

**CONTROLLED // DISTRIBUTION LIST ONLY**  
**MEETING OF THE BOARD OF DIRECTORS**  
**A G E N D A**  
**9:30 A.M. THURSDAY**  
**AUGUST 22, 2019**  
**ROOM 1126**

REMINDER: The attached materials contain Confidential Business Information,  
which may be disclosed only to appropriate parties.

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I. **OPEN: NONE**

II. **CLOSED:**

1. Minutes of July 31, 2019 Board Meeting to be approved

**PROJECT FINANCE DIVISION**

2. COUNTRY: MOZAMBIQUE – AP087889XX  
FOREIGN BUYER: The Mozambique LNG Project  
PRODUCTS: LNG Liquefaction Technology, Engineering/  
Construction/Procurement  
TOTAL FINANCED AMOUNT: \$5,000,000,000  
Review Required: NAC, Congressional & Public Notification  
Decision Required: Referral to Congress  
**Trey Armstrong – Senior Loan Officer**  
**Lisa G. Geberth – Senior Assistant General Counsel for Structured Finance**  
**Roger Yerger – Senior Mechanical Engineer**

**CONTROLLED // DISTRIBUTION LIST ONLY**

**NOTE: ITEM NO 3 HAS BEEN WITHDRAWN**

**MEETING OF THE BOARD OF DIRECTORS**

**A G E N D A**

**9:30 A.M. THURSDAY**

**SEPTEMBER 26, 2019**

**ROOM 1126B**

REMINDER: The attached materials contain Confidential Business Information,  
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I. **OPEN: NONE**

II. **CLOSED:**

1. Minutes of August 22, 2019 Board Meeting to be approved

**PROJECT FINANCE DIVISION**

2. COUNTRY: MOZAMBIQUE – AP087889XX  
FOREIGN BUYER: The Anadarko Mozambique LNG Project  
PRODUCTS: LNG Liquefaction Technology, Engineering/  
Construction/Procurement  
TOTAL FINANCED AMOUNT: \$5,000,000,000  
(See Item No. 2 on the 08-22-19 Agenda. Also see addendum, to be distributed)  
NAC Review: 08-21-19  
Public Notice Expiry Date: 09-17-19  
Congressional Review - Expiry Date: 09-25-19  
Decision Required: Approval  
**Lyman Armstrong – Senior Loan Officer**  
**Lisa G. Geberth – Assistant General Counsel for Structured Finance**  
**Roger Yerger – Senior Mechanical Engineer**

## ADDENDUM TO THE FINAL BOARD MEMORANDUM

**DATE:** September 19, 2019

**TO:** Kimberly A. Reed, President and Chairman  
Spencer Bachus III, Member of the Board of Directors  
Judith Pryor, Member of the Board of Directors

**FROM:** The Mozambique LNG Deal Team:  
Lyman Armstrong, Project Finance *LA*  
Lisa G. Geberth, Office of General Counsel *BGM For LGG*  
Roger Yerger, Engineering and Environment *RYC For RY*  
Masud Hasan, Engineering and Environment *MHC For MH*

**CC:** Bonnie Cybulko, Project Finance  
Paula Swain, Project Finance  
Tyler Linsky, Country Risk and Economic Analysis  
Scott Condren, Policy Analysis  
Stephen Parsons, Engineering and Environment  
Donna Schneider, Credit Administration and Claims Processing  
Joanna Belyamani, Asset Management

**SUBJECT:** AP087889XX—MOZ LNG, Mozambique

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**Summary:** In April 2015, EXIM received an application to support the Mozambique LNG project in Area 1 in northern Mozambique. Over the past 4 years, EXIM staff conducted due diligence and negotiated the terms and conditions of this proposed transaction. On August 22, 2019, EXIM staff presented this \$5 billion transaction to the Board of Directors, having determined that the structure presented a reasonable reassurance of repayment.

This transaction is estimated to support over 16,000 jobs primarily in Pennsylvania, Texas, Florida, Georgia, New York, and Washington DC, as well as secondary benefits spread throughout the country. Additionally, over the life of the EXIM financing support, EXIM's economic impact procedures model estimates that this transaction is likely to yield a net benefit to the US economy of over \$2 billion. Separately, the IMF and other experts expect this transaction to have significant benefits to the broader economy of Mozambique over the life of the transaction.

MEMORANDUM Continued Page 2

On August 15, 2019, the National Advisory Council (NAC) agencies were polled on this transaction. The NAC cleared the transaction on August 21 with no objections or other comments. On August 22, 2019, the Board of Directors approved this transaction for referral to Congress; all transactions over \$100 million require a 35 day referral period to Congress and publication in the Federal Register.

**Updates:**

- Congressional notification:
  - On August 22, 2019, EXIM's Board of Directors referred the aforementioned transaction to Congress.
  - The 35 day Congressional notification period will expire on September 25, 2019.
  - EXIM can receive written comments from Congress at any time up until September 25.
  - As of the date of this memo, EXIM has not received any written comments from Congress.
- Federal Register publication:
  - This transaction first appeared in the Federal Register on August 23, 2019.
  - The public comment period extends from that date until September 17, 2019.
  - As of the date of this memo, the public comment period has closed.
  - EXIM has received four public comments.
  - The first comment is from Mr. Michael Wetzel and was received on September 14, 2019. In the comment, Mr. Wetzel questions whether the U.S. Government should be using taxpayer dollars to finance a transaction that could harm environmental and social fabrics abroad. A copy of this comment is attached for Board review.
  - The second is from LNG Allies and was received on September 16, 2019. In the comment, LNG Allies reverse their previous objection to the transaction in light of EXIM's active engagement with the U.S. LNG Industry. A copy of this comment is attached for Board review.
  - The third is from Mr. Richard Rockett and was received September 17, 2019. In the comment, Mr. Rockett expresses his support for the transaction given the potential economic impact it will have on the people of Mozambique. A copy of this comment is attached for Board review.
  - The fourth is from Mr. Aaron Ahern and was received September 17, 2019. His



MEMORANDUM Continued Page 3

comments were specific to usage and licensing fees, which do not relate to this transaction. A copy of this comment is attached for Board review.

- Transaction updates:

(b) (4), (b) (5)


Any comments received by the Bank from Congress after the date of this memo will be summarized and presented to the Board.



## Document Details

**Docket ID:** EIB\_FRDOC\_0001 ⓘ

**Docket Title:** Recently Posted EIB Rules and Notices. \*ⓘ

**Document File:**  HTML

**Docket Phase:** Notice

**Phase Sequence:** 130

**RIN:** Not Assigned ⓘ

**Original Document ID:** EIB\_FRDOC\_0001-DRAFT-0148

**Current Document ID:** EIB\_FRDOC\_0001-DRAFT-0148

**Title:** Comment on EIB\_FRDOC\_0001-0512 ⓘ

**Number of Attachments:** 0

**Document Type:** PUBLIC SUBMISSIONS \*ⓘ

**Document Subtype:** ⓘ

**Comment on Document ID:** EIB\_FRDOC\_0001-0512 ⓘ

**Comment on Document Title:** Application for Final Commitment for a Long-Term Loan or Financial Guarantee in Excess of 100 Million ⓘ

**Status:** Pending\_Post ⓘ

**Received Date:** 09/14/2019 \*ⓘ

**Date Posted:** ⓘ

**Posting Restriction:** No restrictions ⓘ

**Submission Type:** Web

**Number of Submissions:** 1 \*

## Document Optional Details

**Status Set Date:** 09/14/2019

**Current Assignee:** Dieguez, Cristopolis (EIB)

**Status Set By:** Public

**Tracking Number:** 1k3-9c6m-wshz ⓘ

**Total Page Count Including Attachments:** 1

## Submitter Info

**Comment:**

To whom it may concern: The U.S. Export-Import Bank (Ex-Im Bank) that provides financial support to U.S. companies working abroad is actually considering financing Texas-based Anadarko to develop the gas reserves in northern Mozambique. The plan is: part of these reserves will be sent south via pipeline to South Africa, and the rest will be exported by large ships most likely to markets in Asia. Kate DeAngelis, an international policy analyst, conducted a field study of the impacts of the development of liquefied natural gas on rural communities and their lands. She writes in an article >Villagers suffer at the hands of Mozambique's LNG gas development< at medium.com: In total I met with six affected communities, over 20 Mozambican civil society organizations, and 10 additional individuals. Corruption and malfeasance at so many different levels are present in this gas development, including its role in Mozambique's secret debt. The gas development has failed to provide the jobs promised to locals and has instead led both Anadarko and supporting industries to take and destroy the land that locals depend on to support their families. Furthermore, the resettlement plan fails to think through all of the potential repercussions, including relocating one community into another of a different religion. This LNG project is toxic on many levels and is not something that Ex-Im Bank should prop up with U.S. taxpayer dollars.. The U.S. government should not be using taxpayer dollars to finance environmental and social destruction abroad. There is no other choice than for Ex-Im Bank to reject financing for Mozambique LNG (AP087889xx). Thank you for considering my point of view. \*☺

**First Name:**

Michael ☺

**Middle Name:****Last Name:**

Wetzel ☺

**Mailing Address:****City:****Country:****State or Province:****ZIP/Postal Code:****Email Address:****Phone Number:****Organization Name:****Submitter's  
Representative:****Government Agency Type:****Government Agency:****Cover Page:****Submitter Info**



September 16, 2019

Ms. Kimberly A. Reed, Chairman and President  
Export-Import Bank of the United States  
Washington, DC 20571  
Re: EIB-2019-0001

To Whom It May Concern:

This is in response to Public Notice 2019-0001 from the Export-Import Bank (EXIM) that appeared in the *Federal Register* on August 23, 2019, regarding the application to the Bank to support the export of U.S. goods and services to Mozambique for construction of a natural gas liquefaction plant and associated facilities.

LNG Allies, the trade association of the U.S. LNG industry, had noted its opposition to any loan or other financial support by EXIM for liquefied natural gas (LNG) export projects in Mozambique in prior comments in response to *Federal Register* notices in December 2018 and June 2019. Our earlier comments noted that EXIM support for projects in Mozambique could disadvantage exports of U.S. LNG and the realization of proposed U.S. LNG export projects and that LNG Allies strongly believed that EXIM should focus on supporting U.S. natural gas liquefaction projects to maximize the economic gain to the United States of growing but very competitive global natural gas markets.

Since those earlier comments, EXIM has taken significant steps to assist the U.S. LNG export industry, including EXIM Chairman Reed's August 21, 2019, meeting with U.S. LNG business leaders. LNG Allies very much appreciates the active engagement by Chairman Reed and EXIM staff in developing creative financing solutions to create opportunities for our industry. The ideas discussed during the August 21 meeting and in other meetings with EXIM staff—such as risk guarantees for lower credit-quality buyers of U.S. LNG, EXIM participation in foreign LNG import facilities (using LNG from the United States), and EXIM participation in the financing of U.S. export facilities—could be particularly valuable in assisting the next wave of U.S. LNG export projects reach final investment decisions, creating thousands of jobs, and adding billions of dollars to the U.S. economy.

In light of EXIM's commitment to working with U.S. LNG project developers to increase U.S. energy exports LNG Allies no longer objects to the Bank supporting the exports of U.S. goods and services to Mozambique as described in the August 23 *Federal Register* notice.

Thank you for the opportunity to present these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Fred H. Hutchison", followed by a horizontal line.

Fred H. Hutchison  
President & CEO



# PUBLIC SUBMISSION

<b>As of:</b> 9/17/19 2:17 PM
<b>Received:</b> September 17, 2019
<b>Status:</b> Pending_Post
<b>Tracking No.</b> 1k3-9c8d-n5ia
<b>Comments Due:</b> September 17, 2019
<b>Submission Type:</b> Web

**Docket:** EIB\_FRDOC\_0001

Recently Posted EIB Rules and Notices.

**Comment On:** EIB\_FRDOC\_0001-0512

Application for Final Commitment for a Long-Term Loan or Financial Guarantee in Excess of 100 Million

**Document:** EIB\_FRDOC\_0001-DRAFT-0150

Comment on EIB\_FRDOC\_0001-0512

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## Submitter Information

**Name:** Aaron Ahern

**Address:** 97741

**Email:** ahernrealestate@gmail.com

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## General Comment

EIB\_FRDOC\_0001-0512

Notice of business concern and request for usage fees in accordance with the open source licensing agreement. The usage fees of \$100 million are being requested by eligible entitled entity.

In good faith

Aaron C Ahern [2019]

## PUBLIC SUBMISSION

<b>As of:</b> 9/17/19 2:18 PM
<b>Received:</b> September 17, 2019
<b>Status:</b> Pending_Post
<b>Tracking No.</b> 1k3-9c8e-vptl
<b>Comments Due:</b> September 17, 2019
<b>Submission Type:</b> Web

**Docket:** EIB\_FRDOC\_0001

Recently Posted EIB Rules and Notices.

**Comment On:** EIB\_FRDOC\_0001-0512

Application for Final Commitment for a Long-Term Loan or Financial Guarantee in Excess of 100 Million

**Document:** EIB\_FRDOC\_0001-DRAFT-0151

Comment on EIB\_FRDOC\_0001-0512

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### Submitter Information

**Name:** Richard Rockett

**Address:** 27557

**Email:** richard.rockett@gmail.com

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### General Comment

Reference:

AP087889XX

EIB-2019-0001

The ability of any nation to establish and maintain economic viability for citizens in every level of education and income potential is important locally as well as internationally.

Energy is an essential to maintain living for every person worldwide.

This new found resource available to Mozambique is a key to support their entire population as well as provide "a place at the table" in our global economy... international exchange.

The common denominator in every population is economics...

As Mom always said:

"Money is Not important; it is the Lack of money that Is important !"

It is with sincere commitment that I encourage and support the Export-Import Bank of USA to invest the proposed loan to the nation of Mozambique in amount of \$5 billion dollars.

My experience in Purchasing and Investment Recovery Consulting, as well as Development Sales and Marketing Research -finding new uses for products,technology, and materials, as allowed me to create an opportunity to "jump start "/boost the project that construction schedule is estimated to be four years.

I have Pylons on hand available for prompt shipment to begin creating the access pier/trestle and dock for delivery of all other materials needed as well as the export loading of LNG via special cargo ships.

215 prestressed concrete Pylons are ready to ship now. due to bridge design change.

These Pylons have 100 years use cycle and are certified for ocean exposure.

The manufacturer is available to produce any or all additional materials as required.

The projected time savings in schedule is at least 46 weeks...  
this translates into the first income from 12.5 million tons of LNG per year as much as full year sooner..

In the words a famous politician:  
"Now we are talking Real Money here!"

My background is connections- making things happen!....  
Like using high grade treated timbers/ that could be used as building or fencing....

Also special coatings for sealing or reflective properties- such as UV light sensitivity for night visibility.

These materials and much more in experience I wish to propose at substantial savings, not to mention logistics, contacts and support.

These Pylons will meet or exceed requirements.

I invite enquiry to inspect and review full details of specifications available,

Attachment#1

Photo:EIB-2019-0001

30" square X 60-120'  
Qty 179 are over 100' long  
Average weight: 35 tons  
Weight per foot approximately 660#

Attachment #2  
See photos uploaded

Bottom end

30" square with 18" diameter hollow sections.

Facts:

Security is a concern as well as transportation infrastructure in area of Afungi, Mozambique- the project location.

The wet season should not delay beginning pier installation.

The speedy delivery of all needed materials would be more reliable and coordinated as required with much better communications.

The technical quality of materials available will be from proven reliable source.

As I see the challenges in this transition of wealth to Mozambique, Communications is the key....

"In order to change people's ways, you must first change their minds."

At the end of the day, the best we can say for our life is that "we made a difference."

I am willing to follow through with this project to fruition.

As Mom always said:

"It isn't who you know, rather, what you know about them."

Did I mention communications ?

But for economic opportunities, every citizen of underdeveloped nation would rather live right where they grew up.

Regards

R Dan Rockett

Additional photos uploaded show aerial view of inventory

Loading access and distance

Airport landing area within 1500 feet... walking distance to inspect.

Sent from my ET, extension of iPhone

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## Attachments

40D991EA-DDD3-419E-A533-B017ED223BE8

4B897188-CB4D-4E23-A1FF-8B1EE56A782F

23F565B9-D442-43C8-91ED-D760A76ADCBD

AD789365-E646-4C13-AD85-916E2B5F50CD

26BCF83B-1772-4094-9AA7-0586092FF76C


CAB22A24-08FC-4184-8D16-5C5A3946FC4B



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**Docket Title:** Recently Posted EIB Rules and Notices. \*ⓘ

**Document File:**  HTML

**Docket Phase:** Notice

**Phase Sequence:** 130

**RIN:** Not Assigned ⓘ

**Original Document ID:** EIB\_FRDOC\_0001-DRAFT-0148

**Current Document ID:** EIB\_FRDOC\_0001-DRAFT-0148

**Title:** Comment on EIB\_FRDOC\_0001-0512 ⓘ

**Number of Attachments:** 0

**Document Type:** PUBLIC SUBMISSIONS \*ⓘ

**Document Subtype:** ⓘ

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**Status:** Pending\_Post ⓘ

**Received Date:** 09/14/2019 \*ⓘ

**Date Posted:** ⓘ

**Posting Restriction:** No restrictions ⓘ

**Submission Type:** Web

**Number of Submissions:** 1 \*

## Document Optional Details

**Status Set Date:** 09/14/2019

**Current Assignee:** Dieguez, Cristopolis (EIB)

**Status Set By:** Public

**Tracking Number:** 1k3-9c6m-wshz ⓘ

**Total Page Count Including Attachments:** 1

## Submitter Info

**Comment:**

To whom it may concern: The U.S. Export-Import Bank (Ex-Im Bank) that provides financial support to U.S. companies working abroad is actually considering financing Texas-based Anadarko to develop the gas reserves in northern Mozambique. The plan is: part of these reserves will be sent south via pipeline to South Africa, and the rest will be exported by large ships most likely to markets in Asia. Kate DeAngelis, an international policy analyst, conducted a field study of the impacts of the development of liquefied natural gas on rural communities and their lands. She writes in an article >Villagers suffer at the hands of Mozambique's LNG gas development< at medium.com: In total I met with six affected communities, over 20 Mozambican civil society organizations, and 10 additional individuals. Corruption and malfeasance at so many different levels are present in this gas development, including its role in Mozambique's secret debt. The gas development has failed to provide the jobs promised to locals and has instead led both Anadarko and supporting industries to take and destroy the land that locals depend on to support their families. Furthermore, the resettlement plan fails to think through all of the potential repercussions, including relocating one community into another of a different religion. This LNG project is toxic on many levels and is not something that Ex-Im Bank should prop up with U.S. taxpayer dollars.. The U.S. government should not be using taxpayer dollars to finance environmental and social destruction abroad. There is no other choice than for Ex-Im Bank to reject financing for Mozambique LNG (AP087889xx). Thank you for considering my point of view. \*🙏

**First Name:**

Michael 🙏

**Middle Name:****Last Name:**

Wetzel 🙏

**Mailing Address:****City:****Country:****State or Province:****ZIP/Postal Code:****Email Address:****Phone Number:****Organization Name:****Submitter's  
Representative:****Government Agency Type:****Government Agency:****Cover Page:****Submitter Info**



## MEMORANDUM

**DATE:** September 16, 2019

**TO:** Kimberly A. Reed, President and Chairman  
Spencer Bachus III, Member of the Board of Directors  
Judith Pryor, Member of the Board of Directors

**FROM:** The Mozambique LNG Deal Team:  
Lyman Armstrong, Project Finance *DMS for LA*  
Lisa G. Geberth, Office of General Counsel *BAM for L.G.G.*  
Roger Yerger, Engineering and Environment *RR for RY*  
Masud Hasan, Engineering and Environment *Mitbe*

**CC:** Bonnie Cybulko, Project Finance  
Paula Swain, Project Finance  
Tyler Linsky, Country Risk and Economic Analysis  
Scott Condren, Policy Analysis  
Stephen Parsons, Engineering and Environment  
Donna Schneider, Credit Administration and Claims Processing  
Joanna Belyamani, Asset Management

**SUBJECT:** AP087889XX—MOZ LNG, Mozambique

---

**Summary:** In April 2015, EXIM received an application to support the Mozambique LNG project in Area 1 in northern Mozambique. Over the past 4 years, EXIM staff conducted due diligence and negotiated the terms and conditions of this proposed transaction. On August 22, 2019, EXIM staff presented this \$5 billion transaction to the Board of Directors, having determined that the structure presented a reasonable reassurance of repayment.

This transaction is estimated to support over 16,000 jobs primarily in Pennsylvania, Texas, Florida, Georgia, New York, and Washington DC, as well as secondary benefits spread throughout the country. Additionally, over the life of the EXIM financing support, EXIM's economic impact procedures model estimates that this transaction is likely to yield a net benefit to the US economy of over \$2 billion. Separately, the IMF and other experts expect this transaction to have significant benefits to the broader economy of Mozambique over the life of the transaction.



MEMORANDUM Continued Page 2

On August 15, 2019, the National Advisory Council (NAC) agencies were polled on this transaction. The NAC cleared the transaction on August 21 with no objections or other comments. On August 22, 2019, the Board of Directors approved this transaction for referral to Congress; all transactions over \$100 million require a 35 day referral period to Congress and publication in the Federal Register.

**Updates:**

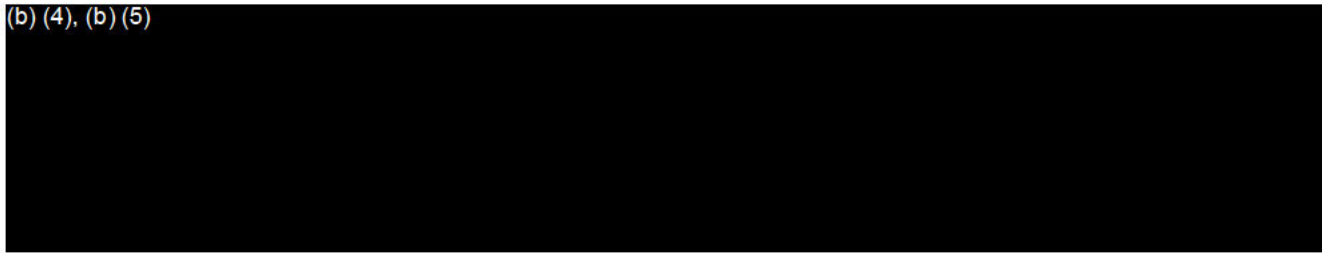
- Congressional notification:
  - On August 22, 2019, EXIM's Board of Directors referred the aforementioned transaction to Congress.
  - The 35 day Congressional notification period will expire on September 25, 2019.
  - EXIM can receive written comments from Congress at any time up until September 25.
  - As of the date of this memo, EXIM has not received any written comments from Congress.
- Federal Register publication:
  - This transaction first appeared in the Federal Register on August 23, 2019.
  - The public comment period extends from that date until September 17, 2019.
  - EXIM can receive written comments from the public at any time up until September 17.
  - As of the date of this memo, EXIM has received one public comment. The comment is from Mr. Michael Wetzel and was received on September 14, 2019. In the comment, Mr. Wetzel questions whether the U.S. Government should be using taxpayer dollars to finance a transaction that could harm environmental and social fabrics abroad. A copy of this comment is attached for Board review.
- Transaction updates:

(b) (4), (b) (5)



MEMORANDUM Continued Page 3

(b) (4), (b) (5)




Any comments received by the Bank from either Congress or through the Federal Register after the date of this memo will be summarized and presented to the Board.



