

# Reserved Based Lending (RBL) Method for Project Financing of EGIZ Working Area

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In 2020, the oil and gas industry was facing significant turbulence due to a global pandemic of coronavirus outbreak, forcing people to stay at home, industries to shut down temporarily, and global energy demand was drop dramatically, forcing oil prices to fall to lows.

In that situation, oil companies must adapt so they're doing more to cut costs. As a result of the global oil price decline, most oil and gas companies, including PT Prima Energi holding, were experiencing financial difficulty. So that funding for new projects and the acquisition of new blocks from shareholder investment and bank loans will certainly be affected.

This research is about PT Prima Energi's strategy of keeping the asset and sharing that pledge with the bank. PT Prima Energi deals with a loan from a bank when the oil price was high to acquire PEG (PE PEG) assets in 2018. At that time, the cash flow of PE PEG can service this debt but after the decline in oil price, the company can't survive although only maintain operations. PE PEG must cut many operational costs and delay expansion projects so that gives the company's cash flow performance effect not the same as when the loan agreement was signed. If PE PEG can't repay the principal and interest of the loan, PT Prima Energi will lose its rights to PE PEG. For this reason, the company must do refinancing to settle the previous loan with the new loan.

PT Prima Energi has a subsidiary named PE EGIZ that sells gas and is not affected by declining oil prices. PE EGIZ will be submitted for PE PEG loan refinancing. Because of the high-level risk business in the oil and gas industry and PE EGIZ doesn't have assets that value bigger than the previous loan so the bank provided a new scheme of loan submission that is Reserve Based Lending (RBL). The RBL method makes the bank feel more secure because the determining loan amount uses the company's cash flow performance and the bank will do a redetermination every 6 months to review the company's performance.

For a company like PE EGIZ that doesn't have a big asset, it also has an advantage within process loan requests. PE EGIZ only needs to provide forecast entitlement that reflects the gas sales agreement that they have until the loan end date based on reserves tail calculation. The RBL system can help PT Prima Energi to settle the previous loan and preserve PE PEG assets.

**Keyword(s):** Refinancing; Reserved Based Lending; Oil Company; Bank Loan

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## 1 Background

The oil and gas industry experienced another shock in 2020 when the oil price declined from \$80 in the previous year's level to \$10 in mid-2020 causing a significant revenue decline. The business issue faced by PT Prima Energi holding Tbk (hereinafter: PE) In this period is similar to other players which are declining revenue at a very significant amount. PE needs to look for a solution to solve the financial crisis such as principal repayment of an existing loan from PE PEG asset.

PE PEG is a critical asset for PE because it affects 25% of the company value as a whole. If PE lost this asset, company value will decrease so impacting stock price and market's sentiment as a public company.

Since the funding injection from a shareholder is not possible at this moment, PE got an offering from the banks for a refinancing scenario. Therefore, we need to determine if the offering is suitable for the project, and the timeline (**Table-1**), and meet with the economical calculation for the PSC based, to cover the cash deficit.

The research then focuses on the role of the Reserve Base Lending (RBL) structure in creating a structural platform for the growth of small and midsize oil producers. It discusses borrowing-base calculation and analyzes the strengths and weakness of various RBL structures, ranging from a "covenant-lite" general working-capital structure, in which the company enjoys full flexibility in withdrawals and usage of the borrowed funds, to a highly "covenanted" structure, where the banks exercise tight control over withdrawal amounts and usage of the funds.

## 2 Data and Method

The company only can book facilities as a company asset on their financial report but the bank needs a guarantee before giving the loan. PT Prima Energi holding also can't give a corporate guarantee because they already provide a guarantee for another ongoing project. The company has a forecast of entitlement that could show the company's business prospects and capability to pay off the bank's loan (**Figure 1**). It described the questions that need to be answered, as follows :

- What are the alternative source and methods of non-collateral funding for refinancing loans in oil and gas companies?
- What is the external and internal factor that affect the refinancing process?
- Will this EGIZ's asset be able to refinance the loan until the end of the PSC period?

Reserve-based lending (RBL) implementation refers to an asset-based financing technique that is unique to the oil and gas sector. It is secure lending where the collateral is the revenue stream that the borrower has from the oil exploitation contracts. The lender bases the amount of the loan on its assessment of the present value of the expected cash flow that it considers the borrower capable of repatriating to accounts typically held by the lending bank(s). Critical to this assessment will be the nature and location of the hydrocarbon, the production forecast, the price deck, and the portfolio of assets available as security. Also notable is that the lenders are looking at a specific subset of assets that are considered acceptable security. Outside this sphere, the parent may have other activities that are uninterrupted by the RBL structure (**Figure-2**).

