

Analysis of Additional Royalty Payments with Reduced Sponsor State CIT

Richard Roth, Randolph Kirchain, Elizabeth Moore
Materials System Laboratory
Massachusetts Institute of Technology

Presentation to International Seabed Authority
Open Ended Working Group on Financial Modeling
Kingston, Jamaica
March 16-17,2023

Agenda

- Review of Sponsor State CIT concerns
- African Group Proposal for Additional Royalty Payment
- Challenges with Choosing a Single Rate
- Approaches for Choosing a Rate
- Sensitivity Analysis to Additional Rate
- Alternative Approaches to Additional Payment Mechanism

Concern that Not All Collectors Will Pay Sponsor State CIT

- Without consideration of an additional royalty, the Option #4 suggestion was a 3→7.5/12.5%
 - This led to a 45.4% ETR (25% CIT to Sponsor State)
- If zero CIT is paid in this same system, the ETR is 29.0%
- Concerns that some contractors **may not** pay any or all of this tax.
 - Effective Tax Rate would be much lower than industry standards (40%-50%)
 - Is this system still **FAIR**?
 - Contractors have more net revenue that could be shared with ISA
 - Are we **Maximizing ISA Revenue** while allowing contractors to be economically viable?

	25% SS Tax	0% SS Tax
ETR	45.4%	29.0%
Lifetime royalty revenue	\$5.215B	\$5.215B
Lifetime SS CIT tax	\$3.988B	\$0
TOTAL	\$9.203B	\$5.215B
Collector IRR	17.65%	19.39%

In general, there are two approaches to address this concern

- **Additional royalty rate from which you can deduct your SS tax payment**
- Calculate how short (if at all) you are of the ETR and you have to make up the difference through a payment to the ISA

African Group Proposal for Additional Royalty Payment

- **Goals of this proposal:**

- Those contractors paying less (or no) Sponsor State CIT, will be liable for this additional payment and keep them at threshold Effective Tax Rate
- Those contractors paying full 25% Sponsor State CIT, will not have any additional liability

- Have an additional royalty liability separate from the baseline royalty payments
 - **Payment** =
Gross Additional Royalty Liability – SS CIT Actually Paid and Verified
 - **Gross Additional Royalty Liability** =
 $6\% * \text{Aggregate Relevant Metal Value}$
- In the notes, they estimated a 7.2% additional royalty would result in:
 - Zero additional payment for those paying 25% CIT after the deduction
 - Additional \$4.125B over the lifetime of the project for those that don't pay the CIT

Choosing a rate that requires no additional payment from contractor already paying 25% CIT

- Rate must result in a liability that can be completely offset by the CIT deduction
 - Additional Payment = \$0

$$\text{Additional Payment} = \text{Addt'l Rate} * \text{Metal Value} - \text{Deduction} = \$0$$

$$\text{Addt'l Rate} = \frac{\text{Deduction}}{\text{Metal Value}}$$

- Deduction varies by year, use value from the year with the smallest deduction (this is also the least profitable year)

Implementing Additional Royalty Rate that is Fully Offset by Sponsor State CIT into the Financial Model

- Should be straightforward
 - Determine amount to be paid in CIT if contractor is paying 25% of profits
 - Choose rate which when applied to metal value, gives equal amount
- EXCEPT, contractor profit varies with time (even if metals prices and cost are assumed to be constant) → 25% tax on profits also varies with time
 - Accounting rules allow for different depreciation over time
 - Maintenance CAPEX and other occasional costs don't occur every year

The rate that would fully be offset by the Sponsor State CIT is different in different years

Challenges with Choosing a Single Rate

- CIT payment (deduction) is dependent on profit, which is dependent on the baseline royalty rates (among other things)
 → **Cannot set rate independently of setting the baseline rates**
- System that uses the “least profitable” year as the basis for calculation, is losing out on some revenue
- Any system that does not use “least profitable” year as the basis, will require additional payment from contractors that are already meeting their tax obligations