## Document Details

**Docket ID:** EIB\_FRDOC\_0001 ⓘ

**Docket Title:** Recently Posted EIB Rules and Notices. \*ⓘ

**Document File:**  PDF

**Docket Phase:** Notice

**Phase Sequence:** 130

**RIN:** Not Assigned ⓘ

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**Current Document ID:** EIB\_FRDOC\_0001-DRAFT-0148

**Title:** Comment on EIB\_FRDOC\_0001-0512 ⓘ

**Number of Attachments:** 0

**Document Type:** PUBLIC SUBMISSIONS \*ⓘ

**Document Subtype:** ⓘ

**Comment on Document ID:** EIB\_FRDOC\_0001-0512 ⓘ

**Comment on Document Title:** Application for Final Commitment for a Long-Term Loan or Financial Guarantee in Excess of 100 Million ⓘ

**Status:** Pending\_Post ⓘ

**Received Date:** 09/14/2019 \*ⓘ

**Date Posted:** ⓘ

**Posting Restriction:** No restrictions ⓘ

**Submission Type:** Web

**Number of Submissions:** 1 \*

## Document Optional Details

**Status Set Date:** 09/14/2019

**Current Assignee:** Dieguez, Cristopolis (EIB)

**Status Set By:** Public

**Tracking Number:** 1k3-9c6m-wshz ⓘ

**Total Page Count Including Attachments:** 1

## Submitter Info

**Comment:**

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**First Name:**

Michael ☺

**Middle Name:****Last Name:**

Wetzel ☺

**Mailing Address:****City:****Country:****State or Province:****ZIP/Postal Code:****Email Address:****Phone Number:****Organization Name:****Submitter's  
Representative:****Government Agency Type:****Government Agency:****Cover Page:****Submitter Info**



EXPORT-IMPORT BANK OF THE UNITED STATES  
MEMORANDUM TO THE BOARD OF DIRECTORS

8/22/2019

<b>1. General</b>	
Transaction No.:	AP087889XX
Country:	Mozambique
Transaction Name:	MOZ LNG (Area 1)
EXIM Bank Financing Program:	Direct Loan
Export Goods and Services:	LNG liquefaction technology, and Engineering/Construction/Procurement
Total Financed Amount (USD):	\$ 5,000,000,000
Total Financed Amount (FX):	0 USD

<b>2. Transaction Team</b>	
Division:	OBAF/ Project Finance Division
Loan Officers:	Paula Swain; Lyman Armstrong Initials: PS; LA
Attorney:	Lisa Geberth Initials: LG
Vice President (Acting):	Bonnie Cybulko Initials: BC
TPMD / AMD Officer:	Joanna Belyamani
Economist(s):	Tyler Linksy
Engineer(s) - Technical:	Roger Yeager Initials: RY
Engineer(s) - Environmental:	Masud Hassen Initial: MH
Credit Administration Officer:	Donna Schneider
OPAIR Officer:	Scott Condren

<b>3. Summary of Financing</b>				
	%	EXIM Bank	Co-Financing ECA	Total
US Content	(b) (4)			
Eligible Foreign Content				
Net Contract Price				
less Cash Payment				
Financed Portion of Net Contract Price				
plus Financed Local Costs				
plus Capitalized Interest During				
Financed Amount Excluding Premium				
OECD Premium/ Exposure Fee				
Total Financed Amount Including Premium		\$ 5,000,000,000	\$ -	\$ 5,000,000,000
Financed Amount in FX/ Exchange Rate		-		

<b>4. Transaction Participants</b>	
Applicant:	ANADARKO MOZAMBIQUE AREA 1, LTDA, Maputo MOZAMBIQUE
Borrower:	Moz LNG1 Financing Company Ltd.
Guarantor(s) and/or Obligor(s):	None
Buyer:	ANADARKO MOZAMBIQUE AREA 1, LTDA, Maputo MOZAMBIQUE
End-User:	ANADARKO MOZAMBIQUE AREA 1, LTDA, Maputo MOZAMBIQUE
Exporter(s):	Identified major exporters to date include Baker Hughes/GE Oil & Gas, Inc. (Texas); Air Products and Chemicals (Pennsylvania); Solar Turbines International (California); and Sooner Pipe LLC (Pipe casing & casing accessories) (Texas). U.S. exports also include a wide range of supplies of construction machinery, engineering services.
Supplier(s):	Identified major suppliers to date include KBR USA (Texas); Global Edge Group (Texas); Air Products and Chemical (Pennsylvania); McDermott (Texas); FDR Safety LLC (Tennessee); and GE Oil & Gas, Inc. (Texas)
Guaranteed Lender:	N/A
Lessor:	N/A
Lessee:	N/A
Co-Financing ECA:	N/A

<b>5. Program Budget/Clearances/Notifications</b>	
EXIM Bank Risk Category:	(b) (4)
Budget Cost Level ("BCL"):	(b) (4)
Program Budget Allocation %:	(b) (4)
Environmental Category:	(b) (4)
Special Features:	<input type="checkbox"/> Environmental Exports Program <input type="checkbox"/> Medical Equipment Program <input type="checkbox"/> Transportation Security Program <input type="checkbox"/> Other

8/22/2019

Justification for EXIM Bank support:	<input checked="" type="checkbox"/> Category 1: To meet competition from foreign, officially sponsored ECAs <input checked="" type="checkbox"/> Category 2: Risk others are unwilling/unable to take <input checked="" type="checkbox"/> Category 3: To overcome structural limitations <input checked="" type="checkbox"/> Category 4: Other/ Not Identified; Reason: EXIM support for this transaction is crucial for the exporter to establish and protect market share through this transaction and potential follow-on sales	
Estimated Jobs Supported:	16,400	
Small Business Percentage:	0.1 % Direct	0.5 % Indirect

#### 6. Applicable OECD/Sector Understanding and Other Selected Financing Terms

OECD/Sector Understanding:	OECD Arrangement			
Advance Rate:				
Repayment Term:	12.5 Years	0 Months		
No. of Installments/ Frequency:	25 S			
Amortization Profile:	(b) (4)			
Financing Structure:	Project Finance			
Exposure Fee (Risk Premium)	(b) (4)	Financed?	Yes	
Fee Level	(b) (4)			
Interest Rate:	Fixed at	3.13% Select	Other:	CIRR
Capital Markets Funding Option:	No			
Cap Mkts Pre-Funding Option:	No			
Commitment Fees:	(b) (4)			
Initial Eligibility Date:	4/10/2013			
Starting Point Event:	Project Completion			
(b) (4)				
Tranches/ Multiple Repayment Schedules:	N			





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**Transaction: Mozambique LNG (AP087889XX)**

**Memo Table of Contents**

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- II. Financing Structure and Terms
- III. Relationship with Sponsors and Sector Experience
- IV. Justification for EXIM Bank Support
- V. Summary of Credit Analysis
- VI. Risks and Mitigating Factors
- VII. Summary of Technical and Environmental Analysis
- VIII. Summary of Legal Analysis and Compliance Criteria
- IX. Transaction Rating and Pricing
- X. Recommendation
- XI. Appendices

**I. Executive Summary**

**Request:** Mozambique LNG1 Financing Company ("**MOZ LNG**" or the "**Borrower**") has requested EXIM to provide a direct loan in the amount of up to \$5 billion to purchase U.S. goods and services for the development, financing, construction and operation of an integrated liquefied natural gas ("**LNG**") project (the "**Project**"), located in northern Mozambique on the Afungi Peninsula in the Cabo Delgado province in Northern Mozambique. The exposure fee, ancillary cost, and interest expense during construction will also be a part of the financing request to be provided on a limited recourse project finance basis.

The Project will consist of: (i) offshore gas production and gathering facilities; ; (ii) the onshore LNG plant with two liquefaction trains (b) (4) (iii) LNG and condensate storage facilities; (iv) marine facilities for LNG and condensate loading, navigation, and construction support; (v) support infrastructure (e.g., utilities, air field, communications); and (vi) domestic gas delivery facilities. (b) (4)

(b) (4) This is an integrated financing involving offshore and onshore assets, with one set of common financing documentation. The current financing request of EXIM Bank is to support the onshore LNG plant and associated facilities.

(b) (4), (b) (5) EXIM's financing support of \$5 billion would represent (b) (4), (b) (5). Shortly after EXIM's Board was confirmed by Congress, Export-Import Bank of China ("China Ex-Im Bank") and Gazprombank (Russia) were dropped as Senior Lenders.

LNG is a natural gas that has been cryogenically converted to liquid for ease of storage and shipment overseas. The Project will chill natural gas to -260°F (-160°C) and store the liquefied natural gas for export and for supply of natural gas to the Mozambique domestic market. Prior to liquefaction, the natural gas will be stripped of liquids (condensates) which will also be exported or used domestically. The feed gas for the Project will be sourced from associated upstream gas reserves located in the Area 1 Concession, which is part of the Rovuma Basin.

(b) (4), (b) (5)

The Project's facilities will be constructed pursuant to two separate Engineering, Procurement, Construction ("EPC") contracts; one for the onshore LNG plant and related facilities, and one for the offshore gas production facilities. The onshore LNG EPC contract has been awarded to



CCSJV, a joint venture consisting of CB&I (now part of McDermott) of the US, Saipem of Italy and Chiyoda of Japan. The offshore EPC has been awarded to a consortium of TechnipFMC of the UK, and Van Oord of the Netherlands. The amount of U.S. procurement and EXIM financing may be adjusted to a slightly lower level before financial close once all procurement contracts and financing sources are finalized by the Project. Identified major exporters to date include Baker Hughes/GE Oil & Gas, Inc. (Texas), Air Products and Chemicals (Pennsylvania), Solar Turbines International (California), and Sooner Pipe LLC (Pipe casing & casing accessories) (Texas). U.S. exports also include a wide range of supplies of construction machinery, engineering services, instrumentation, and drilling.

The Project will use proven Air Products LNG liquefaction technology that is well recognized in the oil and gas sector. The Environmental and Engineering Division ("E&E") has determined that the Project is technically feasible, and is expected to offer moderate technical risk. Furthermore, E&E expects there will be sufficient reserves to meet production targets. E&E has determined that, according to the information provided by the Sponsors, the Project is expected to be designed, built and operated in compliance with Mozambique Environmental Rules, IFC Guidelines, Equator principles, and EXIM's Environmental Procedures and Guidelines.

This is one of two projects EXIM is currently considering financing, which are located next to each other and utilizing gas reserves located offshore in the Rovuma Basin. This adjacent Project ("Rovuma") is located in the Area 4 concession and is sponsored by an investor group led by Exxon Mobil Corporation (Rovuma LNG – AP684477XX).

**Borrower Profile:** The Sponsors of the Project and the related upstream Area 1 gas field (the "Area 1 Exploration, Production, Concession Contract" or "Area 1 Concession") are Anadarko Petroleum Corporation ("APC") (US) (b) (4) Oil India Limited ("OIL") (India) (b) (4) Oil & Natural Gas Corporation (India) ("ONGC") (b) (4) Bharat Petroleum Corporation Limited ("BPCL") (India) (b) (4) PTT Exploration and Production Public Company Limited ("PTTEP") (Thailand) (b) (4) Mistui & Co., Ltd. ("Mitsui") and Japan Oil, Gas, and Metals Corporation ("JOGMEC") (Japan) (b) (4) and Empresa Nacional de Hidrocarbonetos ("ENH") (Mozambique) (b) (4). As the largest equity shareholder of the Project (b) (4) Anadarko is serving as the operator of the Project. The Borrower is a special purpose vehicle<sup>1</sup> incorporated under the laws of the Abu Dhabi Global Market ("ADGM"), a financial free trade zone within Abu Dhabi, an Emirate of the United Arab


<sup>1</sup> As the Project is structured among the Concessionaires as an unincorporated joint venture, it is necessary to establish a legal entity to receive the proceeds of the Senior Debt and carry out other obligations in accordance with the finance agreements.

Emirates, which will borrow the Senior Debt Facilities (including the EXIM loan) and then on-lend all of the proceeds to the concessionaires, wholly owned affiliates of the Sponsors.

(b) (4), (b) (5)

(b) (4), (b) (5)

(b) (4), (b) (5)



Moz LNG is requesting a Direct Loan in the amount of \$5 billion. Given the large size of the financing and Mozambique's (b) (4), (b) (5) the debt financing for the Project is highly dependent on support from ECAs and/or development finance institutions. EXIM's financing will have a door-to-door maturity of 18 years comprises (b) (4), (b) (5)

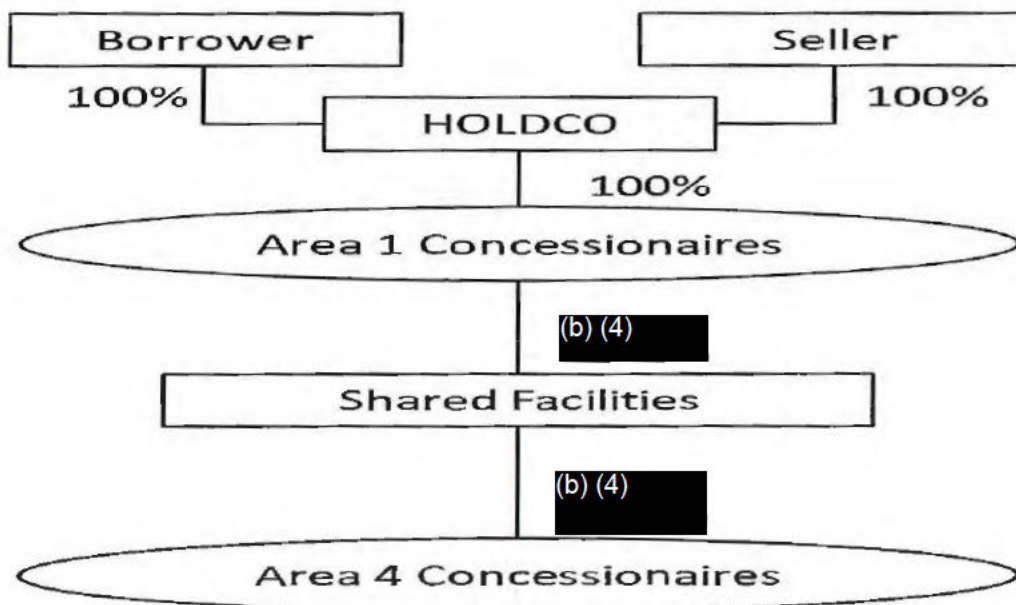
6-month grace period and a repayment term of 12.5 years (weighted average repayment term of 7.24 years). (b) (4), (b) (5)

(b) (4), (b) (5) This is consistent with the Arrangement on Guidelines for Officially Supported Export Credits ("OECD Arrangement") for repayment terms for a Category II country.

The indicative pricing of the EXIM direct loan is set at the Commercial Interest Reference Rate ("CIRR"). The relevant CIRR for purposes of the Board presentation, which is the effective CIRR for the period from August 15, 2019 to September 14, 2019, (b) (4), (b) (5) The final CIRR will be determined and fixed at the time of the first disbursement as required by the general policy of the Bank.

#### Diagram 1: Project Ownership Structure

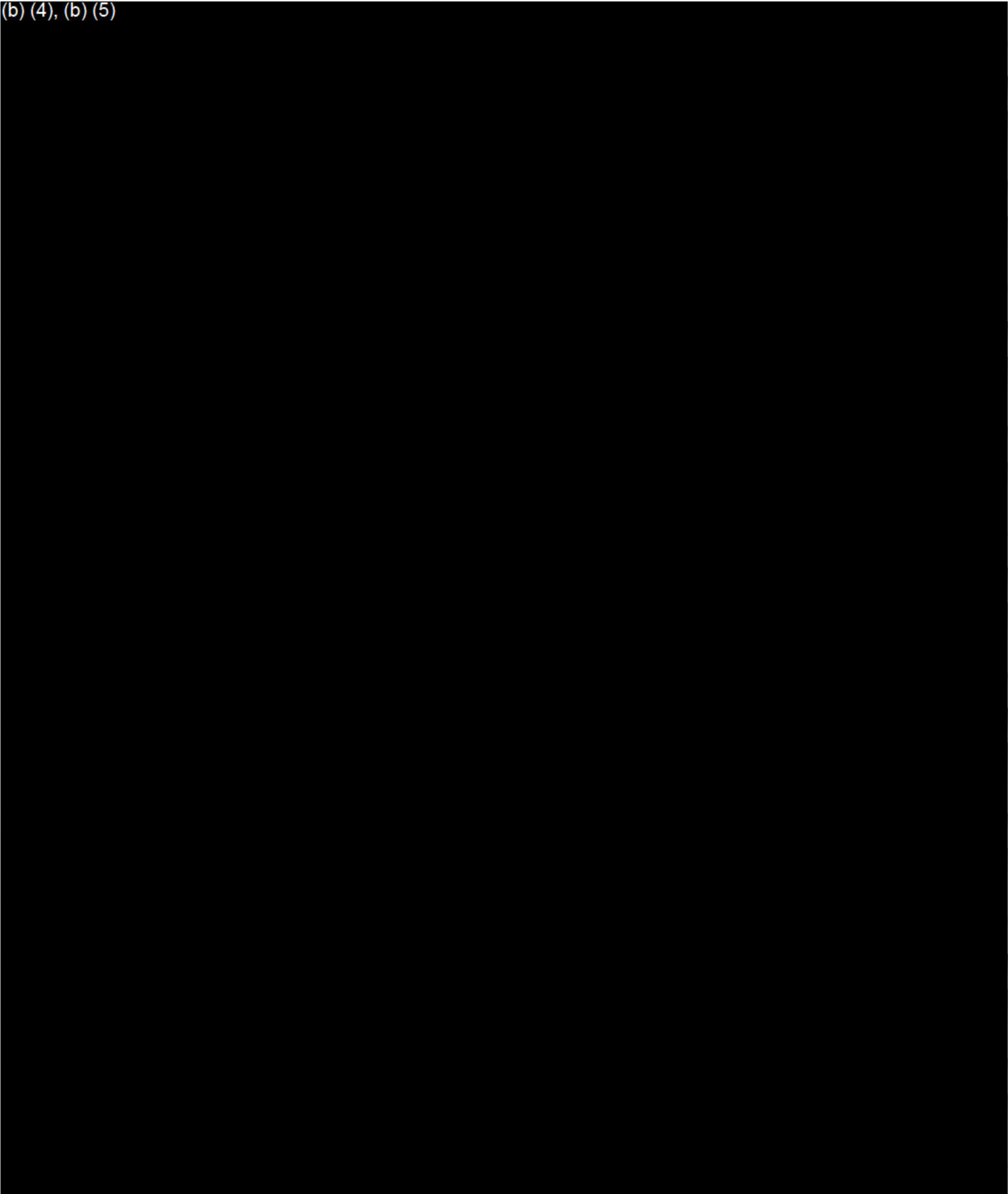
A diagram of the key special purpose entities ("SPEs") established for the Project is shown below.



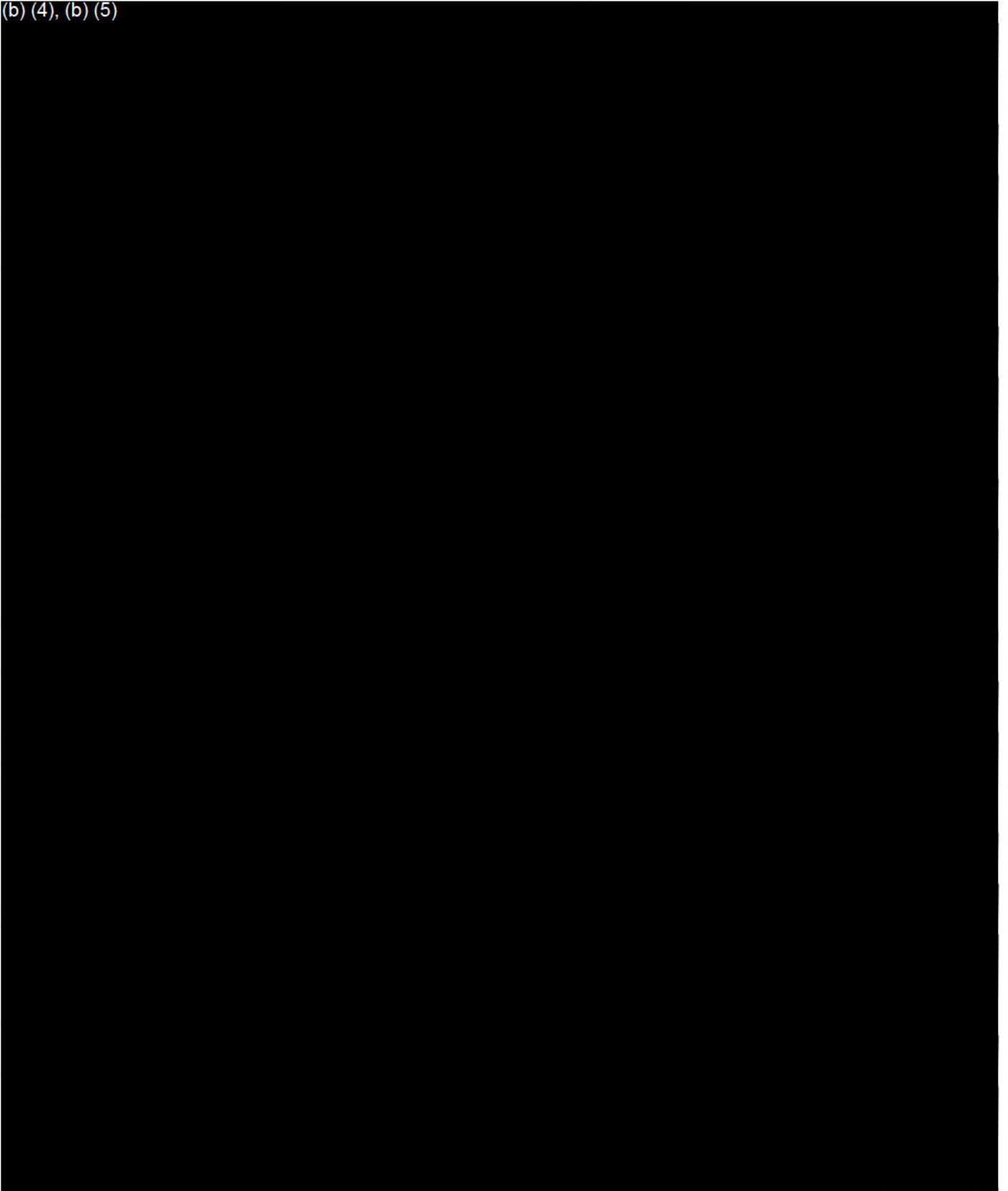
(b) (4), (b) (5)



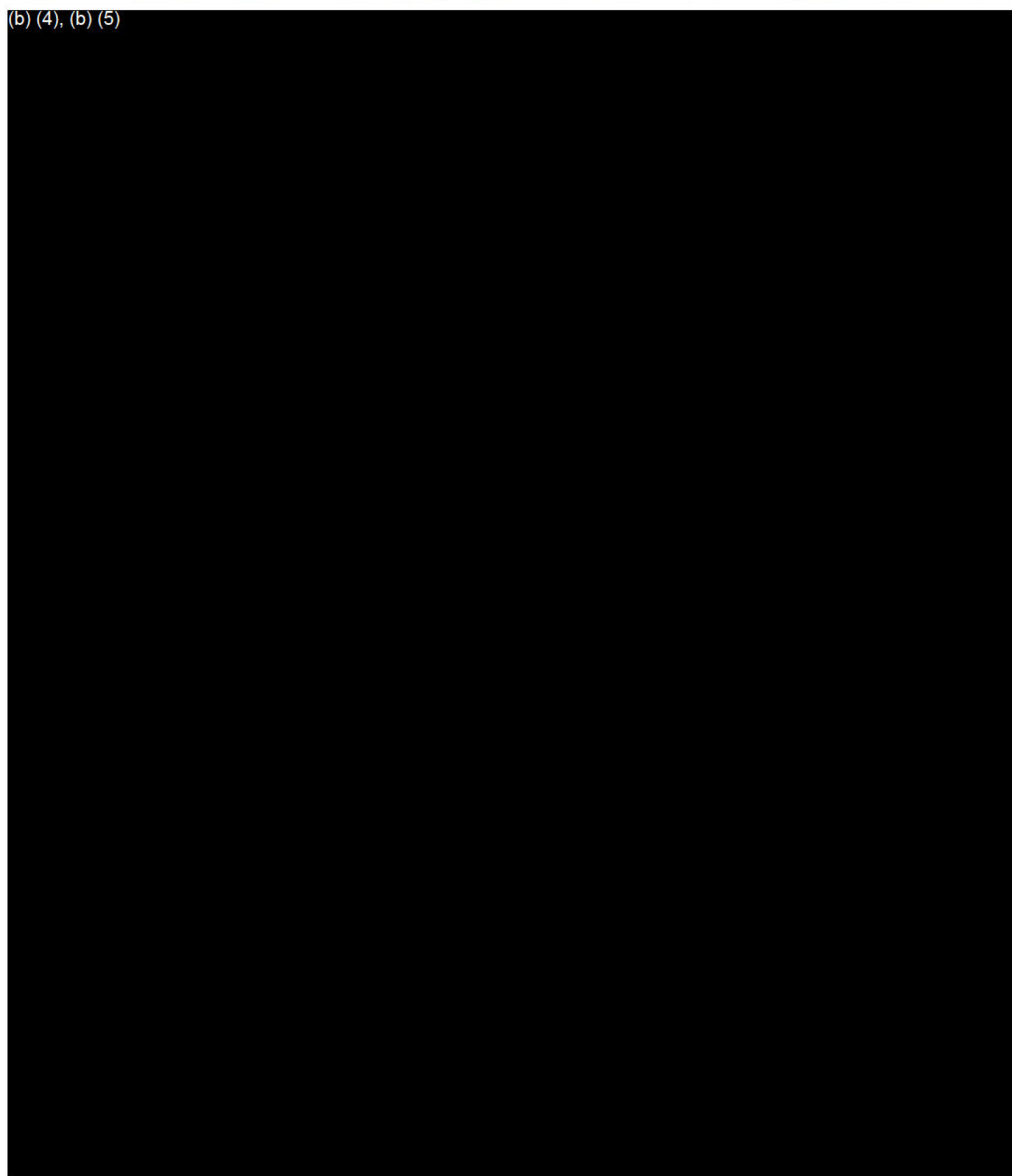
(b) (4), (b) (5)



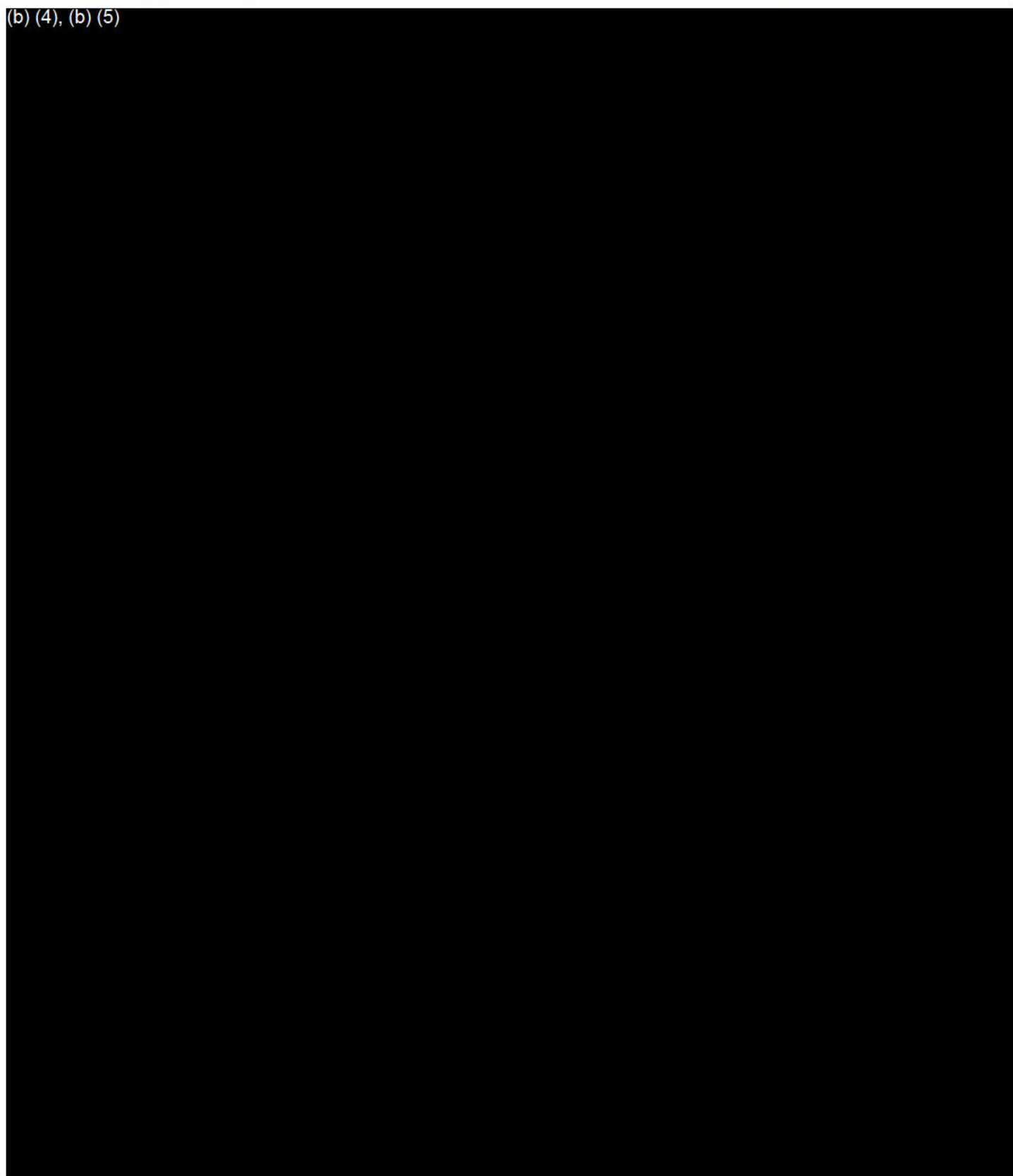
(b) (4), (b) (5)



