direct construction and drilling activities would also support on average a range of about 360 to 450 indirect and induced part-time and full-time jobs per year (890 to 980 jobs at peak levels of activity) in other sectors of the state's economy over the construction and drilling phase of the project.

Table 3. Direct Construction and Drilling Manpower Requirements of Proponent's Proposed Project

Year	Construction		Drilling
	Seasonal Peak	Annual Average	
Year 1	525	50	
Year 2	400	280	195
Year 3			195
Year 4			195
Year 5			195
Year 6			195

Source: CPAI, 2025.

The operations phase of the project would generate up to 4 additional operator positions (day and night shifts working on rotation) to support Project annual operations. In addition to the direct jobs, annual operations and maintenance activities are estimated to create an additional 30 to 50 indirect and induced jobs per year.

Table 4. Estimated Number Jobs during the Operations Phase of the Project

Year	Annual Average Number of Jobs
Direct	Up to 4
Indirect and Induced	30 to 50
Total	Up to 54

Source: CPAI, 2025 for direct jobs, Northern Economics estimates for indirect and induced jobs.

These estimated jobs are available for workers residing in the North Slope, other areas of Alaska, and outside Alaska. It is unknown at this time how many workers from North Slope communities and other Alaska communities would participate in the direct oil and gas activities. According to the Alaska Department of Labor and Workforce Development, the share of oil industry workers who are not Alaska residents has grown since 2010, ranging from 31 percent nonresident in 2010 to 37 percent in 2023 (ADOLWD 2025a). This percentage of non-resident workers could change in the future, depending on availability of training programs and labor supply.

Oil field development projects in the North Slope typically require specialty tradesmen and construction workers with the skills and experience in ice roads, pipeline construction, facilities construction, and drilling; and these jobs are typically held by non-local workers. However, opportunities do exist for North Slope residents that live near existing oil developments. Local residents have participated in oil and gas jobs such as ice road monitors, camp security and facilities operators, and subsistence representatives. The Alaska Department of Labor and Workforce Development and the oil and gas industry have training programs geared towards developing special skills required in oilfield services. This is expected to create more employment opportunities for local residents.

Table 5 shows the prevailing average yearly earnings of workers in various industries in Alaska that are associated with the direct construction and operations jobs described above. The table shows that direct oil and gas industry jobs currently pay about \$178,000 per year; and the oil and gas extraction sector paying even more at approximately \$251,000 per year. It is estimated that about \$33.6 million in direct labor income would be generated over the 2-year construction period, plus \$190 million over the 5-year drilling phase. In addition, construction and drilling activities are projected to generate between \$25 and \$68 million in indirect and induced labor income.

Note that a direct oil and gas industry worker either works for an oil producer or an oilfield service company. Thousands of other jobs that directly serve the oil and gas industry but are not

categorized under this sector are generally included in the Support Activities for Mining sector; some of these jobs are in security, catering, accommodations, transportation, and logistics services. Indirect and induced jobs, on the other hand, would be jobs in a variety of other sectors of the Alaska economy that provide goods and services to the oil and gas industry and its direct workers. The projected annual average earnings associated with these indirect and induced jobs are estimated to be about \$68,800.

It is estimated that total annual average direct, indirect, and induced labor income generated during the operations phase would range between \$2.6 to \$3.5 million.

Table 5. Prevailing Statewide Average Annual Earnings by Selected Industries associated with the Direct Construction and Operations Jobs

Industry	Average Annual Earnings
Oil and Gas Industry	\$178,920
Oil and Gas Extraction	\$251,052
Support Activities for Mining	\$139,416
Construction (industry-wide average)	\$101,700
Construction of Buildings	\$92,964
Heavy Construction	\$140,160
Specialty Trade Contractors	\$83,256
Indirect and Induced Sectors	\$68,818

Source: QCEW 2024data, ADOLWD, 2025b.

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