Years 1-4	Year 5	Years 6-11	Years 12-25
No Additional Royalty	High Profits due to: Low Base Royalty in Peirod 1 Profits High → High CIT Payment High CIT Payment → Large Deduction from Additional Royalty	Profits Lower due to: Higher Base Royalty in Period 2 Capital Depreciation Still Occurring Low Profits → Low CIT Payment Low CIT Payment → Limited Deduction from Additional Royalty	Profits Rise due to: Fully Depreciated Capital High Profits → High CIT High CIT Payment → Large Deduction from Additional Royalty

Should we choose a rate that offsets during years 6 to 11 or the latter years?

Approach #1: Maximum rate that requires no additional payment if CIT = 25%

	CIT = 25%	CIT = 0%
Year with Lowest Deduction	Year 11 (last year still depreciating)	
CIT Payment in that year	\$107.4 million	
Maximum Add'l Rate that can be fully offset	4.5%	
Effective Tax Rate (no add'l royalty)	45.4%	29.0%

Effective Tax Rate (with add'l royalty)	45.4% (unchanged)	37.2%
Base Royalty Payment (lifetime)	\$5,215 million	\$5,215 million
Additional Royalty Payment (lifetime)	\$0 million	\$2,227 million
Sponsor State CIT Payment (lifetime)	\$3,988 million	\$0
Total Royalty + CIT Payments (lifetime)	\$9,203 million	\$7,452 million

Shortfall in Payment for those paying no CIT = \$1,751 million

* Based on Option 4: 3% → 7.5%/12.5%, with Threshold ETR = 45%

Approach #2: Additional royalty rate that results in threshold ETR for contractors paying 0% CIT

- Additional royalty rate = 7.3% would result in ETR = 45% for contractors paying 0% CIT to sponsor state

	CIT = 25%	CIT = 0%
Additional Royalty Rate	7.3%	7.3%
Base Royalty (lifetime)	\$5,215 million	\$5,215 million
Additional Royalty before Deduction (lifetime)	\$3,629 million	\$3,629 million
Additional Royalty (lifetime)	\$412 million	\$3,629 million
CIT Payment (lifetime)	\$3,924 million	0
TOTAL Royalty + CIT (lifetime)	\$9,551 million	\$8,844 million
Effective Tax Rate	46.7%	45.0%

Contractors paying no CIT, will still pay **\$707 million less** over project lifetime

Contractors paying 25% CIT, will see payments increase by **\$348 million** over project lifetime

Approach #3: Compromise Rate Would Reduce Penalty on those Paying 25% CIT, but others will fall slightly short of threshold ETR

	CIT = 25%	CIT = 0%
Additional Royalty Rate	6.0%	6.0%
Base Royalty	\$5,215 million	\$5,215 million
Additional Royalty before Deduction	\$2,983 million	\$2,983 million
Additional Royalty	\$139 million	\$2,983 million
CIT Payment	\$3,966 million	0
TOTAL Royalty + CIT	\$9,320 million	\$8,198 million
Effective Tax Rate	45.8%	42.3%