(b) (4), (b) (5)



(b) (4), (b) (5)

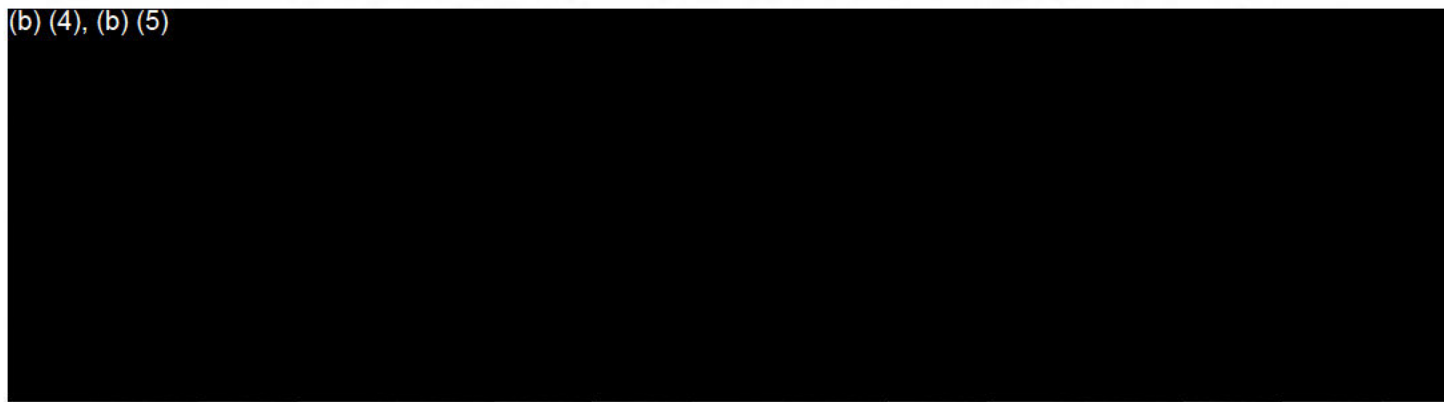




*Region*



EXIM Bank has very minimal experience in Mozambique with the last significant transaction going back to 1980. Historical experience with respect to transactions in the oil and gas sector in the Sub-Sahara African region also has been limited with no experience in the last ten years. Although the Bank has limited experience in Mozambique, we have financed projects in (e.g., Chad/Cameroon, BTC Pipeline, and PNG LNG) that were similar challenging environments.

(b) (4), (b) (5)





#### IV. Justification for EXIM Bank Support

Given the large size of the financing and Mozambique's (b) (4), (b) (5) the debt financing for the Project is highly dependent on support from ECAs and/or development finance institutions. Approximately 98% of the debt financing is being provided by ECA and/or development financial institutions. (b) (4), (b) (5)



Without the ECAs there would be no material financing support from commercial banks. Capacity for uncovered Mozambique risk in the commercial bank market is limited, particularly with two large LNG transactions in the market at the same time. (b) (4), (b) (5)



In a letter dated November 5, 2019 to EXIM (attached in Appendix I, The Economic Impact Analysis), the Sponsors stated that "If US EXIM does not have a board quorum by the end of 2018, the Project will be forced to seek financing terms from other ECA sources and reallocate capital spending to support that alternative financing". Goods and services can be sourced from different countries including for this transaction and other similar LNG transactions. Please refer to Appendix E for a list of goods and services for typical LNG transactions that are sourced from either the U.S. or other countries. As noted, EXIM proposed financing replaced foreign ECA financing (China and Russia) and resulted in a shift in sourcing to U.S. exporters. A list of

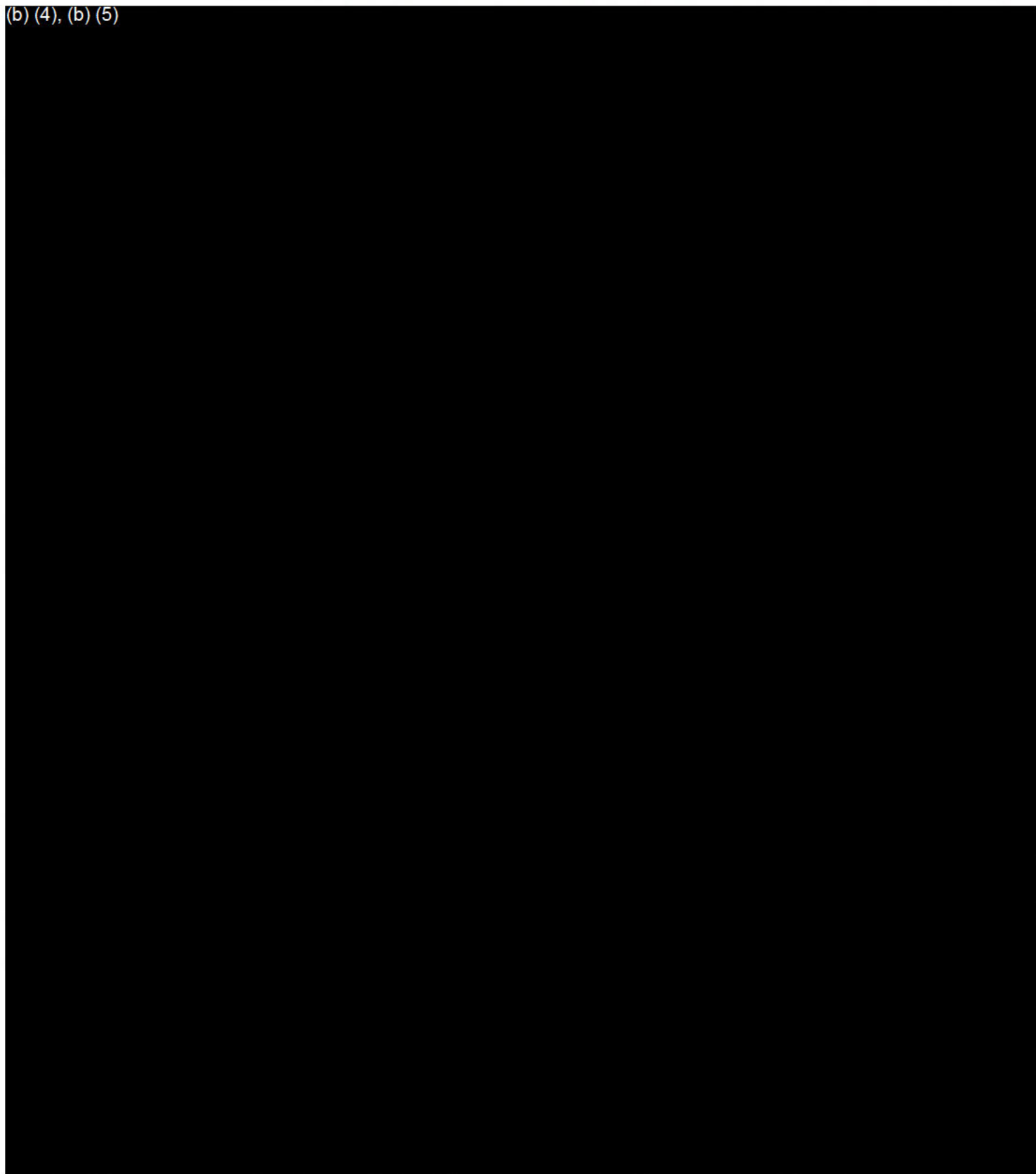
(b) (4), (b) (5)

**Jobs Supported:** This transaction is estimated to support 16,400 jobs, as determined by EXIM Bank's job calculator. EXIM's job calculator reflects industry averages and estimates associated jobs using the transaction's U.S. Contract Price, appropriately adjusted for inflation using the "Price Indices for Exports and Imports of Goods and Services" developed by the U.S. Bureau of Economic Analysis. EXIM's job calculator also utilizes data published in the Employment Requirements Matrix by the Bureau of Labor Statistics, which provides typical employment generation per million dollars of production

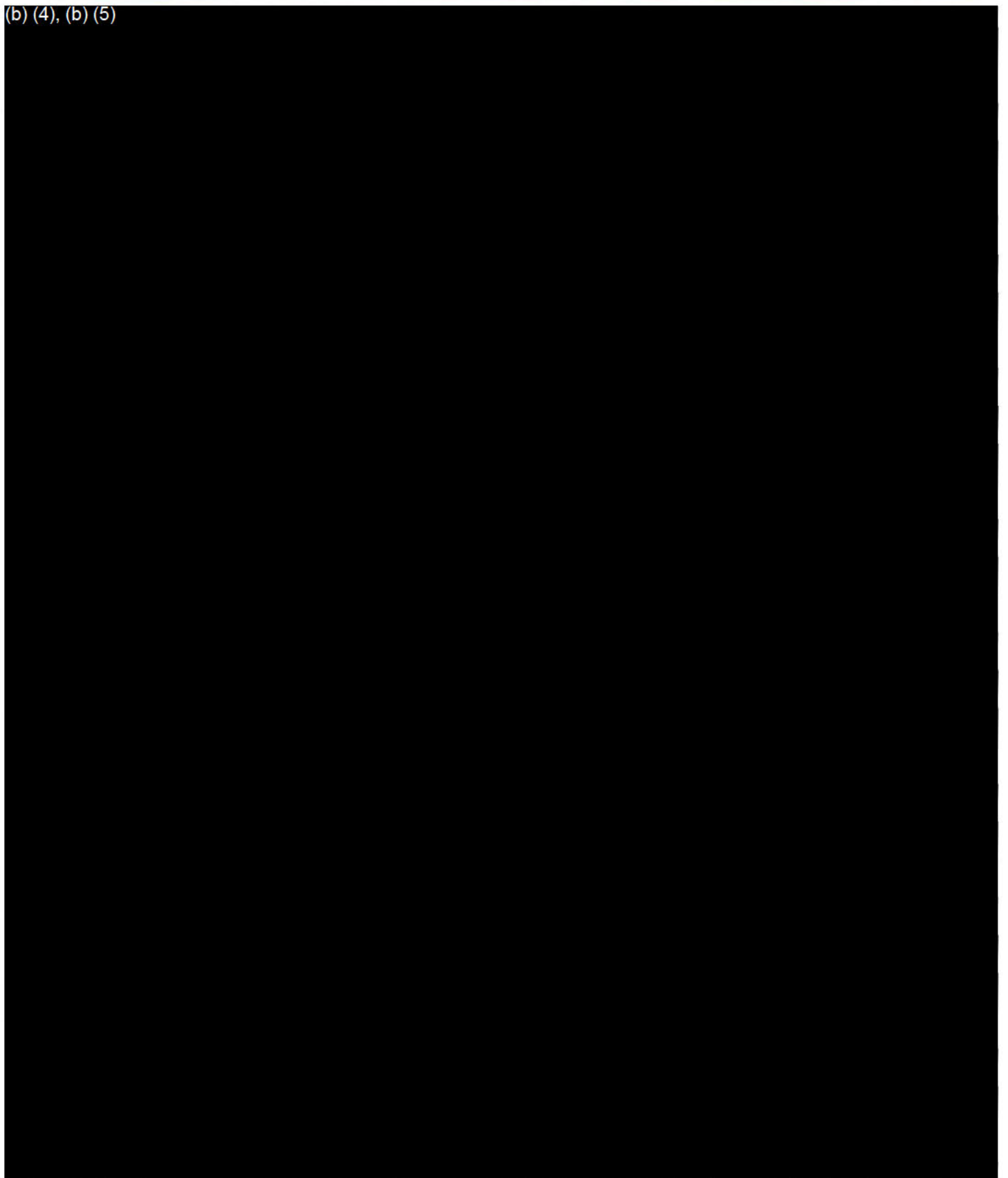
(b) (4), (b) (5)

(b) (4), (b) (5)

(b) (4), (b) (5)

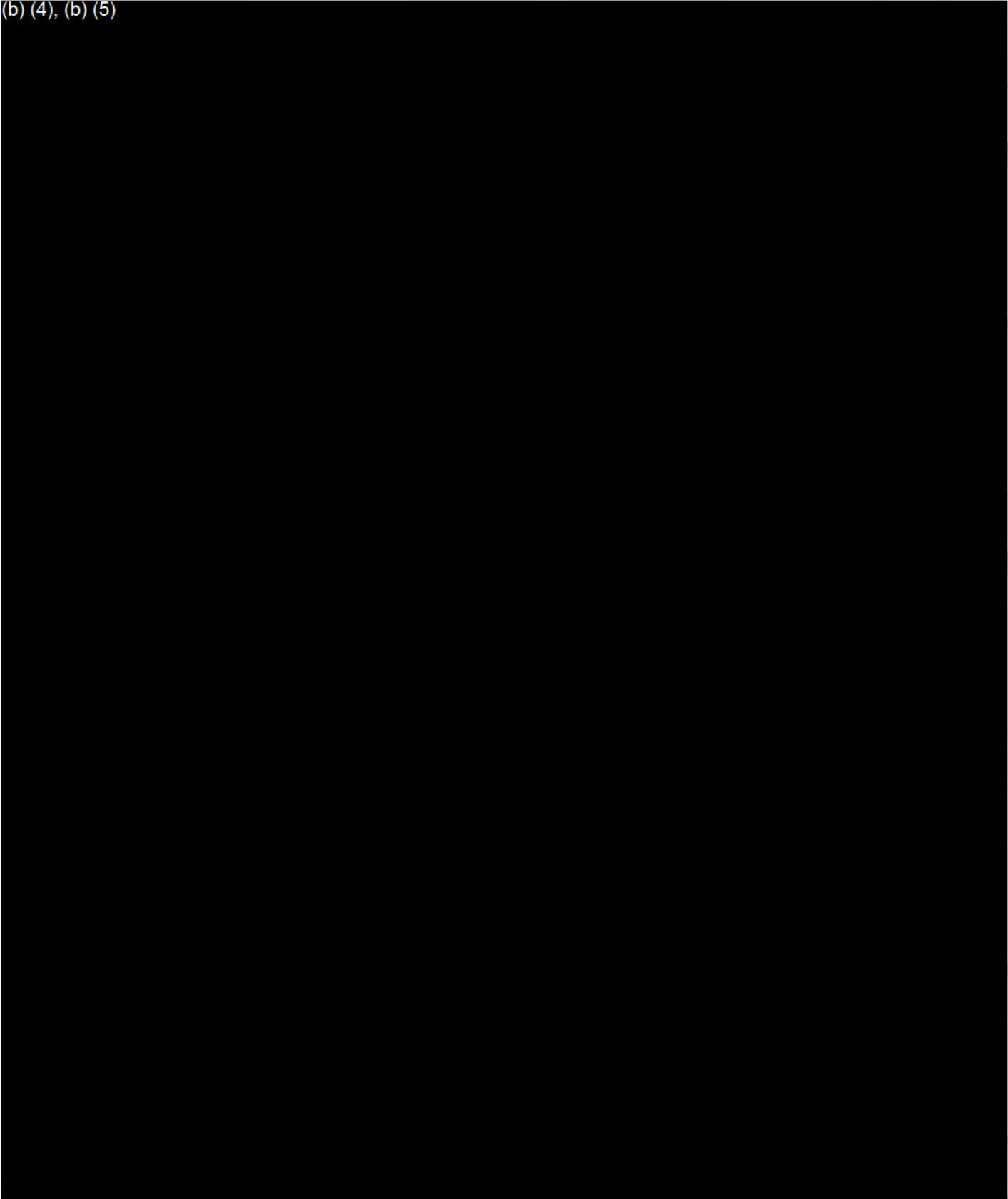


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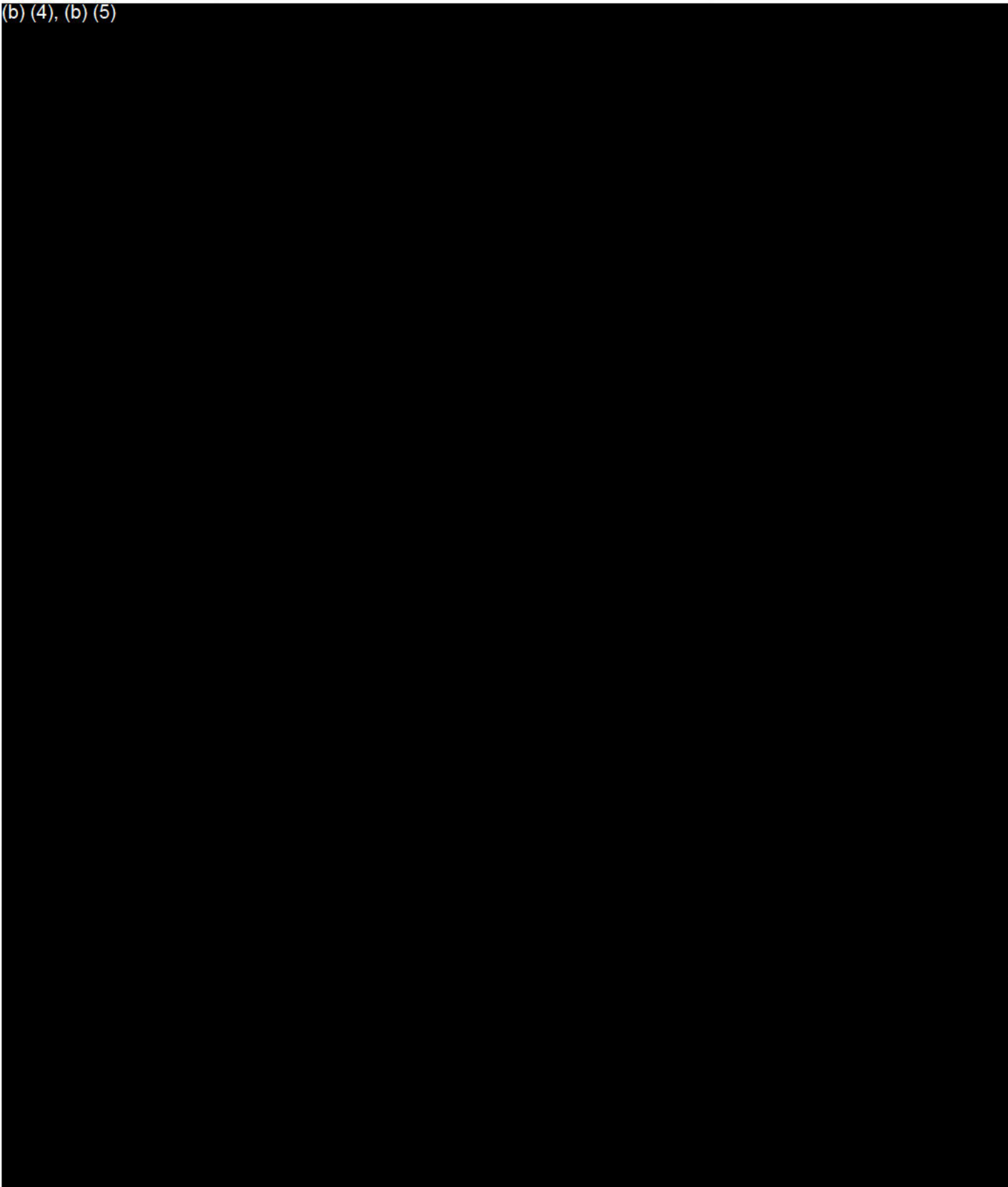




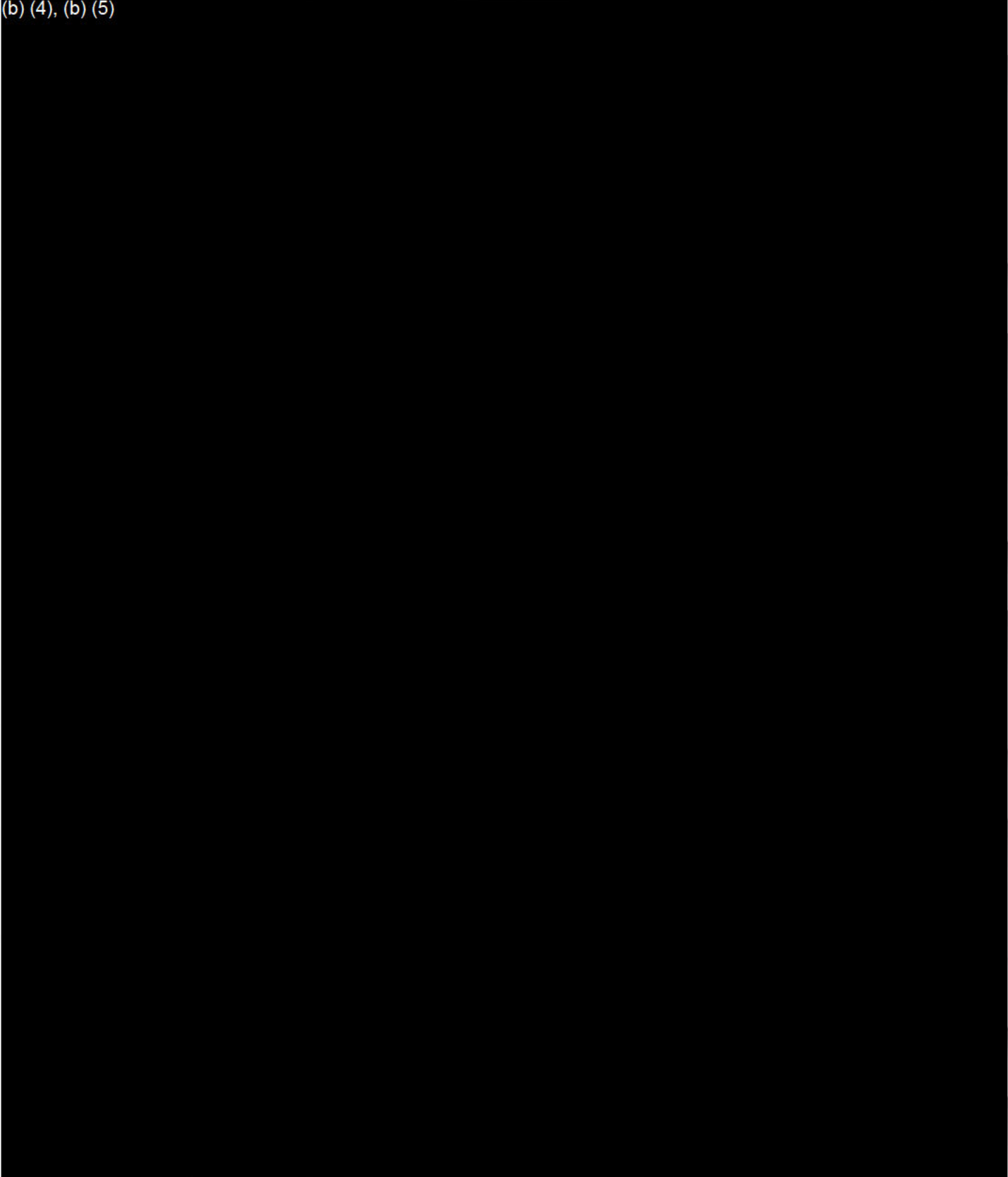
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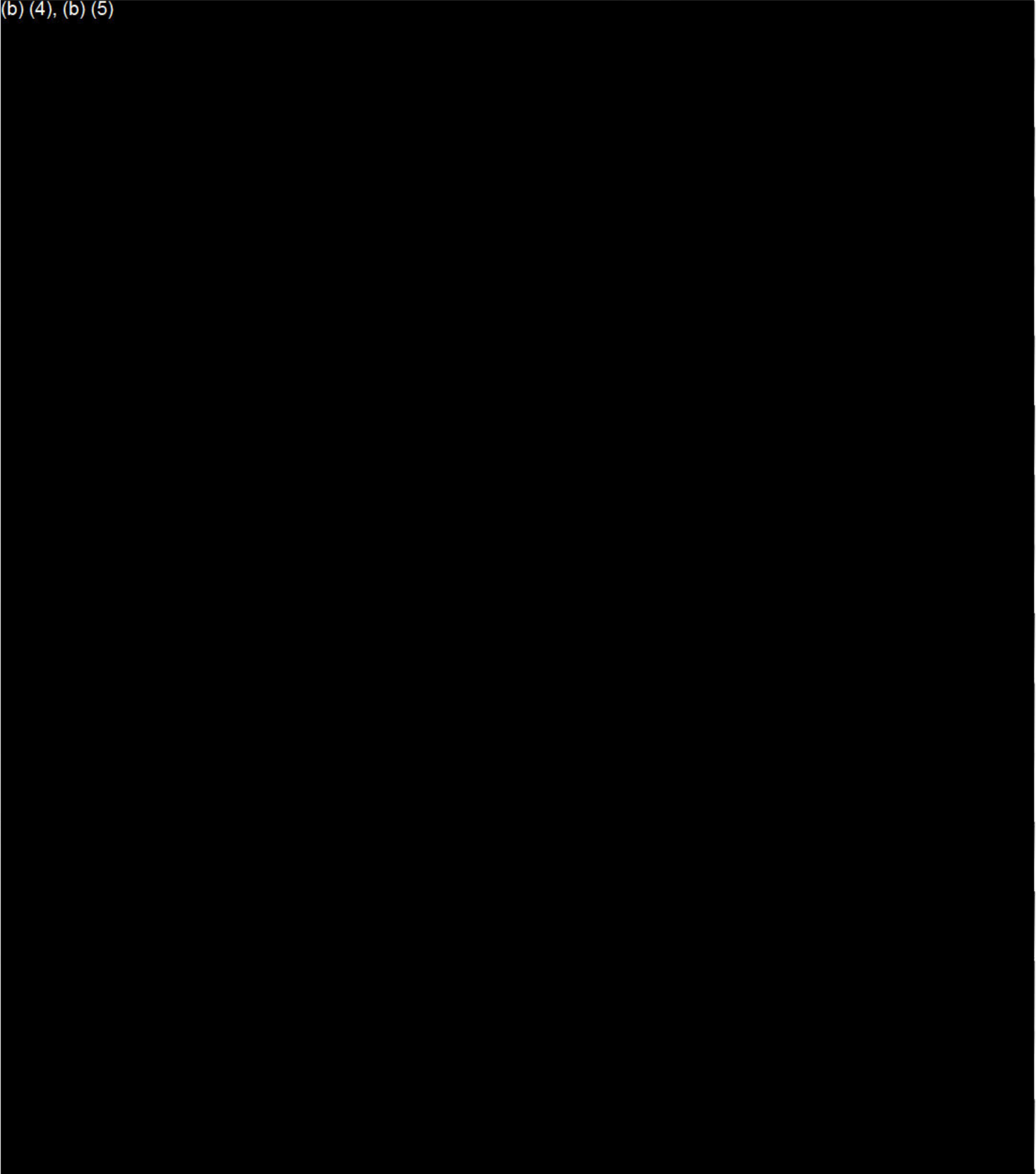
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(b) (4), (b) (5)