### 3 Results

Since there is no funding option from the shareholder, the company focus on the bank loan. We have tried to research about the reserve-base lending method and it's compatible with limited asset that can be pledged at the bank.

#### 3.1 Loan Facility

##### Reserve Calculation

Not all oil and gas resources can be used as a bank credit (**Figure-3**).

Reserve Calculation is very important because it will determine when cut-off date of the loan. The company must calculate the remaining reserve that is consistent with all gas sales agreements (GSA) until the end of PSC. In general, the bank can not accept all reserves by the field that can be produced so they give a limitation of reserve tail of 20% minimum from the total remaining reserve for anticipated risk (**Table – 2**).

##### Debt Sizing

After the company calculates the maximum loan life that can they get, they should calculate how big the loan that able to service by their cash flow. The company also consider a loan that needs to be repaid around \$75 million and \$15 million for funding working capital-related existing project. For bank purposes, they want to see more detail about our cash available for debt service quarterly format to ensure our cash capable to pay their interest and loan principal. Bank calculates how big the loan the company gets based on our net present value until the end of loan (4 years from reserve calculation data) or up to PSC expiry. Before the bank calculates the NPV, it must determine the discount rate first. The company is using the rate of 10%. But to be more precise, the bank will calculate the weighted average cost of capital (WACC).

Following the bank covenant, Bank approves the amount of loan submitted by the company looking at reserve based lending (RBL) amount under the loan life coverage ratio (LLCR) of project life coverage ratio (PLCR). If a company submits a number that is higher than its reserve based lending amount, the bank will refuse this submission. Reserve based lending amount reflects the company's capability to settle the loan using cash flow obtained until the end of the loan's date or PSC expiry. The bank uses an LLCR ratio is 1.5 and a PLCR ratio of 2.0 under the bank covenant written in the facility agreement (**Table-3**).

RBL's number gets from NPV divided by LLCR or PLCR ratio. Bank takes the minimum number between RBL amount under the LLCR constraint and the RBL amount PLCR constraint to be used as a basis to determine the RBL amount for that year. Bank can look at **Table-4**, the company can get a loan of up to \$175 million if the loan drawdown is done in June 2021.

#### 3.2 Repayment

Repayment principal calculation is based on the bank's covenant calculation debt service coverage ratio (DSCR). DSCR represents a comparison between cash flow available for debt service (CFADS) and total debt service (principal repayment and interest). In this case, the bank set the lowest limit of DSCR 1.5x so the company's CFADS must be bigger than 1.5x rather than the total debt service. Bank also calculates the amount repayment principle by dividing CFADS with the DSCR ratio quarterly minus interest.

For interest payment, the interest number comes from deal margin bank and company around 6.8% plus London Interbank Office Rate (LIBOR).

DSCR checking is useful for securing that the company can pay all total debt, If the company has DSCR under 1.0x, it will be a bank warning to check company performance. Because of that, it could affect to schedule of loan payments.

### 3.3 Redetermination

The bank always does loan sizing re-calculation every 6 months to review company performance and cash flow whether the same as the one submitted when making a facility agreement. The company must send the technical assumption related to production, opex, and capex that already update with actual data. They also organize our bank account to make sure the budget is paid according to the correct post. Bank concern with changing on LLCR and DSCR ratio.

Bank's other attention is the comparison between the loan balance and reserve based lending amount. RBL amount made to measure how much loan that decent with company performance. RBL amount can't be lower than the loan balance because the company must do a top-up or return the difference amount from that calculation. The company considered not performing and not feasible to get the same loan number that agreed upon at the initial facility agreement (**Table-5**).

## 4 Conclusion

This research is about PT PE holding how to survive when they want to keep PEG's assets using EGIZ's assets for getting refinancing. PE EGIZ asset can cover loan through the RBL refinancing process so PT PE still has PEG's asset.

Suggestion to the company, the company must provide forecast production and cash flow that reflect appropriate with the actual condition and capabilities of the company. If the company tries to exaggerate more cash flow it will be a problem later on. Bank considers this situation will enforce a top-up system or transfer back the different amount that appears every redetermination. The company can negotiate some points below :

- Reserve tail percentage 20% to 10% because it will affect the tenor of the loan. The company that gets a longer loan tenor will ease the repayment process.
- LLCR ratio from 1.5x to 1.3x for example. It will minimize top-up risk.
- Basic interest could be negotiated also from 6.5% to 5% to reduce the cost of debt.