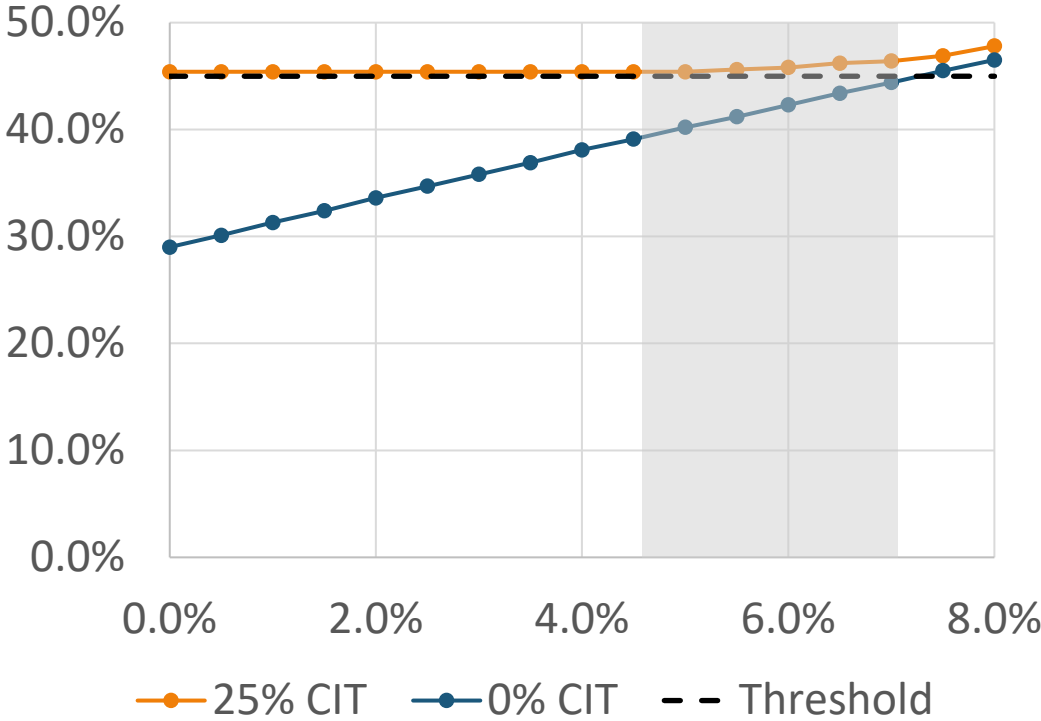
Contractors paying no CIT, will still pay **\$1,122 million less** over project lifetime

Contractors paying 25% CIT, will see payments increase by **\$139 million** over project lifetime

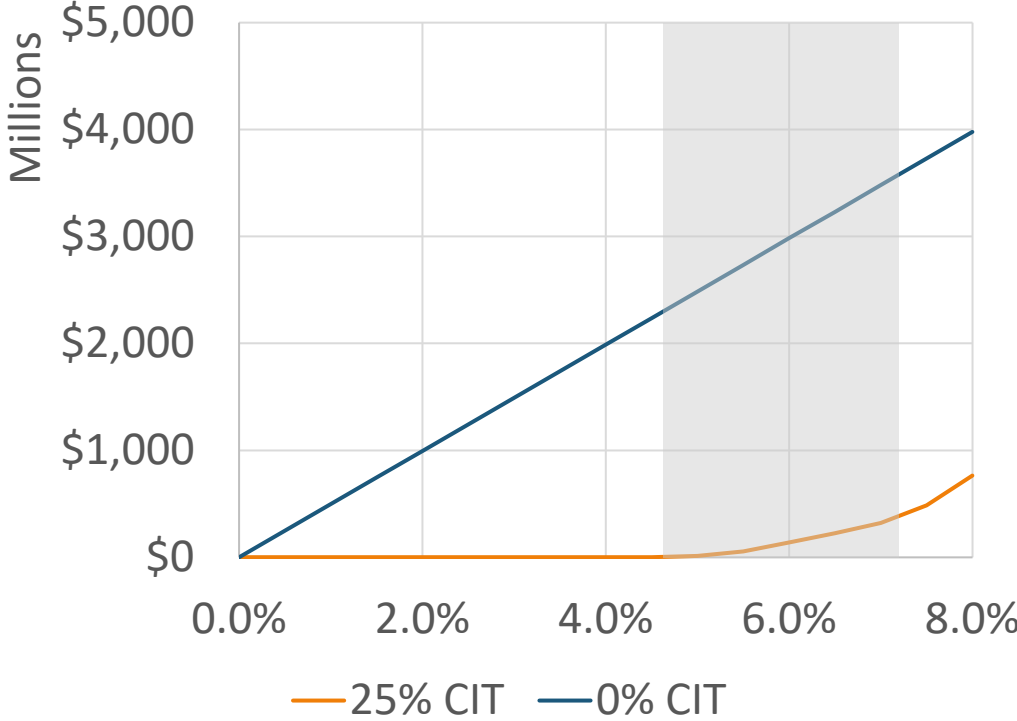
Sensitivity to Additional Rate

As the additional rate rises, the ETR gap shrinks. Yet, the additional payment also increases for those paying the 25% CIT