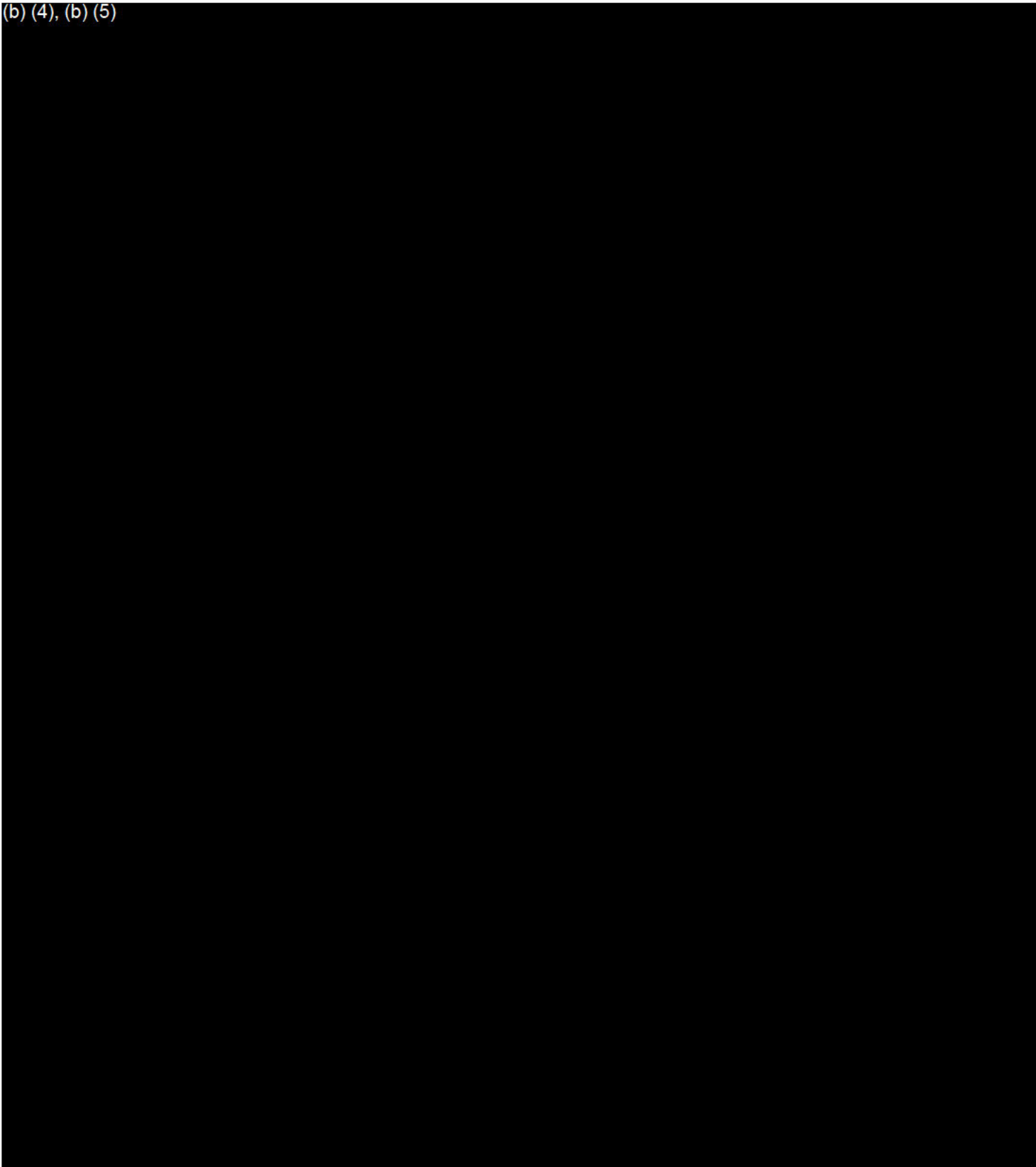


(b) (4), (b) (5)






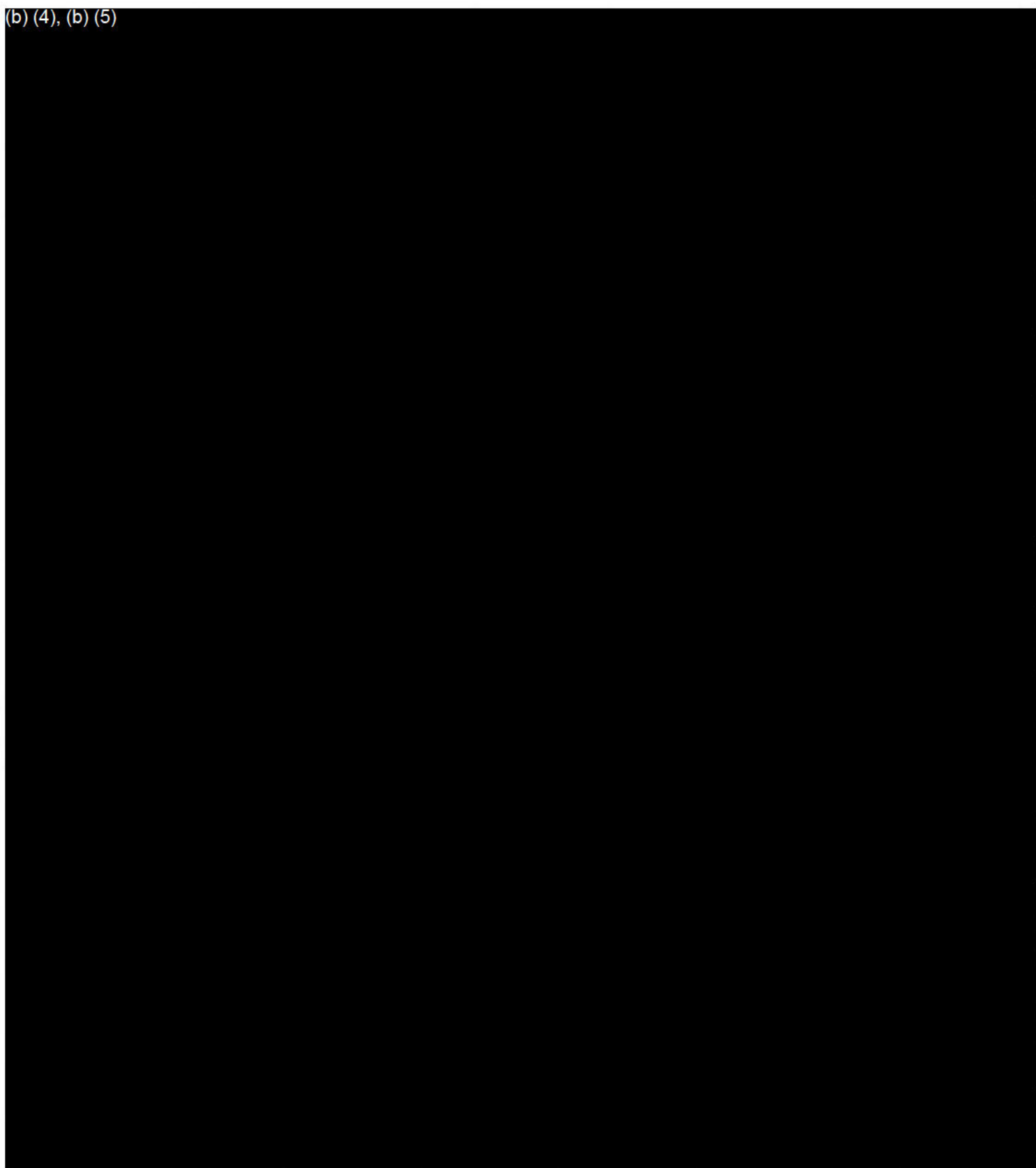
(b) (4), (b) (5)



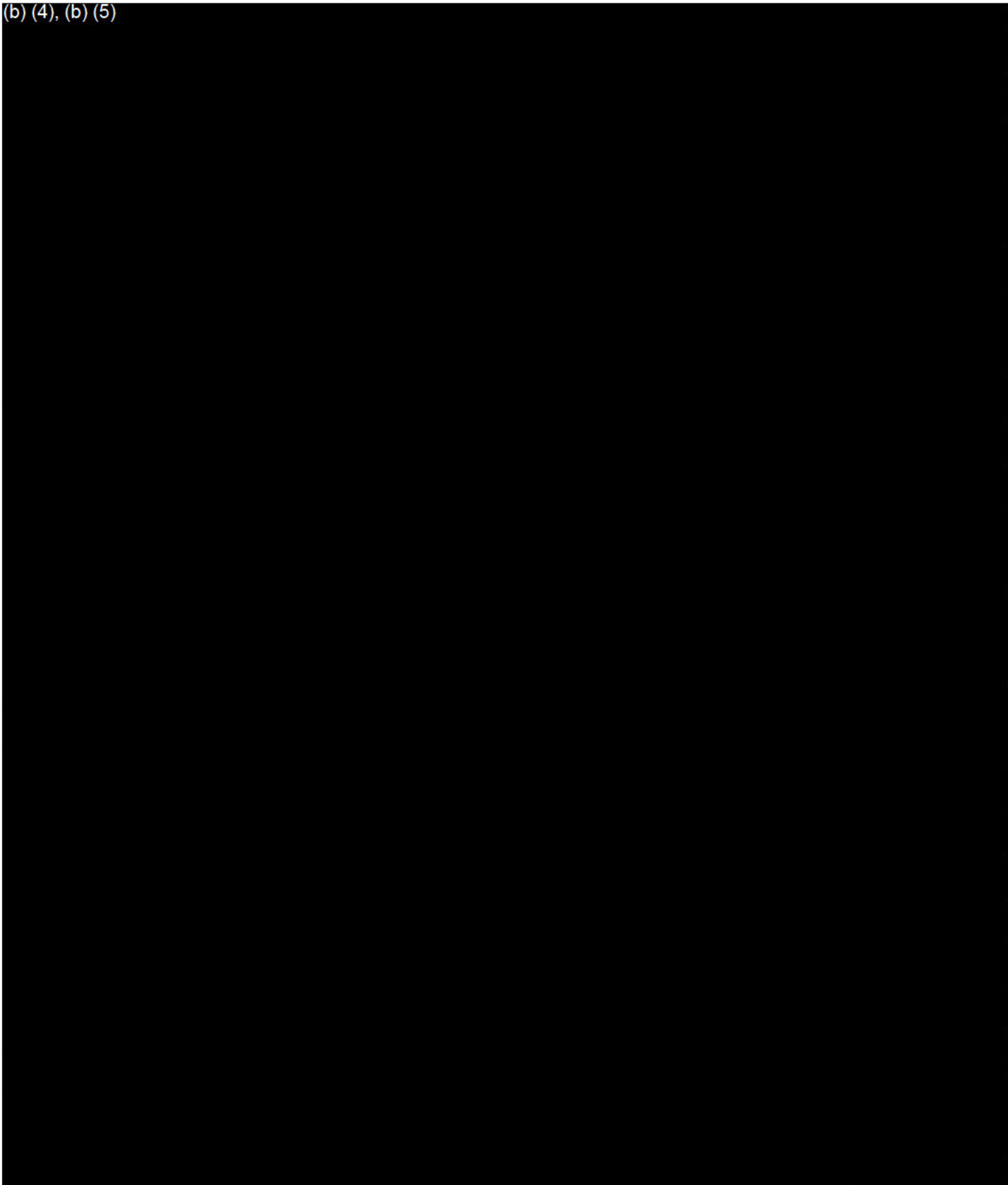
(b) (4), (b) (5)



(b) (4), (b) (5)

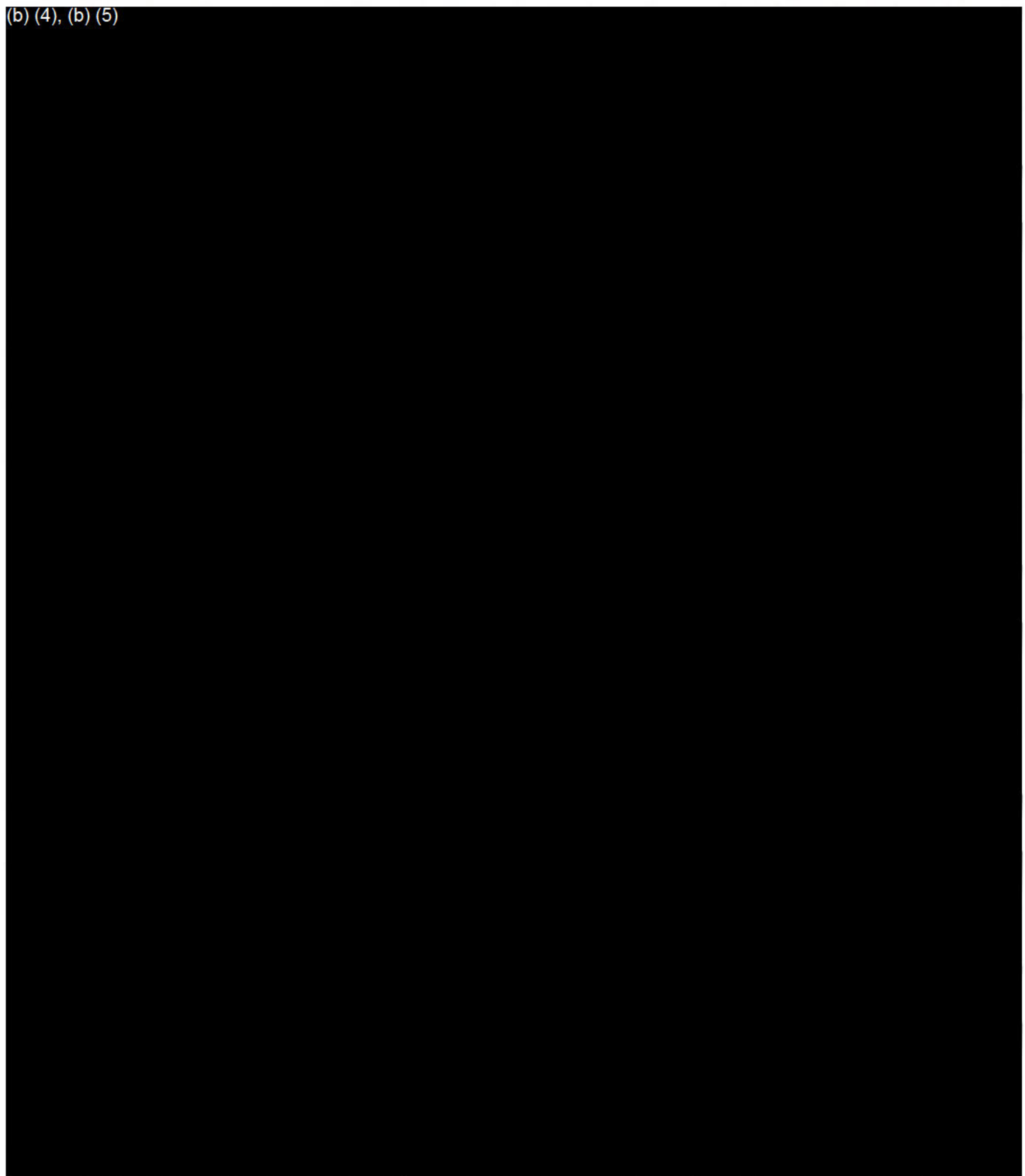


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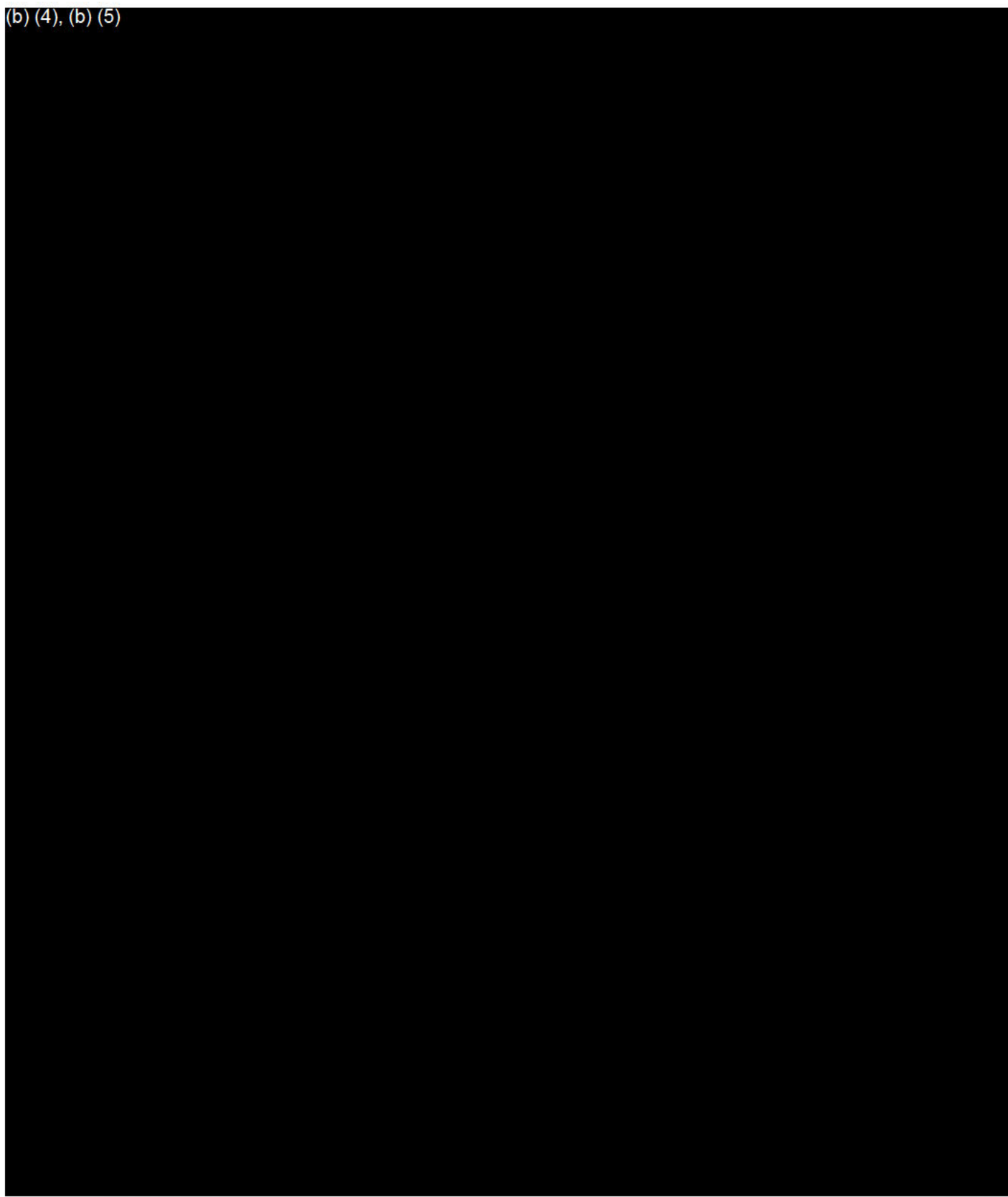




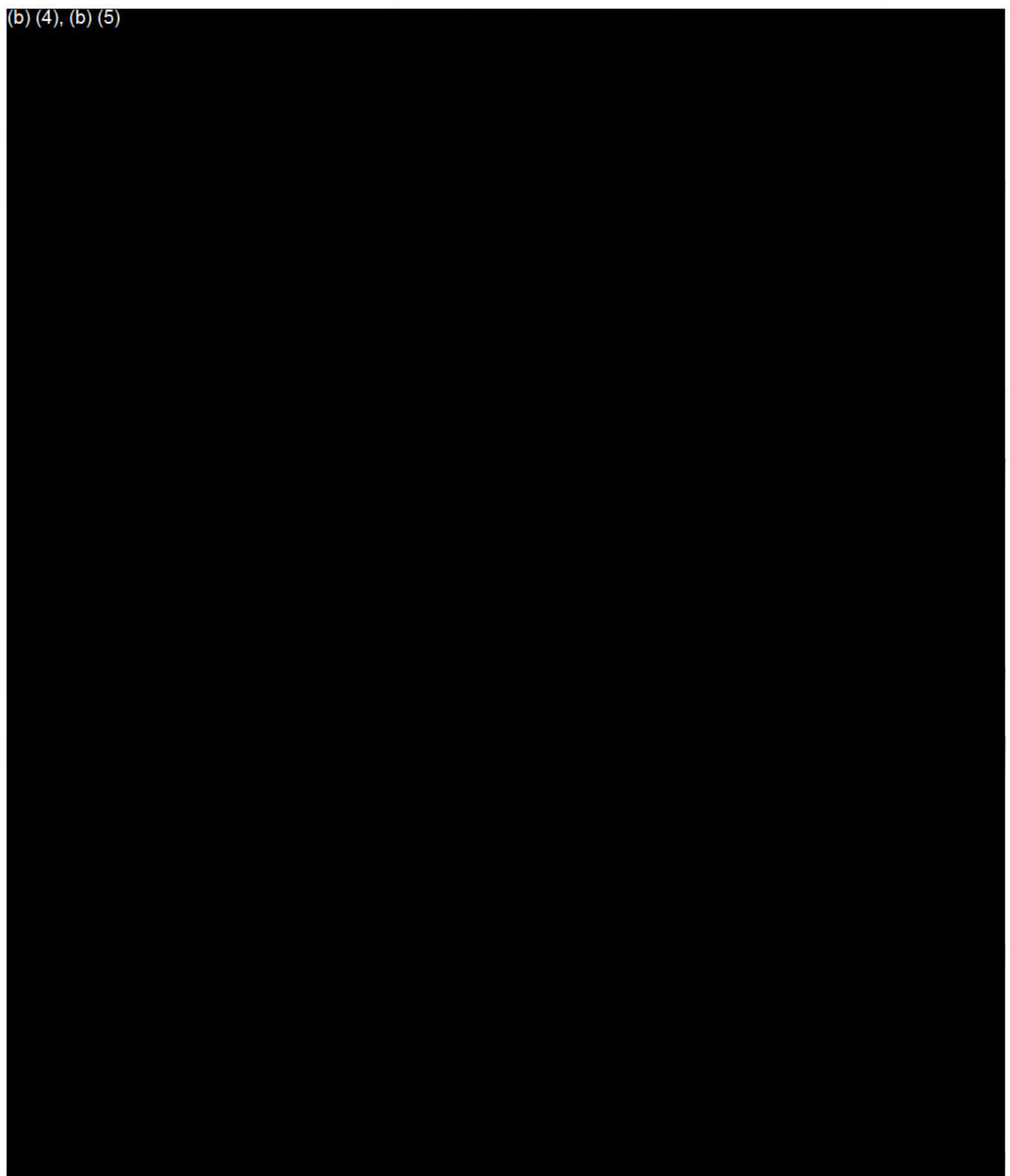
(b) (4), (b) (5)