## Discussion

We could answer some questions from the previous chapter, as below:

- a) The alternative source of funding for refinancing may come from shareholder chip-in or bank refinancing. In this case, the shareholder can't add more money to help the company, the holding company can't give a corporate guarantee because It's already done to other subsidiaries and the company doesn't have assets with a big amount that can cover the debt that becomes due.
- b) Based on the result, reserve based lending method is very compatible with the company which have limited assets that can be pledged at the bank.
- c) The external and internal factors that affect the refinancing process are the gas buyer or market condition, company operation, production and financial performance (during due dilligence), and political risk factors.
- d) This EGIZ's asset appears to have a bigger value than the need for debt repayment in the short term.

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		2021	2022	2023	2024	2025	2026
DAYS OF PRODUCTION	(DAYS)	365	365	365	365	365	145
DAILY PRODUCTION	mmscfd	64	91	106	106	87	85
ANNUAL LIFTING	mmscfd	23232	33215	38690	38690	31664	12325
PRICE	US\$/mmcf	4.81	6.45	6.86	7.06	7.60	7.74
<b>GROSS REVENUE</b>		<b>108,402</b>	<b>214,508</b>	<b>265,485</b>	<b>273,131</b>	<b>240,485</b>	<b>95,363</b>

FTP (First Tranche Petroleum)	20.0%	21,680	42,902	53,097	54,626	48,097	19,073
Gross Revenue After FTP		86,722	171,606	212,388	218,505	192,388	76,290
Investment Credit		-	-	-	-	-	-
Investment Credit Recovered		-	-	-	-	-	-
<b>Available for Cost Recovery</b>		<b>86,722</b>	<b>171,606</b>	<b>212,388</b>	<b>218,505</b>	<b>192,388</b>	<b>76,290</b>

COST RECOVERY							
Beginning Unrecovered Cost		-	-	-	-	-	-
Add - current year cost :							
Operating Cost		30,513	48,845	71,864	71,593	70,691	29,477
Non Capital Cost		4,201	6,011	6,720	-	-	-
Depreciation		1,710	1,689	4,370	5,030	2,370	5,112
<b>TOTAL COST RECOVERY</b>		<b>36,424</b>	<b>56,544</b>	<b>82,954</b>	<b>76,624</b>	<b>73,061</b>	<b>34,589</b>
<b>TOTAL RECOVERED</b>		<b>36,424</b>	<b>56,544</b>	<b>82,954</b>	<b>76,624</b>	<b>73,061</b>	<b>34,589</b>