Effective Tax Rate vs Additional Royalty Rate

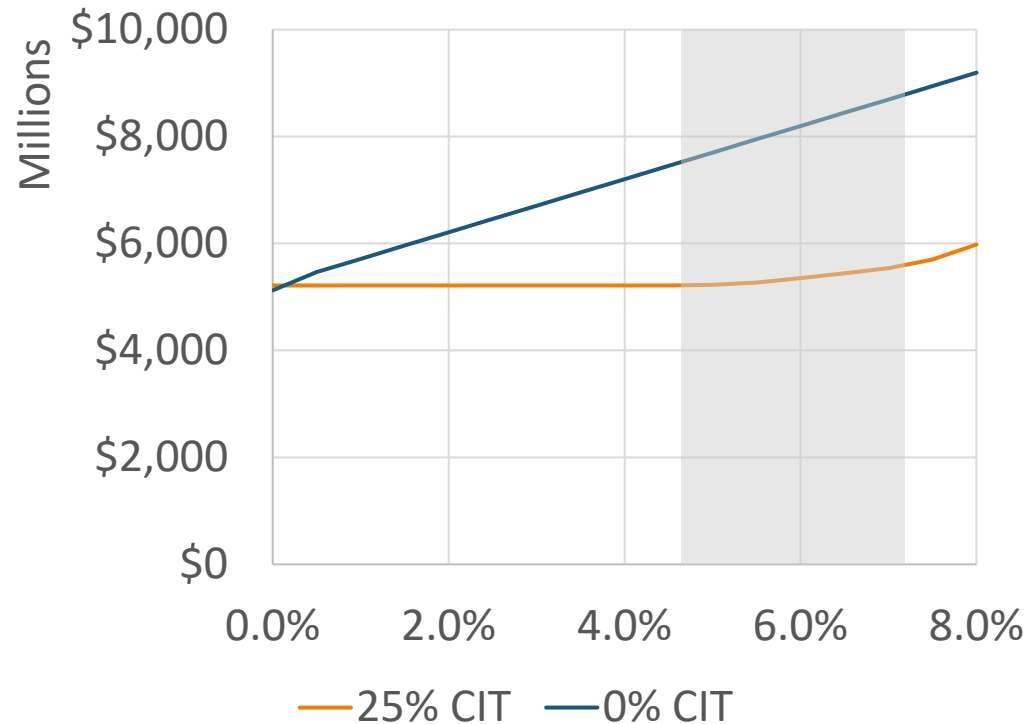


Additional Payment vs Additional Royalty Rate

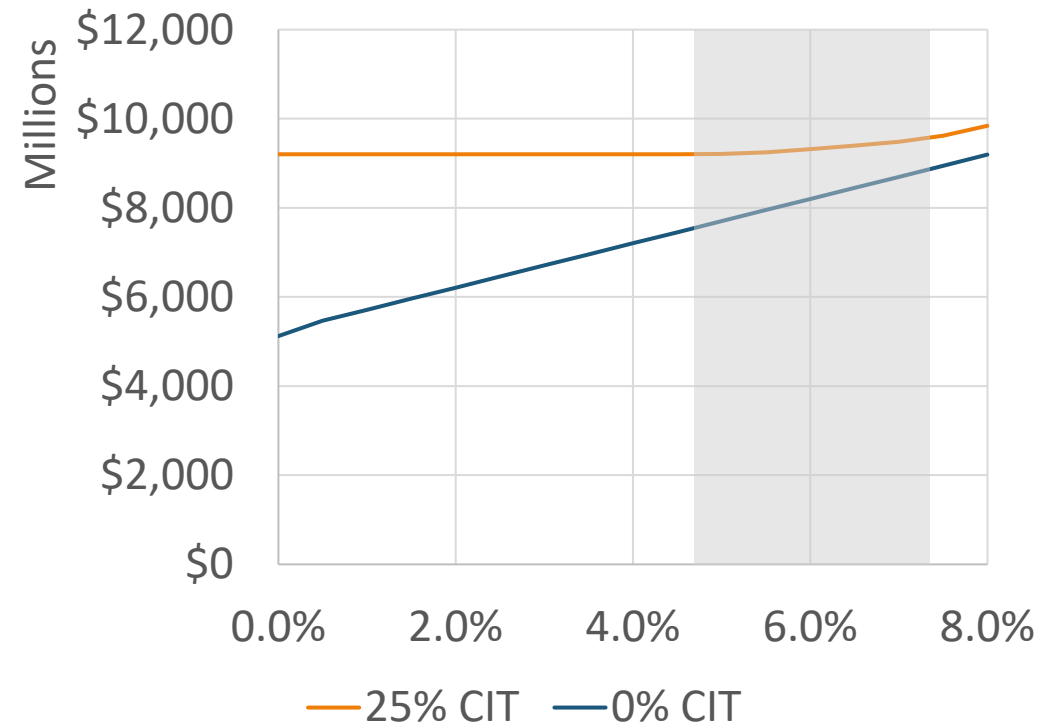


As the additional royalty rate rises, there is less incentive to pay 0% CIT

Payment to ISA vs Additional Royalty Rate



Total Tax vs Additional Royalty Rate



Summary of the Challenges of an Additional Royalty with the CIT Deduction Mechanism

- Impossible to simultaneously fully meet both goals
 - ETR thresholds for contractors paying 0% CIT
 - No additional payment for those paying full 25% CIT
 - Therefore their ETR remains at threshold value
- Dependence on prior knowledge of contractors costs
 - Highly uncertain at this point
 - More will be known as we approach beginning of production

Could the Other Approach to the Additional Payment Mechanism Solve Challenges?

- Other approach: Calculate how short (if at all) you are of the ETR and you have to make up the difference through a payment to the ISA
- Potentially, but system would be complex:
 - Calculate ETR
 - If ETR is the total payments divided by before tax profit, calculating the total payments is straightforward. Calculating profit means I need an accounting system
 - Cost, revenues, and tax deductions

Contractor Submission Offers Another Mechanism

Approach:

- The contractors propose a different mechanism:

$$\text{Payment due to the ISA} = \text{ETR Range} - \text{CIT and other payments to the Sponsor State}$$

- If the contractor's ETR falls below the ETR range, the ISA will be entitled to an additional payment from the ISA Contractor: **"ETR normalization levy"**
- The contractor's approach is conceptually our second approach

Mechanism:

- If the Contractor ETR for the preceding 5-year ETR normalization period falls within the ETR range, the ISA ETR normalization levy is set to zero.
- If the ISA contractor ETR falls below the ETR range, the ISA may impose an additional ETR normalization levy to bring the contractor within the ETR range for land-based miners
- If in any given 5-year ETR normalization period the Contractor makes a loss, no additional levy will be due to the ISA.

How will ISA verify calculation of ETR?

5-year Normalization Period eliminates some of the issues surrounding year-on-year variability

Additional Issue: Switching to Nodule Transfer Price as Royalty Basis

- Challenge: No arms length price currently exists, but one will likely develop when industry is mature
- Royalty rate on Nodule Transfer Price:
 - more in line with current land based mining practice
 - Simple to administer (if there is a global benchmark price)
 - Would automatically address concerns about other value metals extraction from nodule
 - The market price for nodules would reflect this value