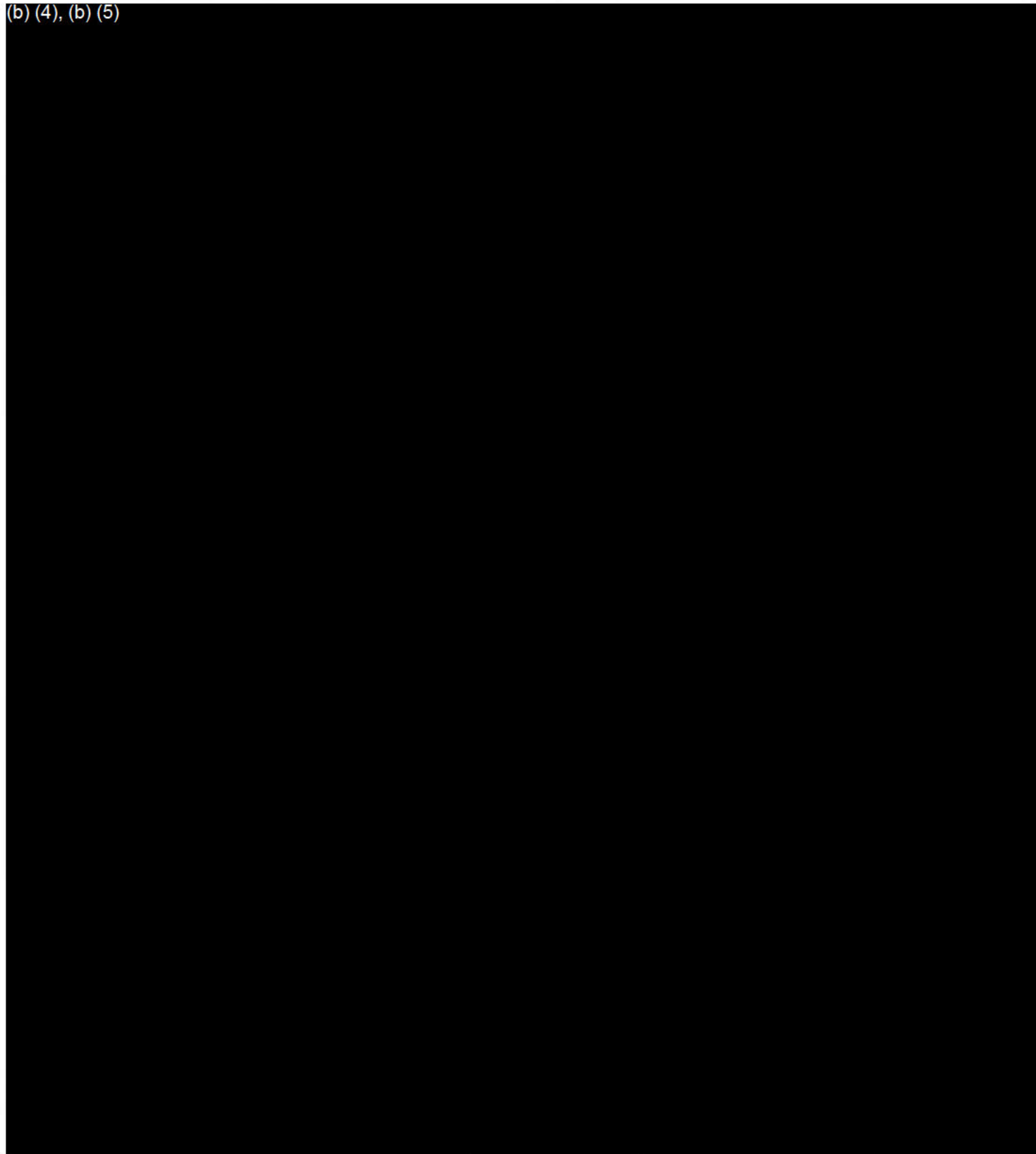
(b) (4), (b) (5)



(b) (4), (b) (5)

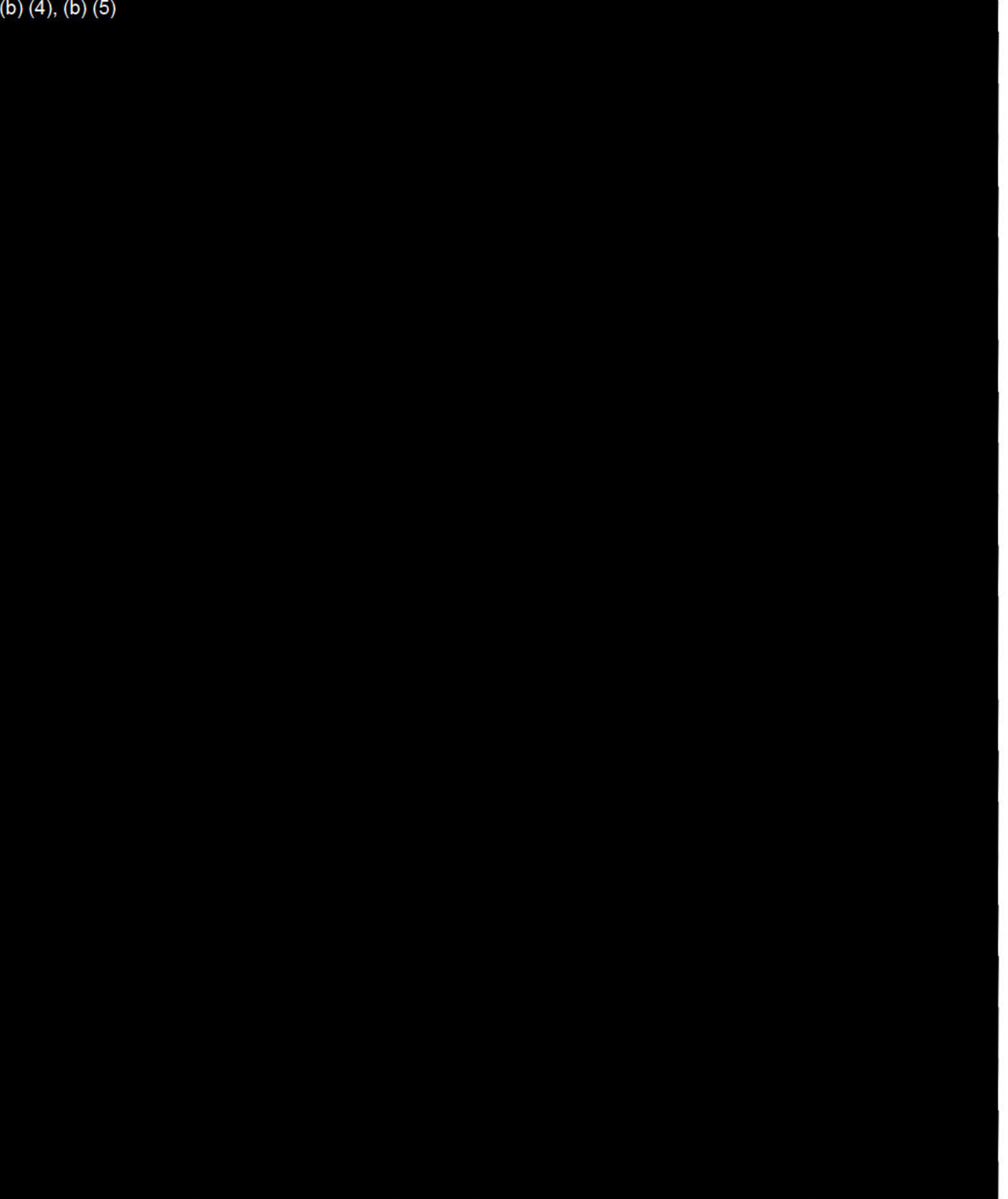


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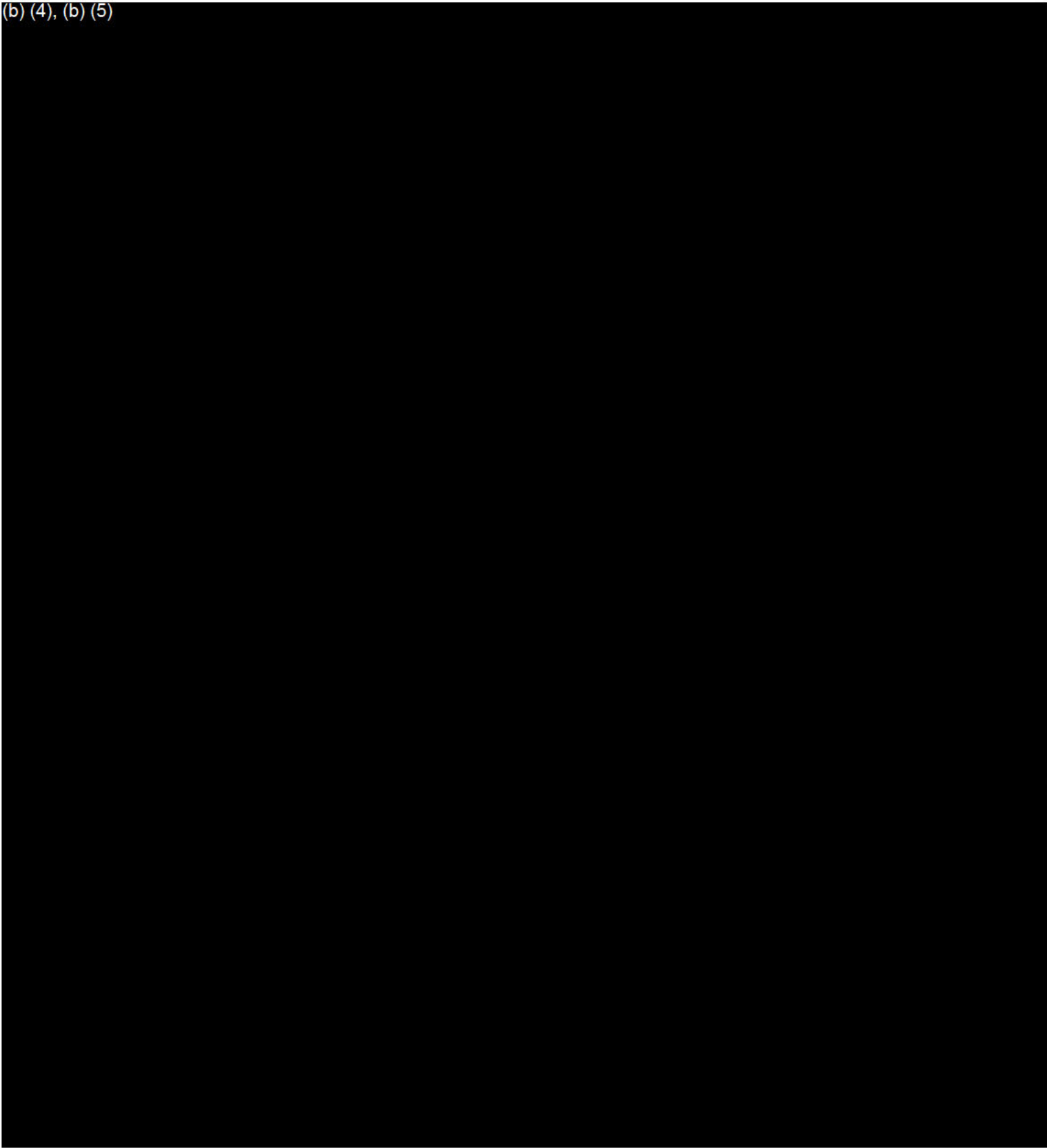




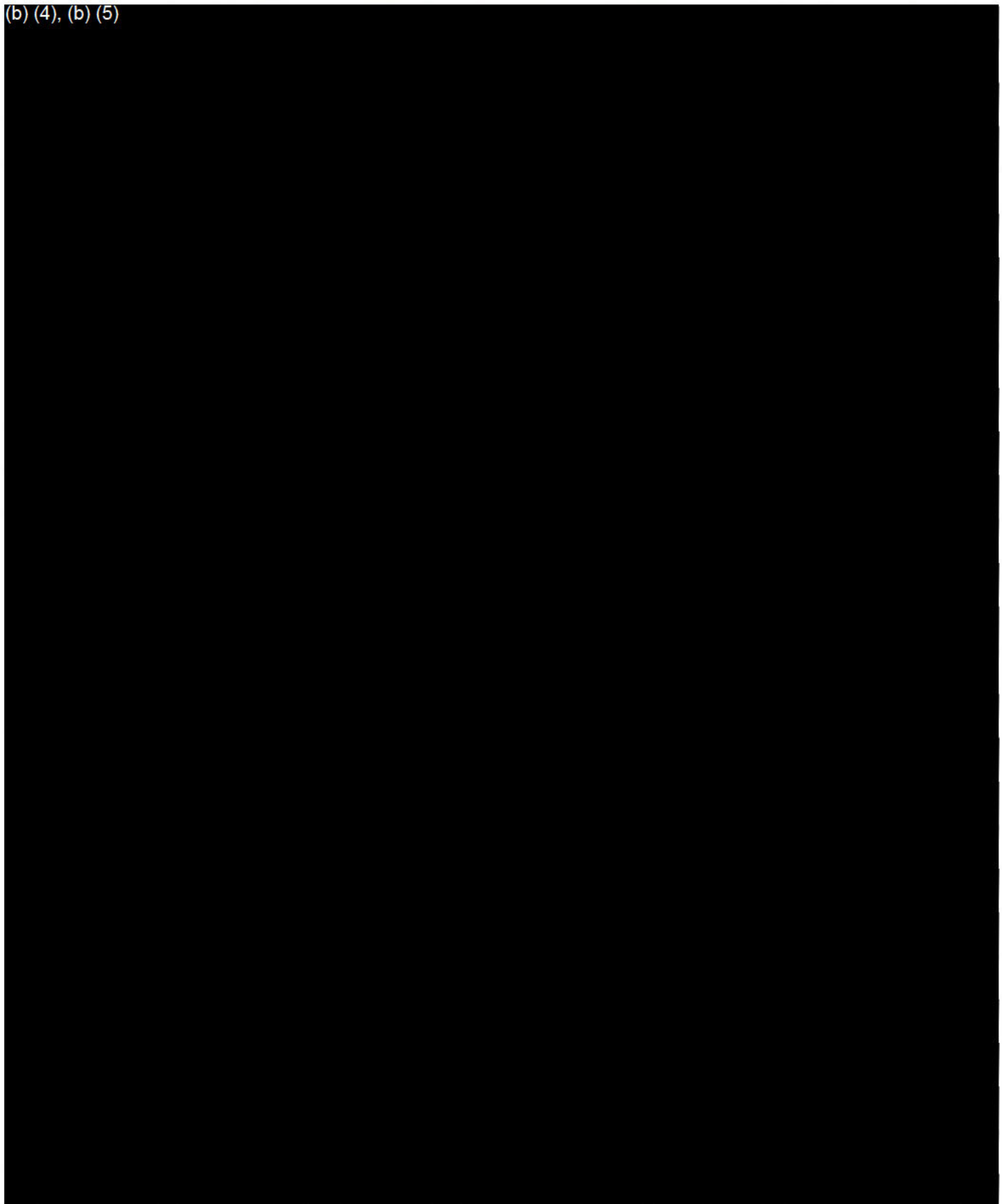
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(b) (4), (b) (5)



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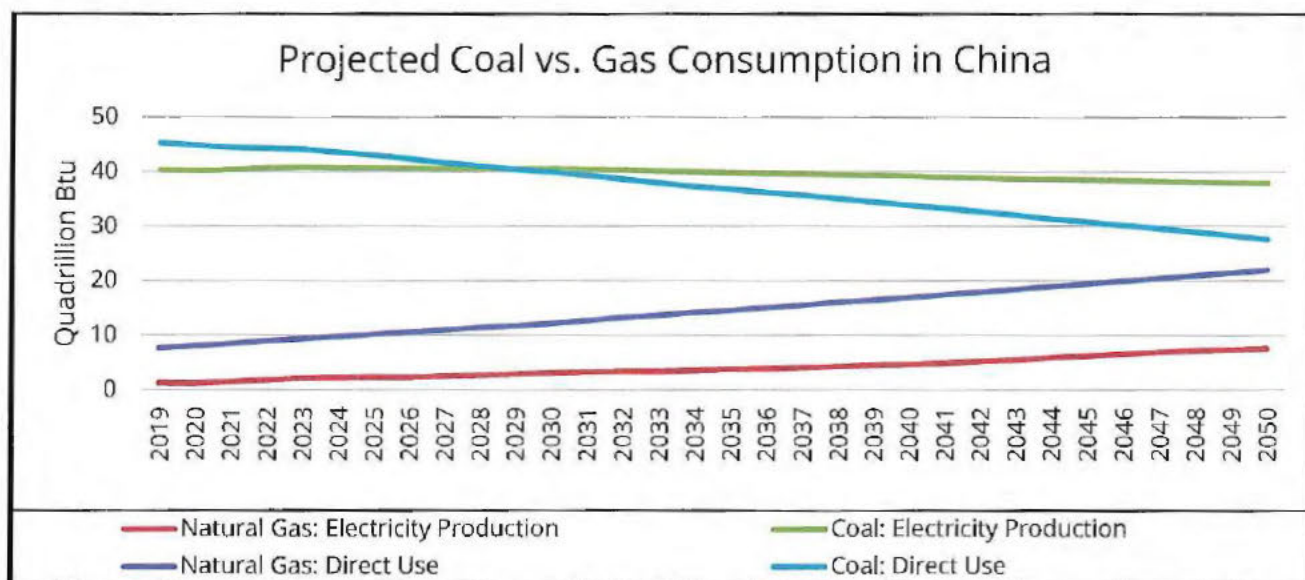


## VII. Summary of Technical and Environmental Analysis

### Technical Considerations:

The Project will comprise offshore upstream facilities connected to an onshore gas receiving and natural gas liquefaction facility. (b) (4), (b) (5)

By way of comparison, the combined LNG output of the two liquefaction trains could provide 75% of New Zealand's total energy needs, or cover the entire energy usage of Sri Lanka, Cambodia, and Papua New Guinea combined. The output may also be expected to partially supplant coal consumption, as shown below for China.



Source: U.S. Energy Information Administration

The LNG complex will be built on 6,288 hectares on the Afungi Peninsula in Mozambique. The Project is effectively co-located with the Rovuma LNG Project (Rovuma) that is under separate consideration by EXIM. While Rovuma LNG and Moz LNG have agreed to share the costs associated with the construction and operation of the Common and Shared Facilities, Moz LNG is expected to perform the work. AMA1, the Project Operator, is responsible for the design, procurement, construction and operation of the facilities. The Project has selected AP-C3-MR™ liquefaction technology licensed by Air Products & Chemicals, Inc. ("APCI"), headquartered in Allentown, Pennsylvania. APCI processes and heat exchangers have been utilized in over 80 percent of LNG trains around the world.



The Project will be implemented through a number of contracts; the principal contracts are an EPC contract for the onshore LNG Plant and an EPCI contract for the subsea gathering system and offshore gas trunklines. AMA1 will also place a number of purchase orders for company-supplied items associated with the offshore campaign. AMA1 has selected the Chiyoda, CB&I and Saipem Joint Venture ("CCSJ") as the preferred EPC contractor, and the TechnipFMC / Van Oord ("TVO") consortia as the EPCI contractor. (b) (4), (b) (5)

(b) (4), (b) (5)

AMA1 has established a reasonable preliminary plan for reliable and safe operation of the Project and will be supported via Long Term Service Agreements for major equipment with respective Original Equipment Manufacturers. The Project will use state-of-the-art telecommunications and control systems to integrate steady operation of the facilities from the wellhead to LNG carrier logistics. The overall Operation Plan for the Project appears to be comprehensive in scope and is based on the application of "best practices" in gas production and LNG operation.

(b) (4), (b) (5)

AMA1 has submitted a preliminary Acquisition List showing \$2.99 billion in US supply, and the Project will seek the maximum allowable Local Cost Support from the Bank. We note that the scope of supply for which EXIM support is being requested, is limited to Onshore and nearshore facilities only, which will be verified prior to any disbursement. (b) (4), (b) (5)

(b) (4), (b) (5)



#### **Environmental and Social Considerations:**

In accordance with EXIM's Environmental and Social Due Diligence Procedures and Guidelines ("**ESPG**"), AMA1 has been identified as a Category "A" transaction, requiring submittal of an Environmental and Social Impact Assessment ("**ESIA**"), reflecting the Project's status as a large-scale oil, gas, or liquefied natural gas development. A link to the ESIA was posted on EXIM's website on January 20, 2016 to provide access to interested parties.

The Project has attracted interest from Non-Governmental Organizations, including an article posted in September 2016 by Friends of the Earth ("**FoE**") on their website, and an April 2018 letter sent by FoE to certain ECAs, including EXIM, involving in the financing of the Project. The overall tone of the articles and letters appears to be critical of the Project rather than any specific

gaps or weaknesses that have been identified in the way that the Project is managing the key Environmental & Social ("E&S") issues. In the opinion of EXIM's staff, AMA1 systematically responded to all key E&S related issues raised in the letters and articles in question.

E&S due diligence was conducted by EXIM's Engineering and Environment Division and relied on information provided by the Project and the Lenders' Independent E&S Consultant ("IESC") via the E&S Due Diligence Report. The E&S evaluation of the Project indicates that the construction, operation and decommissioning of the Project will have impacts on people and the environment, which must be managed in a manner consistent with the eight World Bank IFC Performance Standards.

The Engineering and Environment Division has assessed Project plans, studies and assessments during their engagement on the Project over the last few years and is satisfied that the Project has worked hard to close out a number of actions identified by EXIM and the IESC, further aligning the Project with Lenders' requirements. A corporate-wide Anadarko Management System ("AMS") has been developed. The policies defined within Anadarko's corporate system are consistent with the requirements of Performance Standard ("PS") 1 – Assessment and Management of Environmental and Social Risks and Impacts.

PS 2 focuses on labor and working conditions. The main Industrial Relations (IR) plans are in place and continue to be implemented. Some recent revisions were made to key documents including the IR Policy which now applies to all AMA1 employees, contractors and their subcontractors. A review of these plans shows them to adequately address the PS2 requirements.

PS 3 deals with Resource Efficiency and Pollution Prevention. The Project has stated their commitment to follow the Sponsor's corporate management systems, Lender requirements and the laws and regulations of Mozambique. Although the Management Plans are not fully developed, the basic requirements for resource efficiency and pollution prevention practices are expected to be consistent with Performance Standard requirements and the Engineering and Environment Division expects to receive and review this plan prior to financial close.

PS 4 covers Community Health, Safety, and Security. Given the escalating threat to communities and the project from insurgent groups, staff recommends that the Project consider providing security around the resettlement and replacement lands, and that the Project coordinate assistance from an expert in similar conflict circumstances. A Memorandum of Understanding ("MoU") with the Ministries of Defense and Interior was established jointly with AMA1 and the adjacent Rovuma project. Under the MoU, 300 Government Security Forces were deployed to



the area and an additional 150 security personnel are scheduled to be deployed. EXIM's Engineering and Environment Division emphasizes that the potential risk of effects on both the Project and the local communities related to recent alleged insurgent attacks in the project area should not be underestimated.

Given the risk of malaria at the Afungi site and surrounding areas, AMA1, in association with the Rovuma project, has developed a Community Malaria Control Program which will need to be implemented as soon as possible.

Relevant to PS 5 (Land Acquisition and Involuntary Resettlement), the two adjacent LNG projects are associated with the physical relocation of 556 households that currently reside within the allocated project area, and the economic displacement of an additional 1,419 households. Since the security incidents in late February 2019, work at the Resettlement Village ("RV") site, and the resettlement program more broadly, has been on hold. This review finds that resettlement planning continues to be largely compliant with the requirements of PS 5 as the Project proactively addresses challenges as they arise.

To address the requirements of PS 6, which focuses on Biodiversity issues, a draft harmonized Critical Habitat Assessment ("CHA") has been developed. The scope of the CHA includes AMA1 as well as the adjacent Rovuma project, and addresses onshore, nearshore and offshore Areas of Assessment. The CHA has identified three Critical Habitat areas, plus areas of both Natural Habitat and Modified Habitat in the area of project influence. No legally protected areas have been identified within or directly overlapping the boundaries of the project sites.

The collective research conducted by the Project has determined that the local area is not home to any Indigenous Peoples groups as defined by PS 7. Therefore, this Performance Standard is not applicable to this Project. To address PS 8 (Cultural Heritage), the Project has prepared a Cultural Heritage Management Plan ("CHMP") that is being reviewed by the National Directorate of Cultural Heritage. EXIM staff has determined that the CHMP is aligned the PS8 requirements.

Although not currently in a position of full compliance with all Performance Standards, from the information reviewed, discussions held, and commitments made to date, the Engineering and Environment Division expects that the Project will continue to take active steps to bring the project into compliance. Residual points of non-compliance will be addressed in an enforceable E&S Action Plan ("ESAP") that will be prepared and incorporated into the finance documents at the time of financial close. The ESAP will specify action items, milestones and due dates that must be met.

In accordance with Section 7 of the U.S. Endangered Species Act, the Engineering and Environment Division and Office of the General Counsel are engaged in a Formal Consultation with NOAA-NMFS in the preparation of a Biological Assessment ("BA"). As a requirement of the BA, AMA1 is undertaking additional noise impact assessment work for the nearshore construction activities. Completion of the noise study and subsequent development of a noise management plan is expected to delay the completion of the Lenders' E&S due diligence per the IFC Performance Standards.

The Project will create a range of positive economic impacts at the local, regional, and national levels, including income growth (linked to employment and procurement opportunities), capacity development and increased Government revenue. A national content plan has been finalized with the Government with specific commitments on hiring and training of national and local workforce.

Security of both the Project and local communities is a key area of concern, considering ongoing security incidents in the surrounding area. AMA1's security is at a level of high alert. The Project's Security Consultant's reports indicate that the insurgency is highly likely to target the project throughout the project's lifecycle and outline several focus areas and proposed mitigation measures for consideration, including the recommendations discussed above related to Performance Standard 4.

It is the opinion of the Engineering and Environment Division that AMA1 has achieved significant progress in meeting the ESPG including the IFC Performance Standards and is currently well positioned in terms of fulfilling the Lender's environmental and social requirements, given the current stage of Project development.

#### **VIII. Summary of Legal Analysis and Compliance Criteria**

The legal basis for implementation of the Project was established under the Area 1 Exploration Production Concession Contract ("**Area 1 EPCC**") with the Government of Mozambique and the Decree Law, passed by the Council of Ministers of Mozambique for the benefit of the Area 1 and Area 4 Concessionaires within the Rovuma Basin. The Area 1 EPCC establishes the rights and obligations of the Concessionaires to explore, produce and sell hydrocarbons from Area 1. The Decree Law broadens the rights of the Area 1 and Area 4 Concessionaires to develop, finance and implement their respective projects, extends certain legal protections, such as providing stability of the fiscal regime during the life of the projects, and imposes certain obligations on the Area 1 and Area 4 Concessionaires.