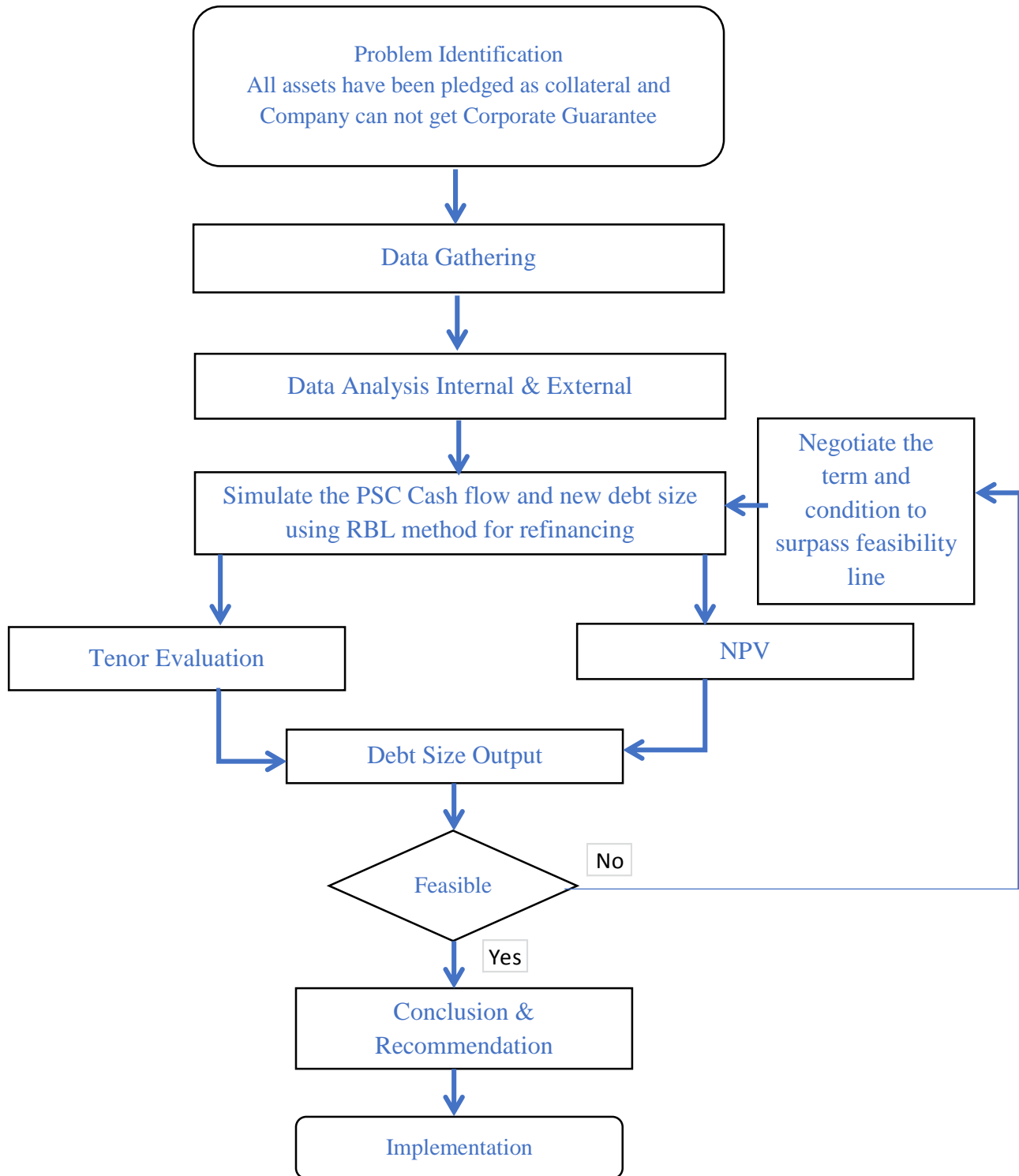
EQUITY TO BE SPLIT							
Indonesia Share :	42.3077%	50,298	115,062	129,434	141,881	119,327	41,701
FTP		9,172	18,151	22,464	23,111	20,349	8,069
Equity Share		21,280	48,680	54,760	60,027	50,485	17,643
DMO		-	-	-	-	-	-
Taxes		17,010	36,453	42,122	47,348	38,636	14,025
<b>TOTAL INDONESIA SHARE</b>		<b>47,463</b>	<b>103,284</b>	<b>119,347</b>	<b>130,486</b>	<b>109,470</b>	<b>39,737</b>

Contractor Shares :	57.6923%						
FTP Share		12,508	24,751	30,633	31,515	27,748	11,003
Investment Credit		-	-	-	-	-	-
Equity Share		29,018	66,382	74,673	81,855	68,843	24,058
less: DMO		-	-	-	-	-	-
add: DMO fee		-	-	-	-	-	-
Taxable Income without deferral		41,526	91,133	105,306	113,370	96,591	35,062
Production Bonus		1,000	-	-	5,000	-	-
Taxable Income		42,526	91,133	105,306	118,370	96,591	35,062
Government Tax Entitlement	40%	(17,010)	(36,453)	(42,122)	(47,348)	(38,636)	(14,025)
Net Contractor Share		24,515	54,680	63,184	66,022	57,954	21,037
Total Cost Recovery		36,424	56,544	82,954	76,624	73,061	34,589
<b>TOTAL CONTRACTOR SHARE</b>		<b>60,939</b>	<b>111,224</b>	<b>146,138</b>	<b>142,645</b>	<b>131,015</b>	<b>55,626</b>