Under the terms of the JOA among all of the Area 1 Concessionaires, Anadarko, through its affiliated Concessionaire (AMA1), will serve as the operator, responsible for leading the development, financing, construction and operations of the Project. The JOA provides the commercial 'blueprint' for how the Concessionaires will carry out the funding and implementation of the Project.

The subject financing contemplates project financing for costs related to the onshore LNG activities, which will include: the LNG plant with two liquefaction trains (b) (4), (b) (5) and associated on-shore facilities.<sup>12</sup> The majority of these activities will be constructed pursuant to one EPC contract for the onshore LNG plant and related facilities. The EPC Contract (b) (4), (b) (5)

**Iran Sanctions:** Pursuant to Section 18 (Prohibition on Financing for Certain Persons Involved in Sanctionable Activities with Respect to Iran) of the Export-Import Bank Reauthorization Act of 2012 (the 2012 Reauthorization Act):

(a) The Borrower, Mozambique LNG1 Financing Company (UAE-ADGM), as well as its holding company, Concessionaire Holdco SPE (UAE) made the certifications required by paragraph (a) (Prohibition on Financing for Persons That Engaged in Certain Sanctionable Activities) of Section 18 of the Reauthorization Act.

(b) Based on Staff's due diligence, Staff has determined that for purposes of paragraph (b) (Prohibition on Financing) of Section 18 of the 2012 Reauthorization Act, there is no controlling sponsor of the Borrower or Concessionaire Holdco SPE.

Based on Staff's due diligence, including representations and information received from the entities identified above, a review through the CRTI process of each of them and the other companies known to be owned or controlled by them (if any), and comparison with the list of entities sanctioned under section 5(a) of the Iran Sanctions Act, none of such entities is subject to sanctions under section 5(a) of the Iran Sanctions Act.

**CRTI:** As an additional part of Staff's due diligence efforts, all significant parties associated with the transaction were reviewed in accordance with EXIM Bank's Character, Reputational, and Transaction Integrity ("CRTI") Due Diligence Procedures. (b) (4), (b) (5)

<sup>12</sup> (b) (4), (b) (5)

(b) (5)

**Economic Impact:**

Policy staff has conducted a detailed economic analysis of this transaction and finds the transaction will have a likely net positive effect on the U.S. balance of trade of about \$2.31 billion dollars. Please see appendix I for the detailed analysis.

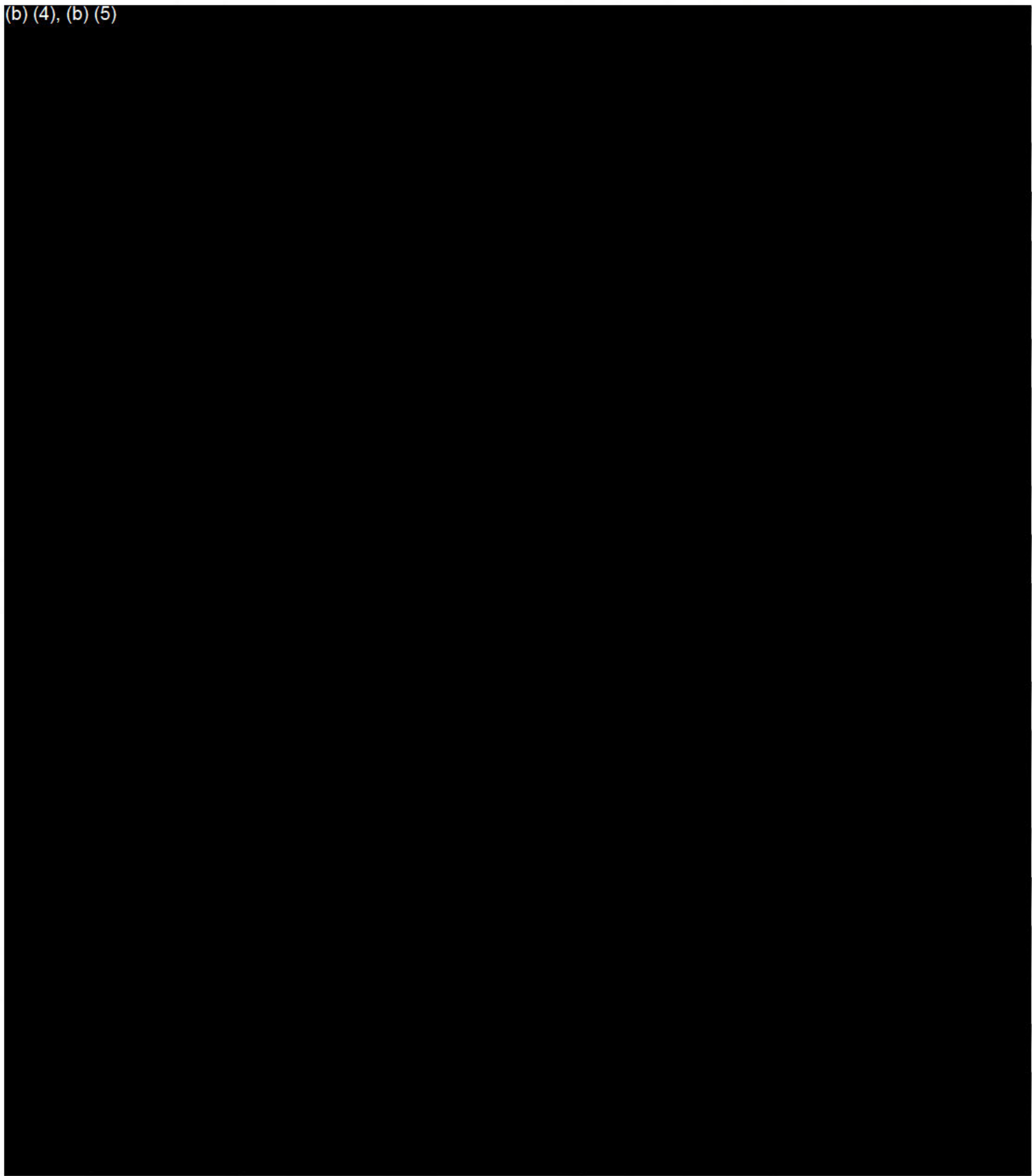
**OECD Sustainable Lending Guidelines:**

In November 2016, the OECD Export Credit Group of which the United States is a member adopted the "Principles and Guidelines to Promote Sustainable Lending in the Provision of Officially Supported Export Credits." In May 2018, the OECD Council (of which the United States is a member) reaffirmed OECD members' support for this agreement and elevated its political stature to an OECD Council Recommendation (the "**OECD Recommendation**"). In the OECD Recommendation, the OECD Council "recommends" that, when deciding to provide official export credits with a repayment term of one year or more to public obligors or publicly guaranteed obligors in lower income countries, OECD members "take into account" IMF and WB country-specific debt sustainability analyses as well as IMF and WB "prevailing limits on public sector non-concessional borrowing." More specifically, in countries such as Mozambique that have a limit of zero non-concessional debt in place, the OECD Council recommends that official export credit "support should not be provided."

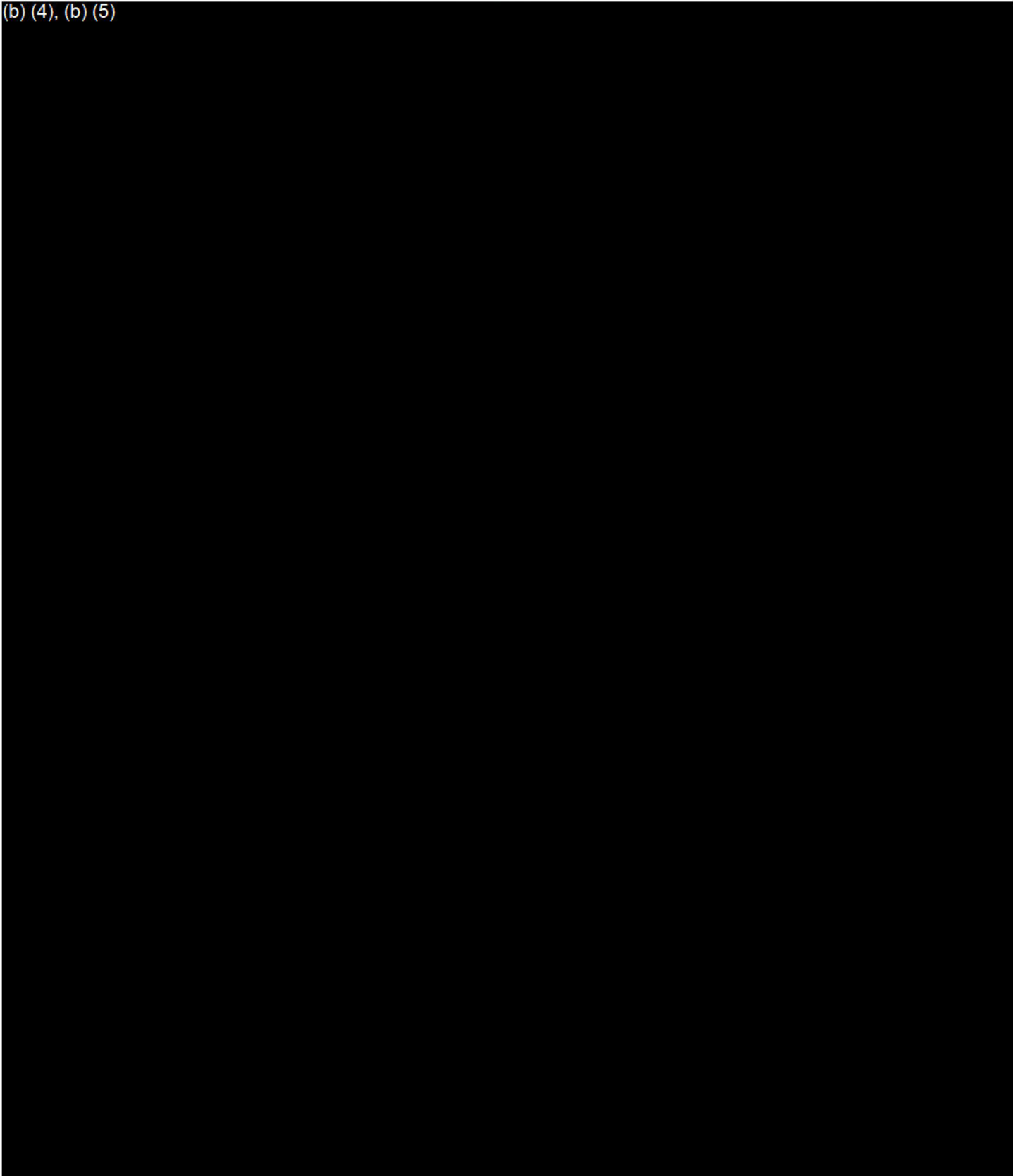
(b) (4), (b) (5)

Staff has determined that EXIM is in full compliance with the OECD Recommendation.

(b) (4), (b) (5)



(b) (4), (b) (5)



**X. Recommendation**

Based on the Project's ability to service debt, high-quality gas resource, credit structure, strong project economics, moderate leverage and a supportive legal and regulatory framework, Staff has determined that the transaction provides a reasonable assurance of repayment and recommends approval, subject to NAC and Congressional review.



## **XI. Appendices**

**Appendix A: Portfolio Analysis and Program Budget Summary**

**Appendix B: Credit Evaluation**

**Appendix C: Compliance Checklist**

**Appendix D: Additionality Checklist**

**Appendix E: Engineering & Environmental Evaluations**

**Appendix E1: Golfinho-Atum Marketable Reserves**

**Appendix F: Risk Rating Sheet, Exposure Fee Calculation**

**Appendix G: Country Update**

**Appendix H: Mozambique Security Summary Analysis**

**Appendix I: Economic Impact Analysis**

**Appendix J: Legal Analysis and Special Conditions**

**Appendix K: Collateral/Security Analysis**

**Appendix L: APS Action Memo**

**Appendix M: Principal Lending Terms, Intercreditor Voting and Debt Service Undertakings**

**Appendix N: Financial and Related Highlights for Area 1 Mozambique LNG Sponsors**

**Appendix O: Major Project Participants, Company Summaries**

**Appendix P: Glossary**

## Appendix A: Portfolio Analysis and Program Budget Summary

## Export-Import Bank: Office of the Chief Financial Officer

## Transaction Summary: AP087889XX

Obligor	Mozambique LNG 1
Program	Financing Company
Country	Long Direct Loan
Industry	Mozambique
Number of Repayments	Oil & Gas
Interest Rate	25 Semi-Annually Payments
Payment Style	CIRR
Exposure Fee	Straight Line
Budget Cost Level	(b) (4)
Financing Amount Excluding Fees	(b) (4)
Financing Amount Including Fees	(b) (4)
	\$5,000,000,000.00

## Program Budget Calculation Summary

## Revenue Components

NPV of Fees

NPV of Interest Margin

NPV of Total Revenue

## Default Components

NPV of Default

Total Program Budget

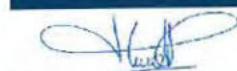
(b) (4)

## Program Budget Disbursement

The chart shows the estimated program budget disbursement for this transaction. Please note, for negative program budget transaction, the program budget is credited to Ex-Im Bank at the time of disbursement.

Disbursement	% Disbursed	Negative Program Budget
Year 1: 2020	(b) (4)	(4)
Year 2: 2021		
Year 3: 2022		
Year 4: 2023		
Year 5: 2024		

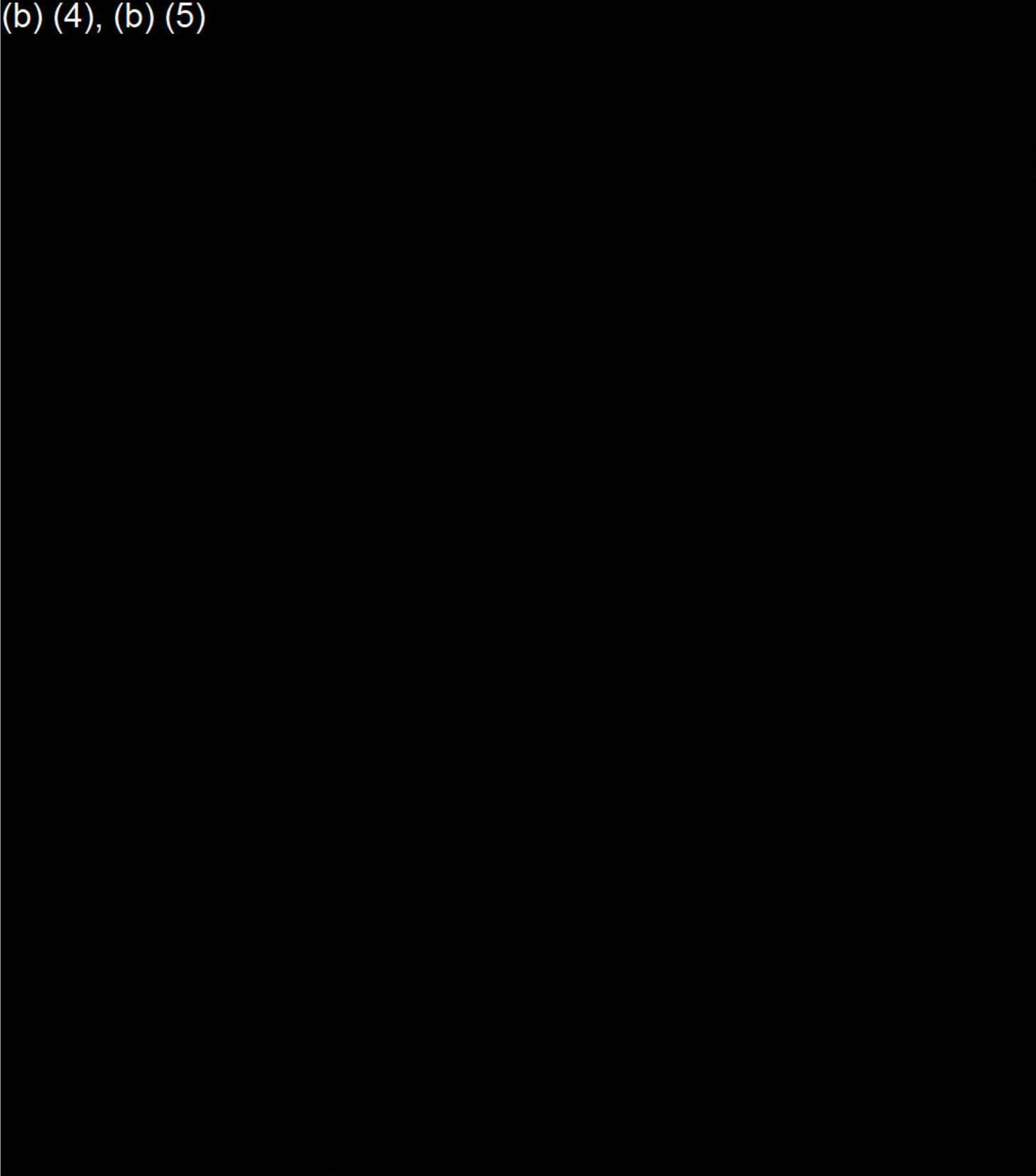
## OCFO Approval



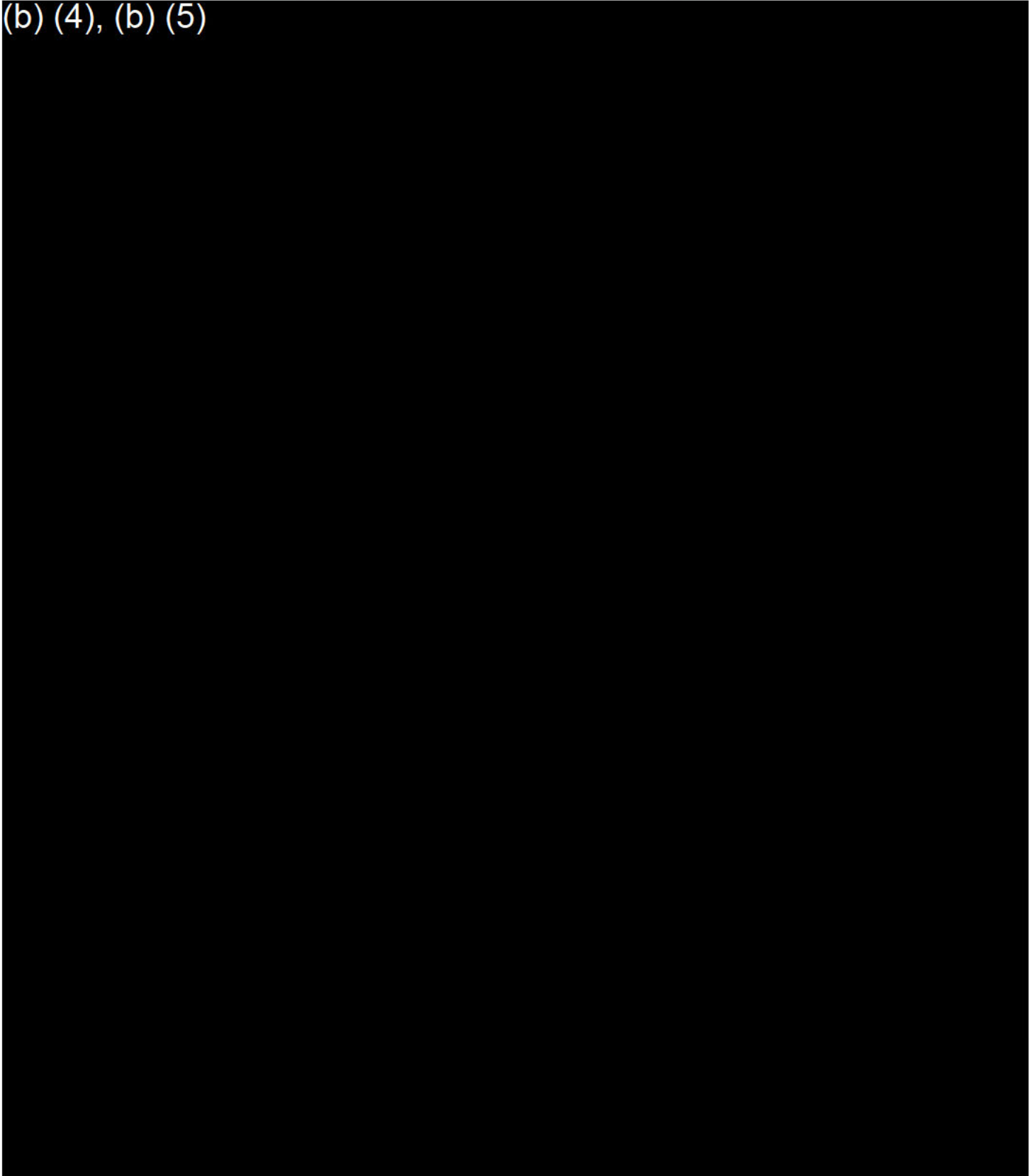
Digitally signed by NATHALIE  
HERMAN  
Date: 2019.08.14 08:42:52 -04'00'

OCFO Signature  
Comments:

(b) (4), (b) (5)



(b) (4), (b) (5)



## EXIM Bank - Mozambique Exposure

June 30, 2019

(in millions)

The Bank has \$0.0 million in exposure to Mozambique which is 0.0% of total Bank exposure (\$52.2 billion).  
The total financed amount for AP087889XX is \$5,000 million, which is N/A of Mozambique exposure.

Total Mozambique Exposure	\$0	100%
AP087889XX	\$5,000	N/A

## Exposure Distribution

Outstanding	\$0	N/A
Undisbursed	\$0	N/A

0% 20% 40% 60% 80% 100%

## Exposure by Term

Long Term	\$0	N/A
Medium Term	\$0	N/A
Short Term	\$0	N/A

0% 20% 40% 60% 80% 100%

## Exposure by Credit Risk Levels

1 to 4 (Good)	\$0	N/A
5 to 8 (Average)	\$0	N/A
9 to 11 (Problem)	\$0	N/A
WC & ST MB (Unrated)	\$0	N/A

	Mozambique	AP087889XX
Portfolio Credit Risk Level	N/A	7.00

0% 20% 40% 60% 80% 100%

## Exposure by Risk Type

Sovereign	\$0	N/A
Non-Sovereign	\$0	N/A

0% 20% 40% 60% 80% 100%

## Industries

Aircraft	\$0	N/A
Manufacturing	\$0	N/A
Oil & Gas	\$0	N/A
Power Projects	\$0	N/A
Other	\$0	N/A

0% 20% 40% 60% 80% 100%

## Top 5 Obligor

	BCL	Exposure
N/A		\$0
N/A		\$0
N/A		\$0
N/A		\$0
N/A		\$0
All Other		\$0

Top 5  
Obligors  
0%

0% 20% 40% 60% 80% 100%

## Mozambique Default Rate

March 2019	0.00%
March 2018	0.00%

0% 1% 2%



## EXIM Bank - Oil &amp; Gas Exposure

June 30, 2019

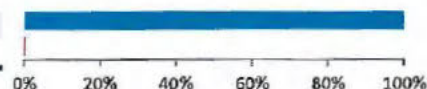
(in millions)

The Bank has \$8,340 million in exposure to Oil & Gas which is 16% of total Bank exposure (\$52.2 billion).  
The total financed amount for AP087889XX is \$5,000 million, which is 60% of Oil & Gas exposure.

Total Exposure	\$8,340	100%
AP087889XX	\$5,000	60%

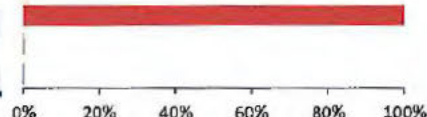
## Exposure Distribution

Outstanding	\$8,327	100%
Undisbursed	\$13	0%



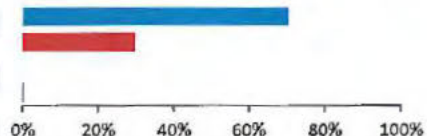
## Exposure by Term

Long Term	\$8,328	100%
Medium Term	\$4	0%
Short Term	\$7	0%



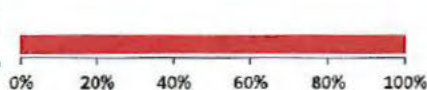
## Exposure by Credit Risk Levels

1 to 4 (Good)	\$5,852	70%
5 to 8 (Average)	\$2,481	30%
9 to 11 (Problem)	\$0	0%
WC & ST MB (Unrated)	\$7	0%
	Oil & Gas	AP087889XX
Portfolio Credit Risk Level	4.03	7.00



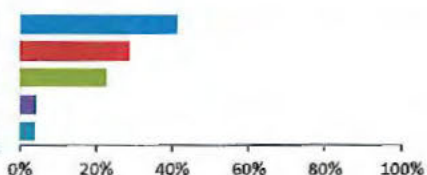
## Exposure by Risk Type

Sovereign	\$0	0%
Non-Sovereign	\$8,340	100%



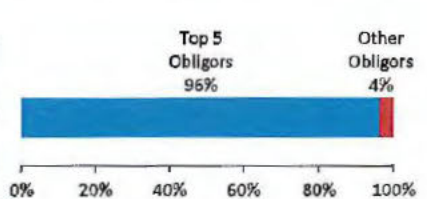
## Countries

Mexico	\$3,423	41%
Australia	\$2,389	29%
Papua New Guinea	\$1,897	23%
Turkey	\$337	4%
Other	\$294	4%



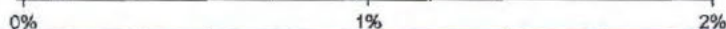
## Top 5 Obligators

	BCL	Exposure
Petroleos Mexicanos	4	\$3,219
Australia Pacific Lng Csg Processing Pty Limited	3	\$2,389
Papua New Guinea Lng Global Company Ldc	5	\$1,897
Star Rafineri A.S.	6	\$337
Central Panuco S.A De C.V.	6	\$202
All Other		\$295




## Oil &amp; Gas Default Rate

March 2019	0.00%
March 2018	0.00%





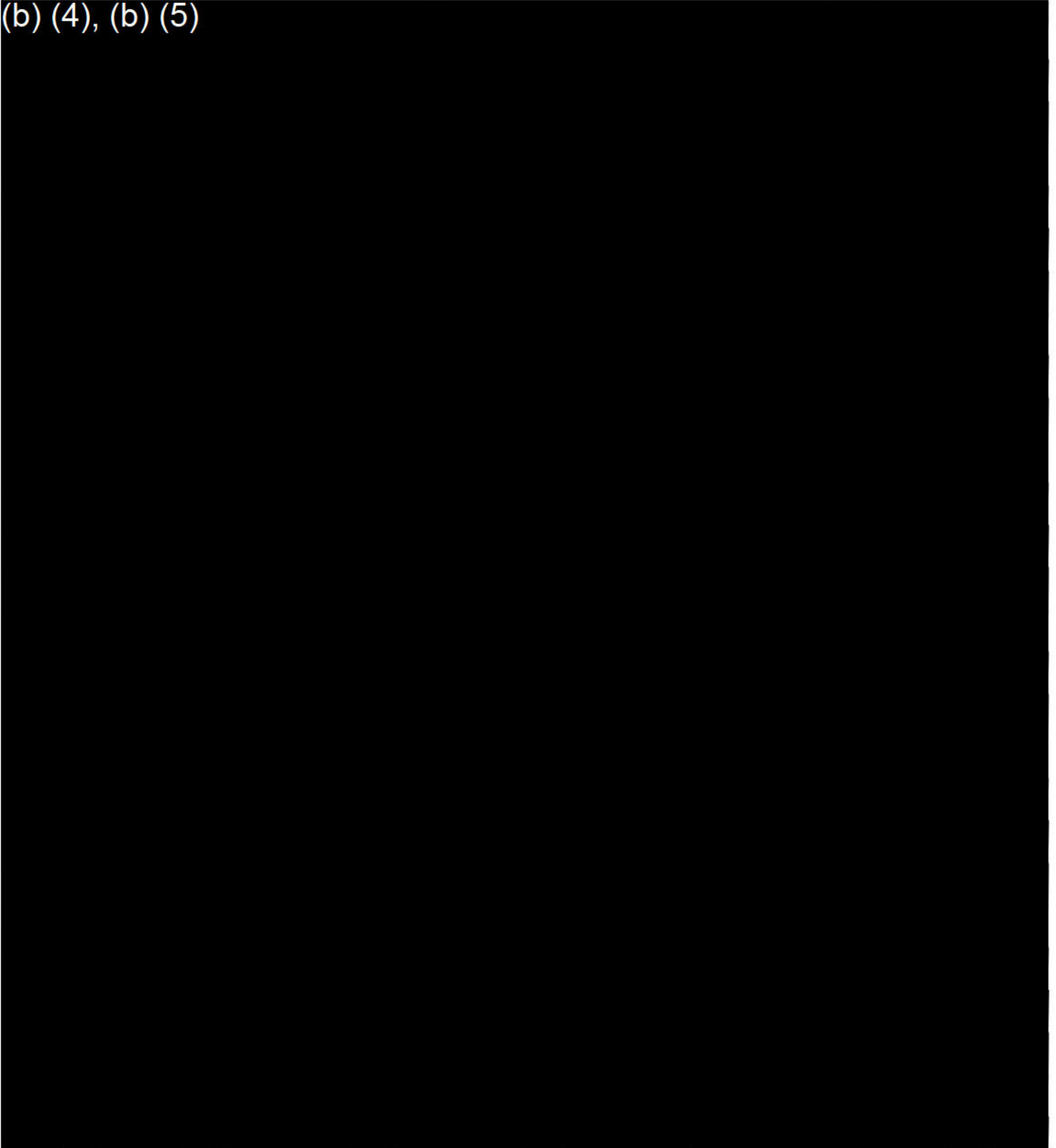
(b) (4), (b) (5)



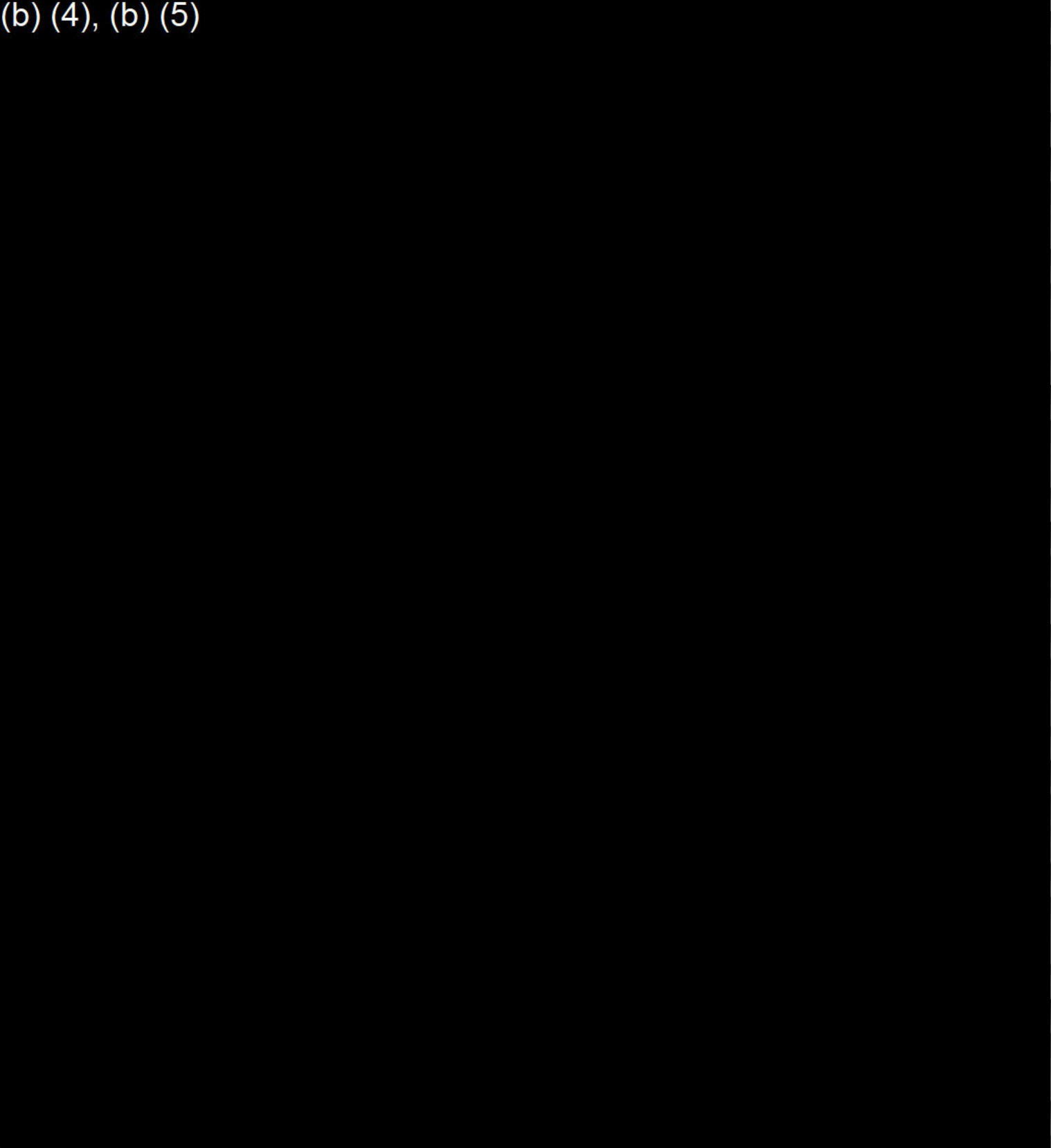
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<sup>13</sup> This analysis is based on the June 2019 Model. The results may change in the future when the Model is updated to reflect finalization of the financing and other assumptions.

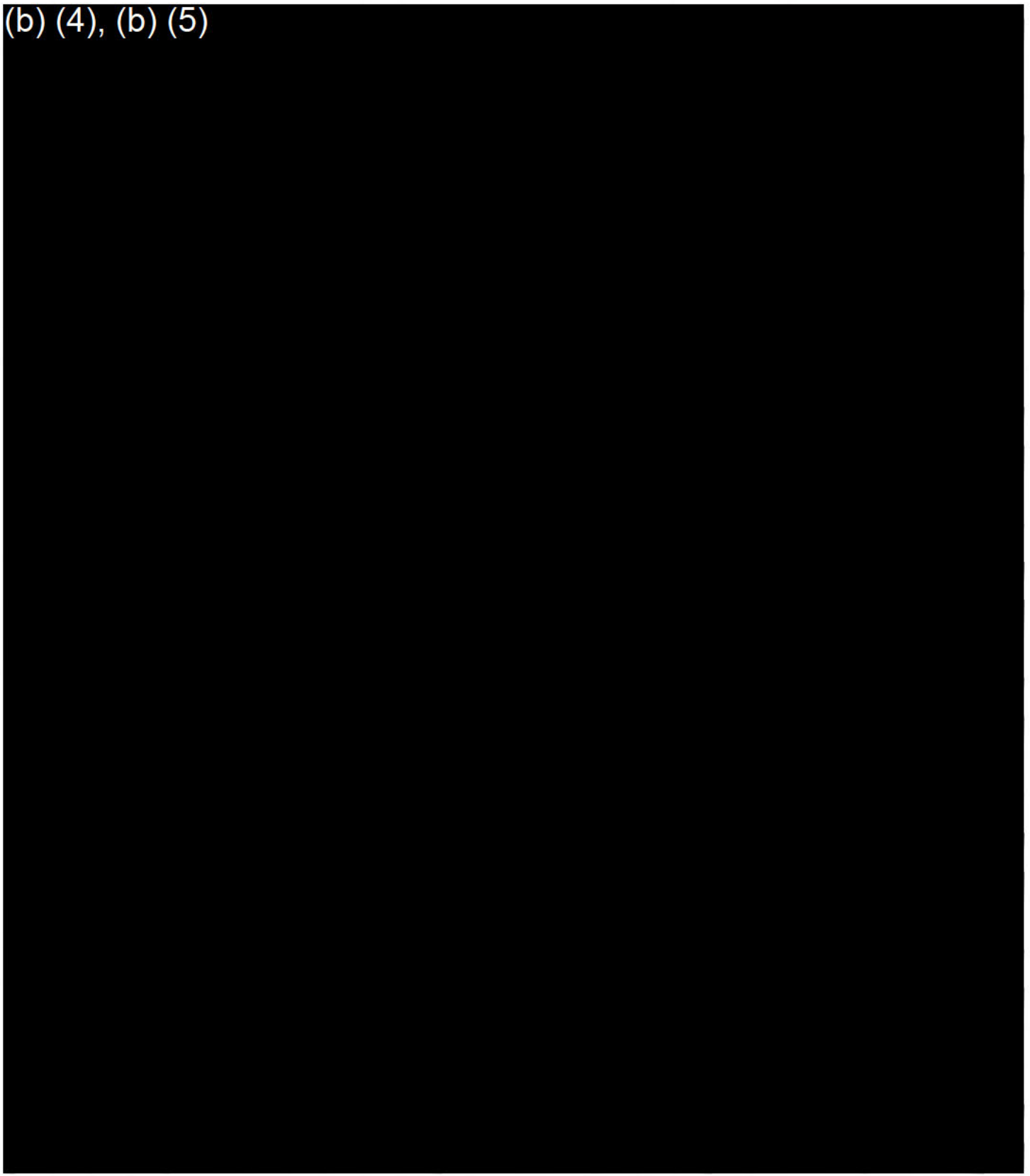
(b) (4), (b) (5)



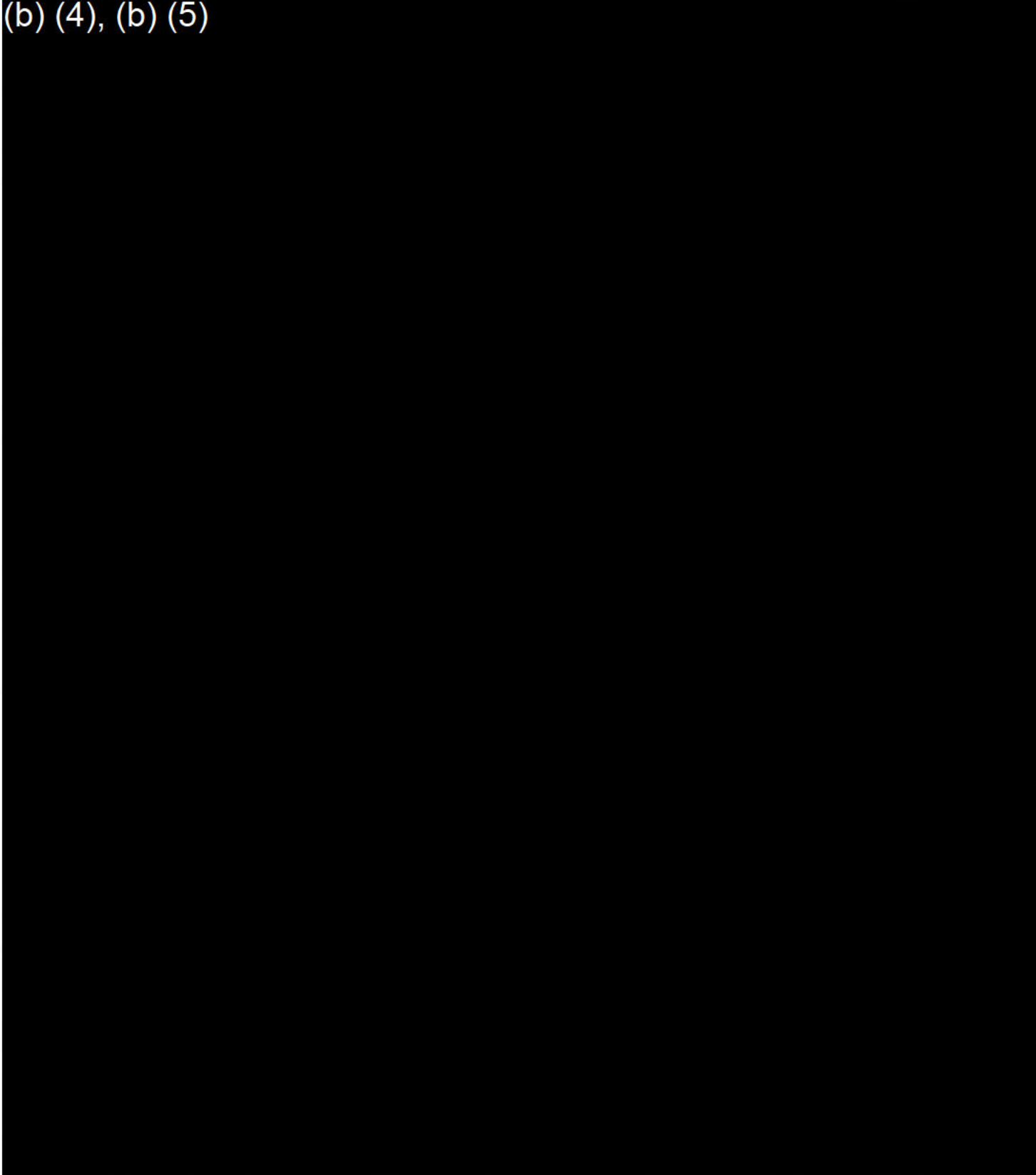
(b) (4), (b) (5)



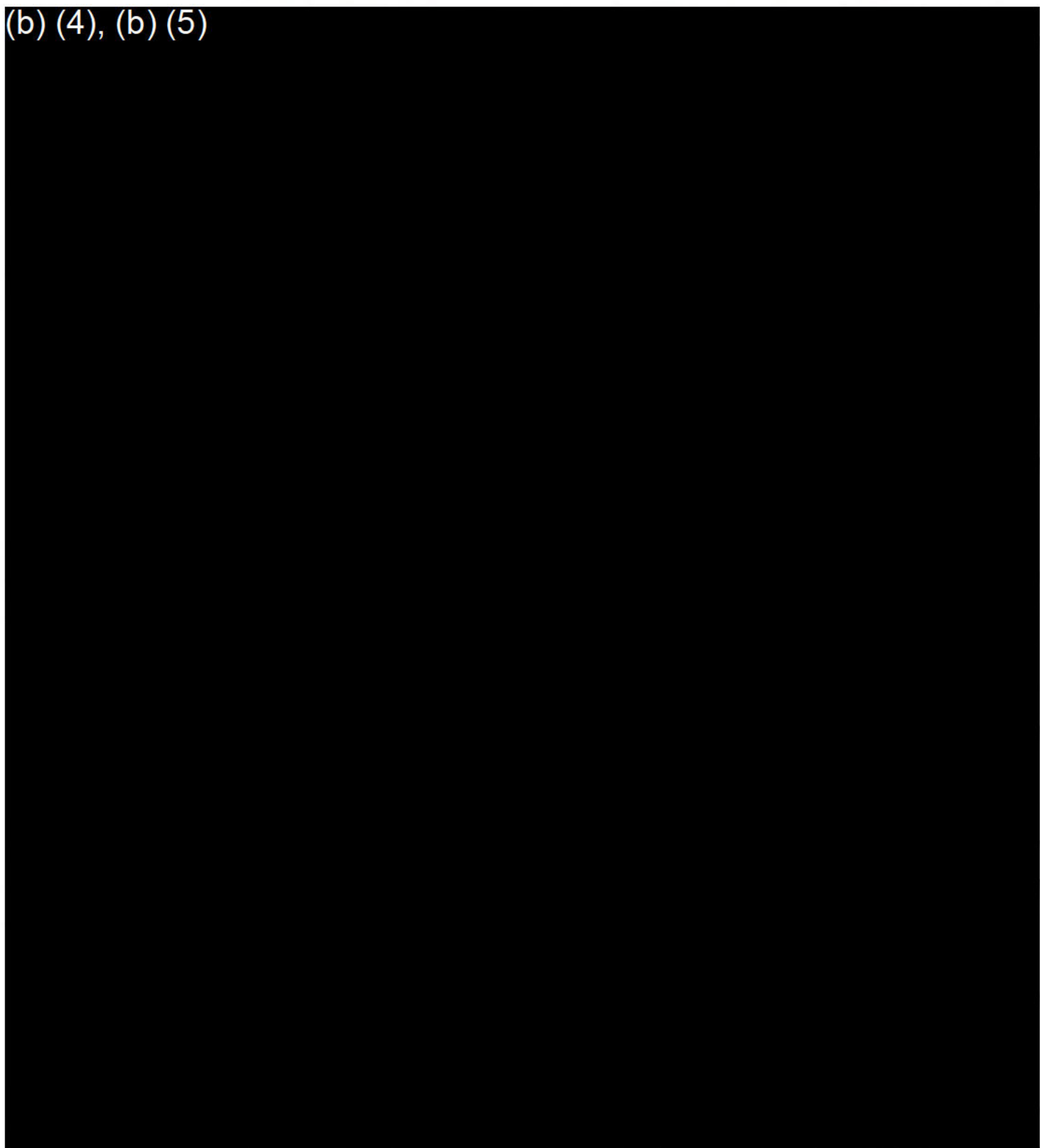
(b) (4), (b) (5)



(b) (4), (b) (5)

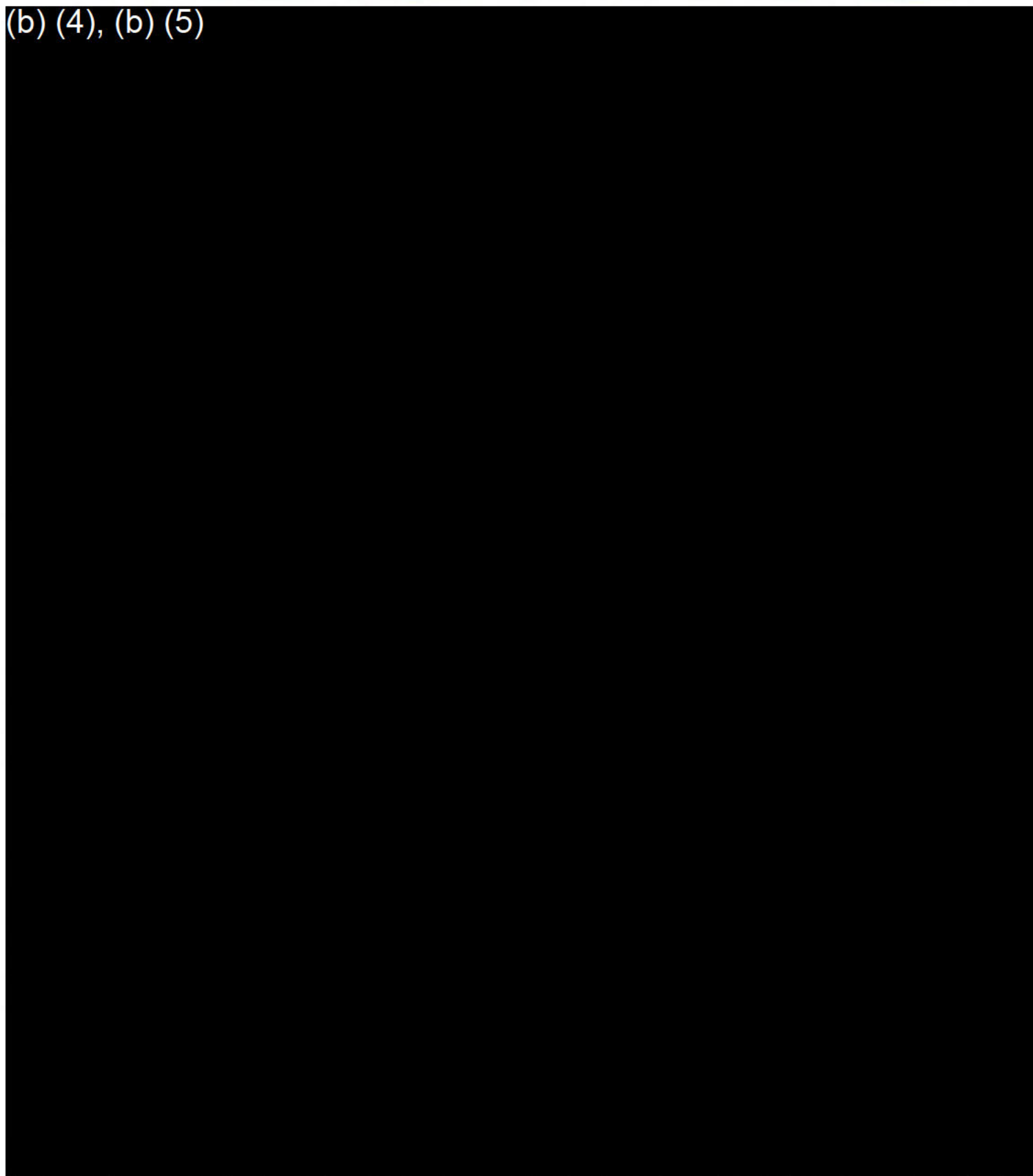


(b) (4), (b) (5)

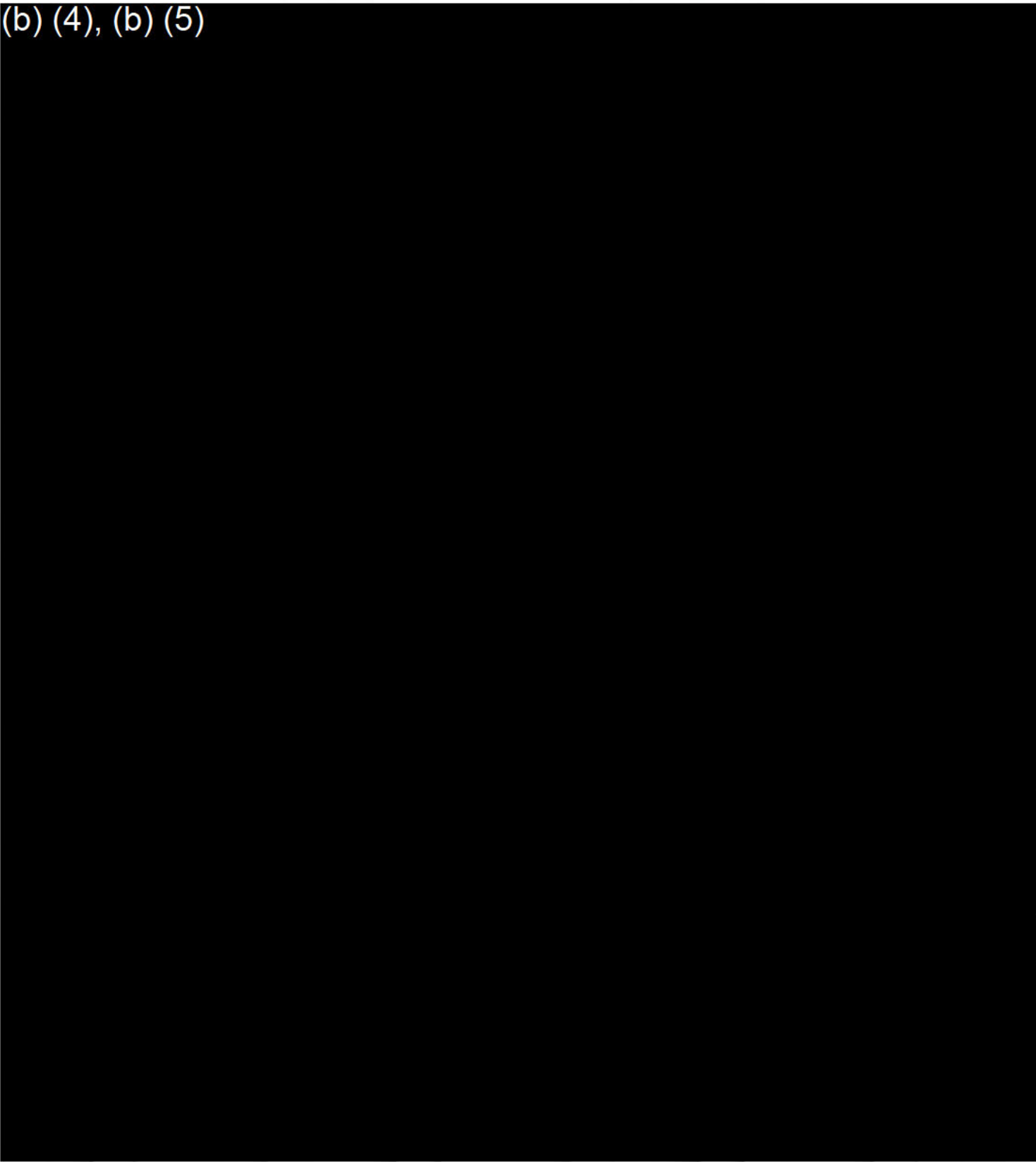




(b) (4), (b) (5)



(b) (4), (b) (5)



## Appendix C—Compliance Checklist

Compliance Items			
CRTI Due Diligence Check: Date Clearance Received <sup>15</sup>		Between 05/24/19-07/25/19	
Iran Sanctions Activities Certification	Guaranteed Lender or Insured Party	Applicable?	No
	Borrower or Lessee	Applicable?	Yes
		Date Received:	7/15/2019
Iran Sanctioned Persons Certification	Controlling Sponsor or Borrower/Lessee	Applicable?	Yes
		Date Received:	7/15/2019
Required Credit Reports Received?		No	
NAC Advice Required?		Yes	
Congressional Review Required?		Yes	
Environmental & Social Impact Assessment Required?		Yes	
		Availability posted on:	1/30/2016
NEPA Memo Required?		Yes	
		Availability posted on:	8/30/2016
GHG Emissions Notification Required?		Yes	
		Availability posted on:	1/20/2016
Detailed Economic Impact Analysis Required?		Yes	
		Economic Impact Notice Posted:	11/29/2018
OECD Notification Required?		Yes	
		Date OECD Notified	
State Department Review - Human Rights Concern?		Yes	
		Date Clearance Received:	6/15/2015
State Department Review - Security Forces?		Yes	
		Date Clearance Received:	6/15/2015
State Department Consultation - Nuclear		No	

<sup>15</sup> The Character, Reputational, and Transaction Integrity (CRTI) Due Diligence Guidelines are intended for use by EXIM Bank staff in implementing Know Your Customer and Due Diligence Standards. The CRTI Guideline identify a baseline for transaction participants that must be reviewed for potential CRTI risk and what procedures staff must follow to determine what CRTI risk, if any, exist.