LESS - EXPENDITURES							
<b>1. OPEX :</b>							
- Production		(30,513)	(48,845)	(71,864)	(71,593)	(70,691)	(29,477)
- Administration							
<b>Total Opex</b>		<b>(30,513)</b>	<b>(48,845)</b>	<b>(71,864)</b>	<b>(71,593)</b>	<b>(70,691)</b>	<b>(29,477)</b>
<b>2. CAPEX :</b>							
- Intangible		(4,201)	(6,011)	(6,720)	-	-	-
- Tangible		(1,050)	(1,503)	(1,680)	-	-	-
<b>Total Capex</b>		<b>(5,252)</b>	<b>(7,513)</b>	<b>(8,400)</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL EXPENDITURES</b>		<b>(35,764)</b>	<b>(56,358)</b>	<b>(80,264)</b>	<b>(71,593)</b>	<b>(70,691)</b>	<b>(29,477)</b>
Production Bonus		(1,000)	-	-	(5,000)	-	-
<b>NET CONTRACTOR'S CASHFLOW</b>		<b>24,175</b>	<b>54,866</b>	<b>65,874</b>	<b>66,052</b>	<b>60,324</b>	<b>26,149</b>

	2021	2022	2023	2024	2025	2026
<b>TOTAL NET CONTRACTOR'S CASHFLOW</b>	<b>24,175</b>	<b>54,866</b>	<b>65,874</b>	<b>66,052</b>	<b>60,324</b>	<b>26,149</b>

**Figure 1 : EGIZ gas entitlement of PSC Calculation**



**Figure 2 : Conceptual Framework**

Reserve Type	Advance Rate (%)	Borrowing Base (\$)
Proved		
PDP	AR1: 95%-99%	$PDB_{(BB)} = AR1 * PDP_{(PV9)}$
PDNP	AR2: 65%-75%	$PDNB_{(BB)} = AR2 * PDNP_{(PV9)}$
PUD	AR3: 50%-60%	$PUD_{(BB)} = AR3 * PUD_{(PV9)}$
Total Proved		$PDB_{(BB)} + PDNB_{(BB)} + PUD_{(BB)}$
Probable	N/A	No borrowing base credit extended
Possible	N/A	No borrowing base credit extended

**Figure 3** : Borrowing Base by Reserve Type, The borrowing base calculation methodology is based on the net present value of future cash flow from oil and gas production under each lender's assumed price deck and the appetite of the sector (Source : Reserve Base Lending and The Outlook For Shale Oil and Gas Finance, energypolicy.columbia.edu)

No	Activity Name	Month																	
		2020		2021				2022				2023				2024			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Preliminary Consultation																		
2	Application from borrower																		
3	Initial Financing Proposal																		
4	Internal credit evaluation																		
5	Due Dilligence																		
6	Letter of intent																		
7	Negotiation on term sheet																		
8	Negotiation Facility Agreement																		
9	Loan Drawdown																		
10	Repayment of Principal and Interest																		
11	Redetermination																		

**Table 1** - The implementation in RBL refinancing process can be structured in the following list along with the relative timeline

		2020	2021	2022	2023	2024	2025	2026
DAYS OF PRODUCTION	(DAYS)	365	365	365	365	365	365	145
DAILY PRODUCTION	mmscfd	50	64	91	106	106	87	85
Yearly Production	mmscf	18,068	23,232	33,215	38,690	38,690	31,664	12,325
Remaining Reserve	mmscf	195,884	177,816	154,584	121,369	82,679	43,989	12,325
Yearly Production	mmscf	18,068	23,232	33,215	38,690	38,690	31,664	12,325
Ending Balance Reserve	mmscf	177,816	154,584	121,369	82,679	43,989	12,325	-
<b>Reserve Tail</b>	%	91%	79%	62%	42%	22%	6%	0%

**Table 2** - Based on this table, bank can calculate that EGIZ's total remaining reserve from 2021-2026 is 178 BCF and reserve that can be used for bank purpose only 134 BCF because of limitation from reserve



tail. Cummulatively that number will reach in 2024 so the loan life is 4 years from loan drawdown in 2021

DEBT SIZING	
RESERVE LIFE (days)	2181
RESERVE LIFE (years)	6.06
Start Date	11/30/2020
End Date	12/21/2026
LOAN LIFE (Tail nearest quarter)	12/31/2024
LOAN LIFE (days)	1470
LOAN LIFE (years)	4.08
DISCOUNT RATE	8.15%
LLCR (Loan Life Coverage Ratio)	1.50
PLCR (Project Life Coverage Ratio)	2.00
Project Life (Quarters)	24.23
LOAN LIFE (Quarters)	16.33

**Table 3 Bank Covenant**

	12/31/2020	3/31/2021	6/30/2021	9/30/2021	12/31/2021	3/31/2022	6/30/2022	9/30/2022
CFADS (US\$m)	0.61	3.31	6.58	9.07	9.25	14.94	14.45	13.26
CFADS (NPV) to loan end date	158.53	161.15	161.13	157.83	151.97	145.82	133.86	122.14
CFADS (NPV) to July 2026 (PSC expiry)	230.31	230.45	231.84	229.98	225.60	220.95	210.51	200.36
RBL Amount UNDER LLCR CONSTRAINT (mm USD)	105.69	107.43	107.42	105.22	101.32	97.22	89.24	81.43
RBL Amount UNDER PLCR CONSTRAINT (mm USD)	115.15	115.23	115.92	114.99	112.80	110.47	105.26	100.18
<b>Reserve Based Lending Amount (mm USD)</b>	<b>105.69</b>	<b>107.43</b>	<b>107.42</b>	<b>105.22</b>	<b>101.32</b>	<b>97.22</b>	<b>89.24</b>	<b>81.43</b>

	12/31/2022	3/31/2023	6/30/2023	9/30/2023	12/31/2023	3/31/2024	6/30/2024	9/30/2024
CFADS (US\$m)	13.27	15.56	15.68	15.68	15.68	10.64	17.78	17.80
CFADS (NPV) to loan end date	111.37	100.37	86.86	72.95	58.75	44.26	34.52	17.44
CFADS (NPV) to July 2026 (PSC expiry)	191.18	181.81	169.96	157.74	145.27	132.54	124.60	109.36
RBL Amount UNDER LLCR CONSTRAINT (mm USD)	74.25	66.92	57.91	48.63	39.17	29.51	23.01	11.63
RBL Amount UNDER PLCR CONSTRAINT (mm USD)	95.59	90.91	84.98	78.87	72.63	66.27	62.30	54.68
<b>Reserve Based Lending Amount (mm USD)</b>	<b>74.25</b>	<b>66.92</b>	<b>57.91</b>	<b>48.63</b>	<b>39.17</b>	<b>29.51</b>	<b>23.01</b>	<b>11.63</b>

	12/31/2024	3/31/2025	6/30/2025	9/30/2025	12/31/2025	3/31/2026	6/30/2026	9/30/2026
CFADS (US\$m)	17.81	15.34	14.06	14.06	14.06	16.14	9.67	0.00
CFADS (NPV) to loan end date	17.45							
CFADS (NPV) to July 2026 (PSC expiry)	93.79	77.89	64.15	51.39	38.38	25.10	9.48	
RBL Amount UNDER LLCR CONSTRAINT (mm USD)	11.63	0.00	0.00	0.00				
RBL Amount UNDER PLCR CONSTRAINT (mm USD)	46.90	38.95	32.07	25.70				
<b>Reserve Based Lending Amount (mm USD)</b>	<b>11.63</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>				

**Table 4 Reserve Based Lending (RBL) Calculation**



	12/31/2020	3/31/2021	6/30/2021	9/30/2021	12/31/2021	3/31/2022	6/30/2022	9/30/2022
Reserve Based Lending Amount (mm USD)	105.69	107.43	107.42	105.22	101.32	97.22	89.24	81.43
Actual outstanding debt amount	-	75.00	75.00	75.00	90.00	90.00	84.22	76.00
difference	105.69	32.43	32.42	30.22	11.32	7.22	5.02	5.43
LLCR	-	2.15	2.15	2.10	1.69	1.62	1.59	1.61
PLCR	-	3.07	3.09	3.07	2.51	2.45	2.50	2.64

	12/31/2022	3/31/2023	6/30/2023	9/30/2023	12/31/2023	3/31/2024	6/30/2024	9/30/2024
Reserve Based Lending Amount (mm USD)	74.25	66.92	57.91	48.63	39.17	29.51	23.01	11.63
Actual outstanding debt amount	68.77	62.07	53.67	45.11	36.38	26.43	16.19	5.74
difference	5.48	4.85	4.23	3.52	2.78	3.08	6.82	
LLCR	1.62	1.62	1.62	1.62	1.61	1.67	2.13	3.04
PLCR	2.78	2.93	3.17	3.50	3.99	5.02	7.69	19.05

	12/31/2024	3/31/2025	6/30/2025	9/30/2025	12/31/2025	3/31/2026	6/30/2026	9/30/2026
Reserve Based Lending Amount (mm USD)	11.63	-	-	-	-	-	-	-
Actual outstanding debt amount	-	-	-	-	-	-	-	-
difference								
LLCR	-	-	-	-	-	-	-	-
PLCR	-	-	-	-	-	-	-	-

**Table 5** Difference between reserve based lending amount and outstanding debt amount