## Appendix D – Additionality Checklist

### Categorization of Transactions

According to EXIM's Charter Section 8(b)(1)(3)(h) – EXIM is required to identify the *Categorization of Purpose* of Loans and Long-term Guarantees. OBAF has created the checklist below of possible justifications to provide a framework for the *Categorization of Purpose*.

More than one reason may apply to a transaction; **check all reasons that apply**. The most important purpose should be identified and recorded as the "Main Purpose" in APS; additional applicable reasons should be recorded as "Other Purposes" in APS.

#### Category 1: To meet competition from foreign, officially sponsored, export credit competition.

- ☒ The exporter faced, is facing, or expects to face competition from one or more foreign companies from an OECD country.
- ☒ One or more of the foreign competitors is supported by their official export credit agency.  
Competing ECA(s):  
UK (UKEF); Japan (JBIC and NEXI); Italy (Sace); Atradius (the Netherlands)
- ☒ The exporter faced, is facing, or expects to face competition from one or more foreign companies with government financing support that is not subject to OECD Arrangement terms.  
Competing Government(s)/Agency(ies):  
China EXIM (China); ECIC (South Africa)
- ☒ One or more foreign ECAs is pursuing a similar transaction in an attempt to influence the current and future supply chain for components in the final exported item.  
Competing ECA(s):  
China EXIM (China); ECIC (South Africa)

#### Category 2: To assume commercial or political risk that exporter or private financial institutions are unwilling or unable to take.



- ☒ Commercial financing is unavailable due to one or more "non-regulatory" risks, or a combination thereof, and/or other considerations, as identified below.
- ☒ Country / Political Risk
  - ☒ Credit / Repayment Term
  - ☐ Nature of Transactions (e.g., nuclear)
  - ☐ Other: \_\_\_\_\_

**Category 3: To overcome maturity or other limitations in private sector export financing.**

- ☒ Bank regulatory requirements constrained one or more elements of commercial financing to the extent that the resulting financing was inadequate or insufficient to facilitate the sale.
- ☒ Term
  - ☒ Amount
  - ☒ Other

**Category 4: "Not identified", and the reason why the purpose is not identified.**

- ☒ Reason the purpose is not identified: \_\_1) (b) (4), (b) (5)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Appendix E: Engineering &amp; Environmental Evaluations

<b>Project Name:</b>	Mozambique LNG	
<b>Project Location:</b>	Palma District, Cabo Delgado Province, Mozambique	
<b>Analyst:</b>	Roger W. Yerger, Jr., Senior Mechanical Engineer Engineering and Environment Division	R/ 08/13/2019
<b>Concurrence:</b>	M. Tiffin Caverly, PE, Vice President Engineering & Environment Division	AP 08/13/2019

**ENGINEERING EVALUATION****A. Background**

The Mozambique LNG Project (the Project, or Moz LNG) entails the integrated development of facilities for the production of (primarily) Liquefied Natural Gas (LNG) to meet increasing market demand. The Project is sponsored by the Area 1 Concessionaires and will produce, store, and export LNG and condensate, with a portion delivered for Mozambican domestic use. Anadarko Mozambique Area 1, Limitada (AMA1), whose parent company is Anadarko Petroleum Corporation (Anadarko), is the Project operator.

The Government of Mozambique (GoM) has granted concessions for the gas fields located in the deep offshore waters of the Rovuma Basin. The Project will utilize reserves of natural gas that have been discovered in Area 1 of the Rovuma Basin, located off the Mozambican shore approximately 25 kilometers east of Palma and 15 kilometers south of the Tanzanian border. Area 1 is adjacent to Area 4, which is being developed by others.

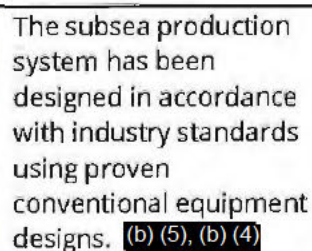
**B. Project Description**

The Project includes the Offshore Facilities, Onshore LNG Facilities, and Onshore Support Facilities. The project is expected to have the capacity to produce 12.88 million metric tons per annum ("MTPA") of LNG, via two liquefaction trains, each with a nominal capacity of 6.44 MTPA.

**Offshore Facilities Design**

The Moz LNG Project is underpinned by five reserves of natural gas that have been discovered in Area 1, namely: Golfinho-Atum, Orca, Prosperidade, Tubarao and Tubarao-Tigre. The Prosperidade field extends into Area 4 and would require additional coordination between the Area 1 and Area 4 operators. AMA1 has elected to use the Golfinho-Atum field as the basis for the Project, since this field is non-straddling and wholly-contained within Area 1.





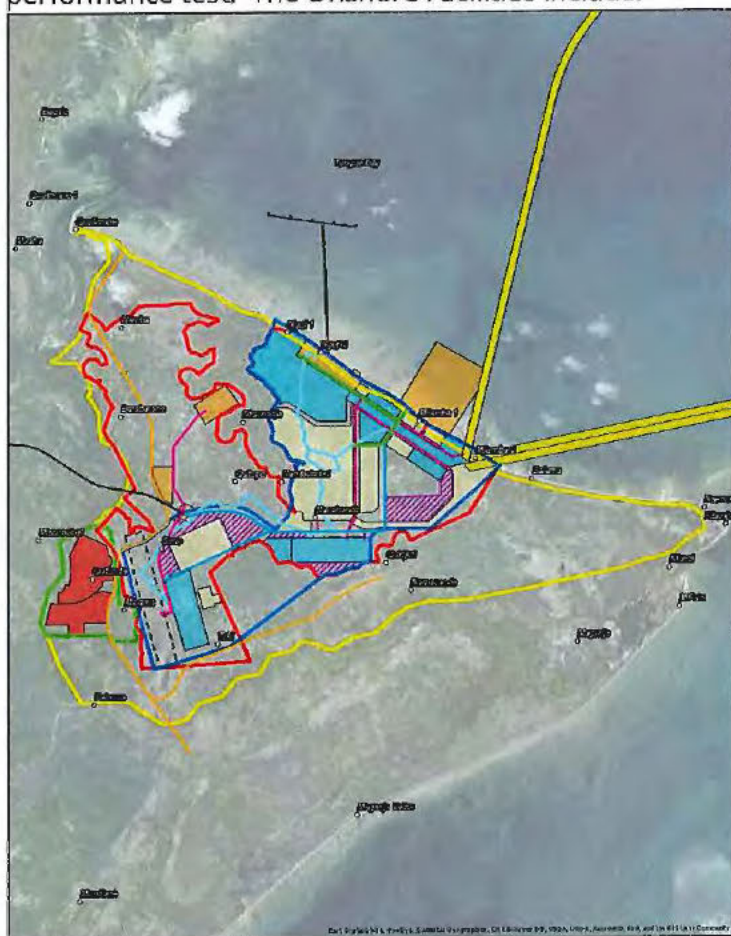
hydrate formation in the subsea pipelines from the wellheads to the onshore facilities, Mono-Ethylene Glycol (MEG) is to be continuously injected and recovered from the well stream fluids and separated on arrival at the onshore facilities. The pipelines and equipment will be designed to accommodate expected well pressures. (b) (5), (b) (4)

The Offshore Facilities include:

- (b) (5), (b) (4)
- (b) (5), (b) (4)
- (b) (5), (b) (4) well production manifolds plus one future location;
- (b) (5), (b) (4) 22-inch diameter offshore pipelines to deliver produced gas and liquids to the onshore LNG plant;
- (b) (5), (b) (4) eight-inch diameter fuel gas line that will convert to MEG injection;
- (b) (5), (b) (4) six-inch diameter flowline to supply MEG and other chemicals from onshore to subsea;
- (b) (5), (b) (4) main control umbilicals to deliver hydraulics, electrical power and fiber optic communications from onshore;

The Onshore Facilities will be built on the Afungi Peninsula in the Palma District of the Cabo Delgado Province of Mozambique. The GoM has allocated 6,288 hectares, designated the Afungi LNG Park, via a Right of Use and Benefit of Land (Direito do Uso e Aproveitamento da Terra or “DUAT”) for the development of the onshore components of the multiple LNG projects of Rovuma Basin Area 1 and Area 4. This area is sufficient to develop both the Area 1 and Area 4 LNG trains (in segregated zones) as well as possible future LNG trains.

The Project has selected AP-C3-MR™ liquefaction technology licensed by Air Products & Chemicals, Inc. (APCI), headquartered in Pennsylvania, USA. APCI processes and heat exchangers have been utilized in over 80 percent of LNG trains around the world and produce over 330 MTPA of LNG. This established technology has become the *de facto* standard in LNG liquefaction. It is notable that, to date, no heat exchanger supplied by APCI has been delivered late; and of those placed in operation, none has ever failed a performance test. The Onshore Facilities include:



- Incoming Feed Gas reception facilities,
- Gas / liquids separation and MEG regeneration,
- The onshore natural gas liquefaction plant (the LNG Plant) consisting of two LNG trains (b) (4) liquefaction capacity of 6.44 Million Tons Per Annum (MTPA) per train (12.88 MTPA in total.) There are also provisions for future installation of 2 more trains,
- LNG storage and loading facilities, including two initial storage tanks with a total capacity of 180,000 cubic meters each, product loading berths, and marine facilities including export jetty,
- Condensate processing facilities and storage tanks to support production from the two LNG Trains,
- Associated piping, controls, and power necessary for the operation of the plant,
- Associated power production facilities and general infrastructure (temporary and permanent), including camps, roads, bridges, airport, offices, and telecommunication systems. In addition, the project will include a resettlement village,
- A material offloading facility ("MOF") for receipt of heavy equipment and other construction supplies by barge during construction and commissioning activities of the Project.

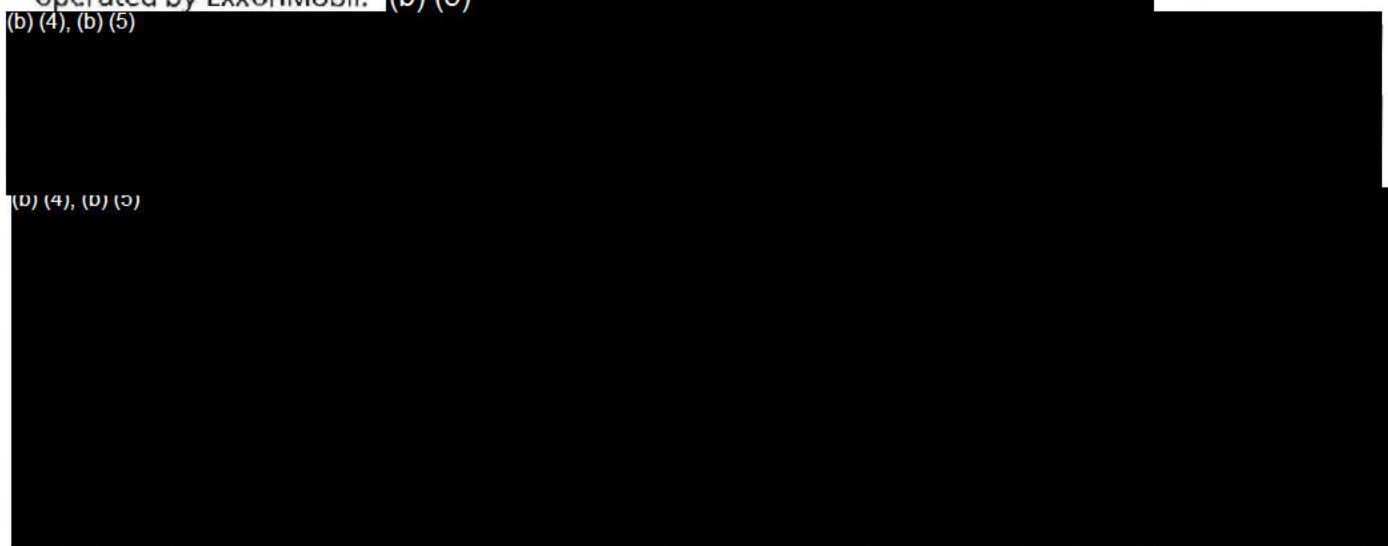


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Interface with Area 4 Rovuma LNG

The Project is effectively co-located with the Rovuma LNG Project (Rovuma), which will be operated by ExxonMobil. (b) (5)

(b) (4), (b) (5)



(b) (4), (b) (5)

### C. Development

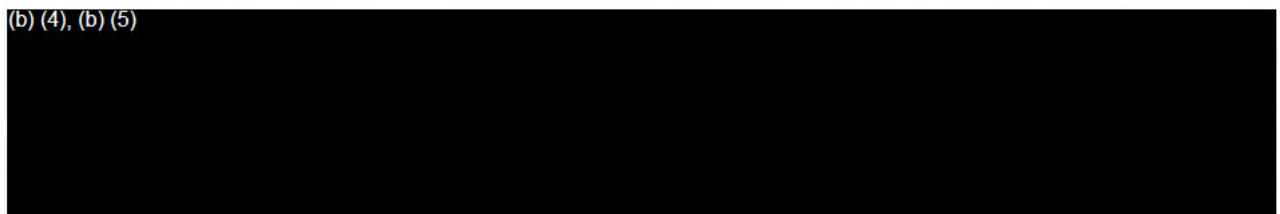
Participants

The Project Sponsors are Anadarko Mozambique Area 1, Empresa Nacional de Hidrocarbonetos E.P., Mitsui E&P Mozambique Area 1, Ltd., Bharat PetroResources Ltd., Oil India Ltd, ONGC Videsh Ltd., Japan Oil, Gas, and Metals Corporation, and PTT Exploration & Production Plc. The Sponsors will conduct all petroleum operations related to the Project.

Natural Gas Reserves

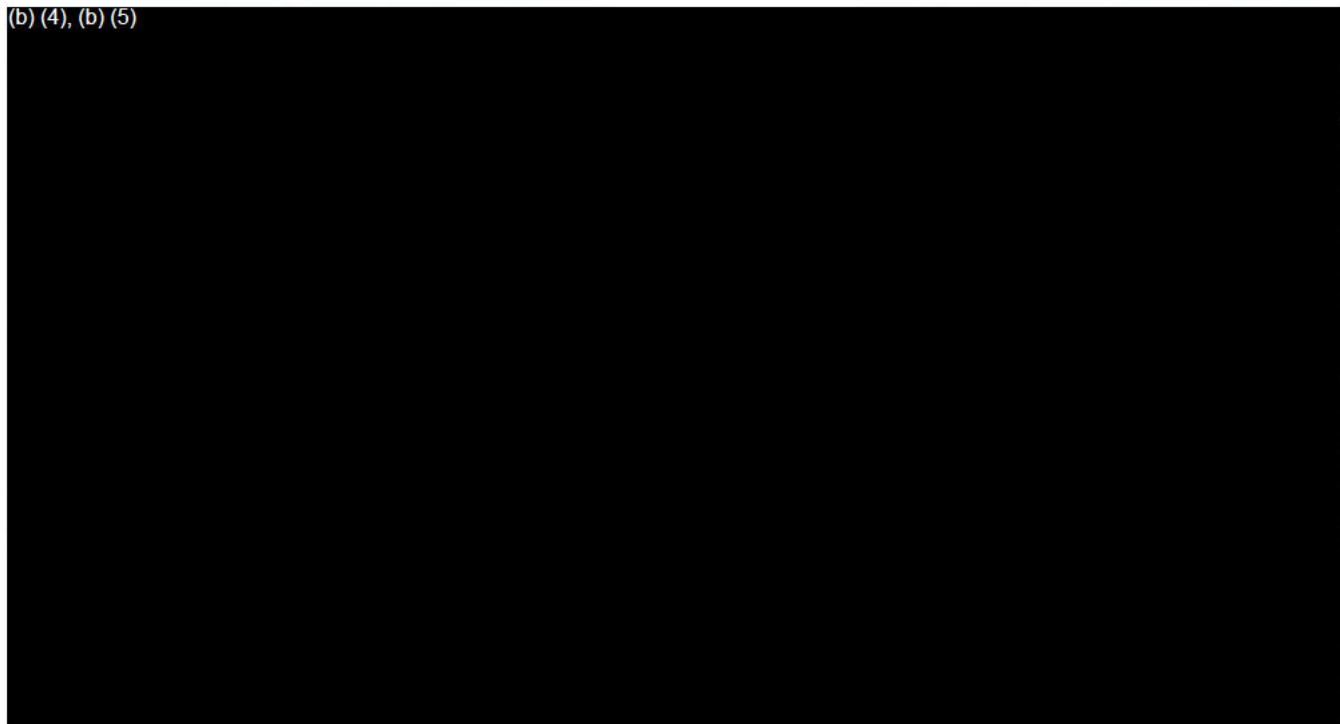
The Golfinho-Atum reservoir was discovered in May 2012 in the Mozambique Exclusive Economic Zone. The development area is approximately 28.5 km by 30 km and located approximately 20 km off the northeast coast of Mozambique. The Project will initially develop 18 wells with a design life of 30 years, and subsea equipment will be designed for the life of the field. While the wells will be located in deep water, the depths are not exceptional by current industry standards; and Anadarko has considerable project implementation experience in greater water depths in both the Gulf of Mexico and offshore Ghana.

(b) (4), (b) (5)





(b) (4), (b) (5)



#### **D. Construction**

##### Contracts


The Project will be primarily implemented through separate contracts for the Onshore and Offshore Facilities. (b) (4), (b) (5)

(b) (4), (b) (5) a joint venture between Chiyoda International Corporation, McDermott International, Inc., and Saipem S.p.A. Chicago Bridge and Iron (CB&I) was an original JV partner, but subsequently merged with McDermott. The EPC Contract scope includes the LNG Plant and associated onshore facilities, employing upwards of 10,000 people. AMA1 has awarded the Engineering, Procurement, Construction, and Installation (EPCI) Contract to MTV, a joint venture between TechnipFMC PLC and Van Oord Gulf FZE, with the McDermott and AllSeas Joint Venture (b) (4), (b) (5). The members of the EPCI and EPC consortia are leading contractors in their respective fields and have extensive track records, including the use of world class fleets for well drilling and installation.

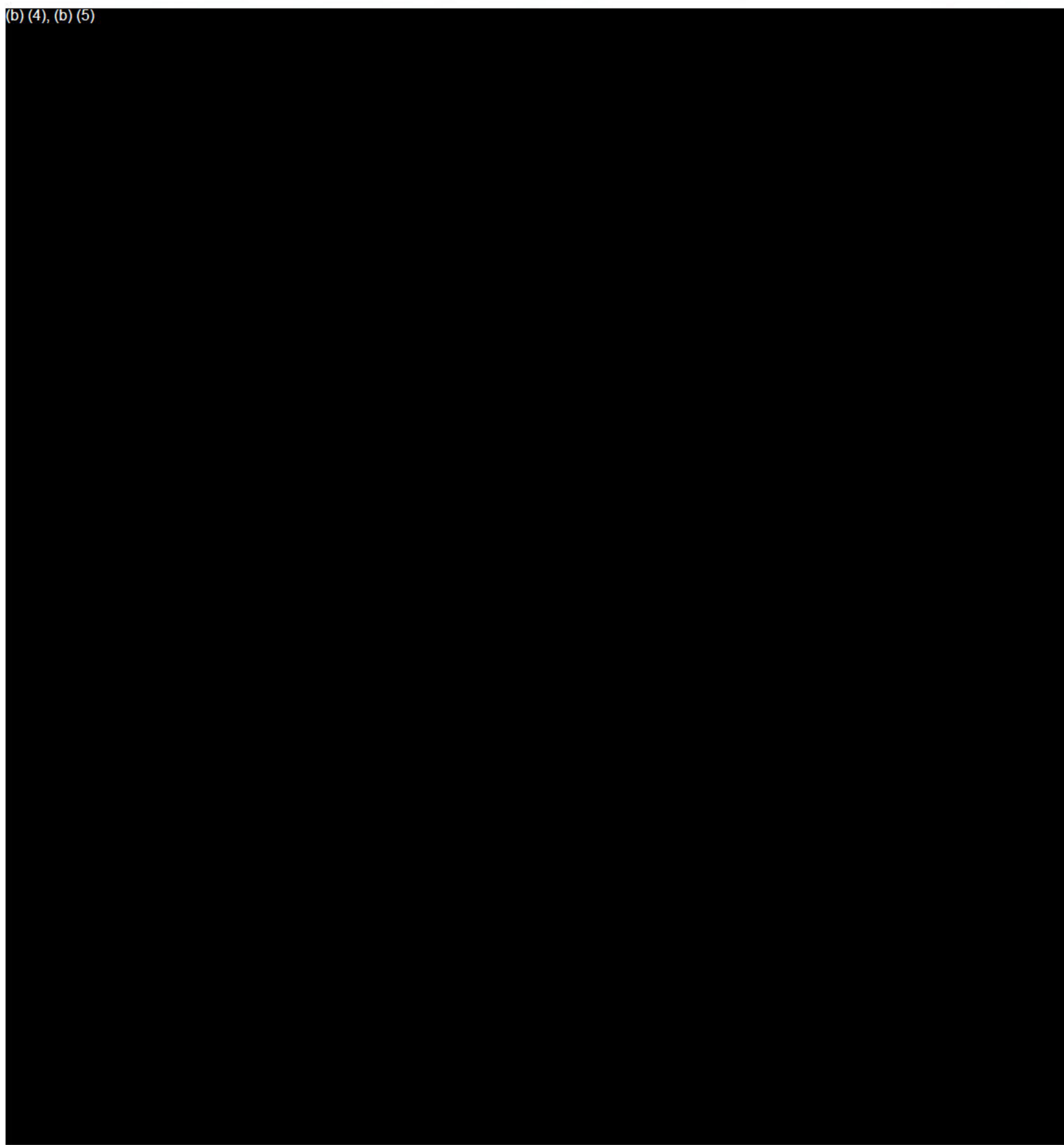
The Afungi peninsula is a greenfield site and a complete infrastructure build out is needed to support the Project. This work is likely to be subcontracted to various local Mozambican companies to enable participation by local Mozambique companies employing largely local labor.

##### Consumables and Capital Spares

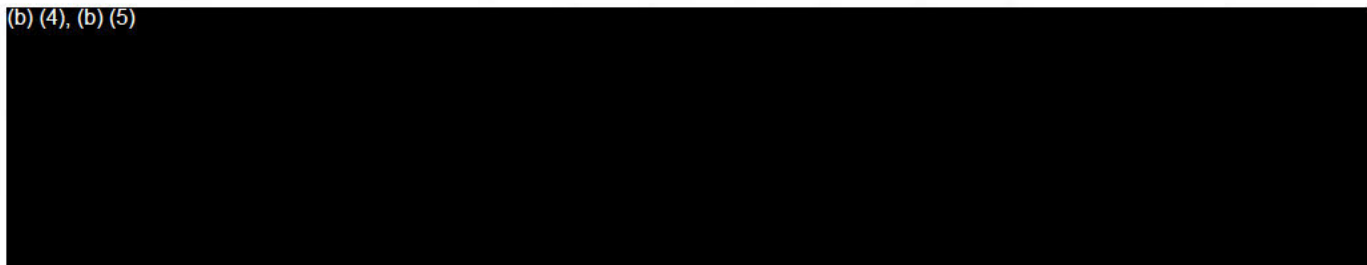
(b) (4), (b) (5)



(b) (4), (b) (5)




(b) (4), (b) (5)



#### Personnel

The AMA1 Mozambique organization plan and workforce mobilization strategy should ensure that the Project is properly managed and staffed. AMA1 has identified the initial organization structure, staffing requirements, and required personnel accommodations and Anadarko personnel will staff key managerial and technical positions. The Project will also employ a combination of expatriate and Mozambican national personnel, with expatriate numbers reducing as local employees gain training and experience. The organization plan projects a need for approximately 1,150 operations personnel, including contractors. This estimate is comparable to similar LNG projects of this scale and is driven by Project complexities and the Mozambique Nationalization Plan for local training and hiring.

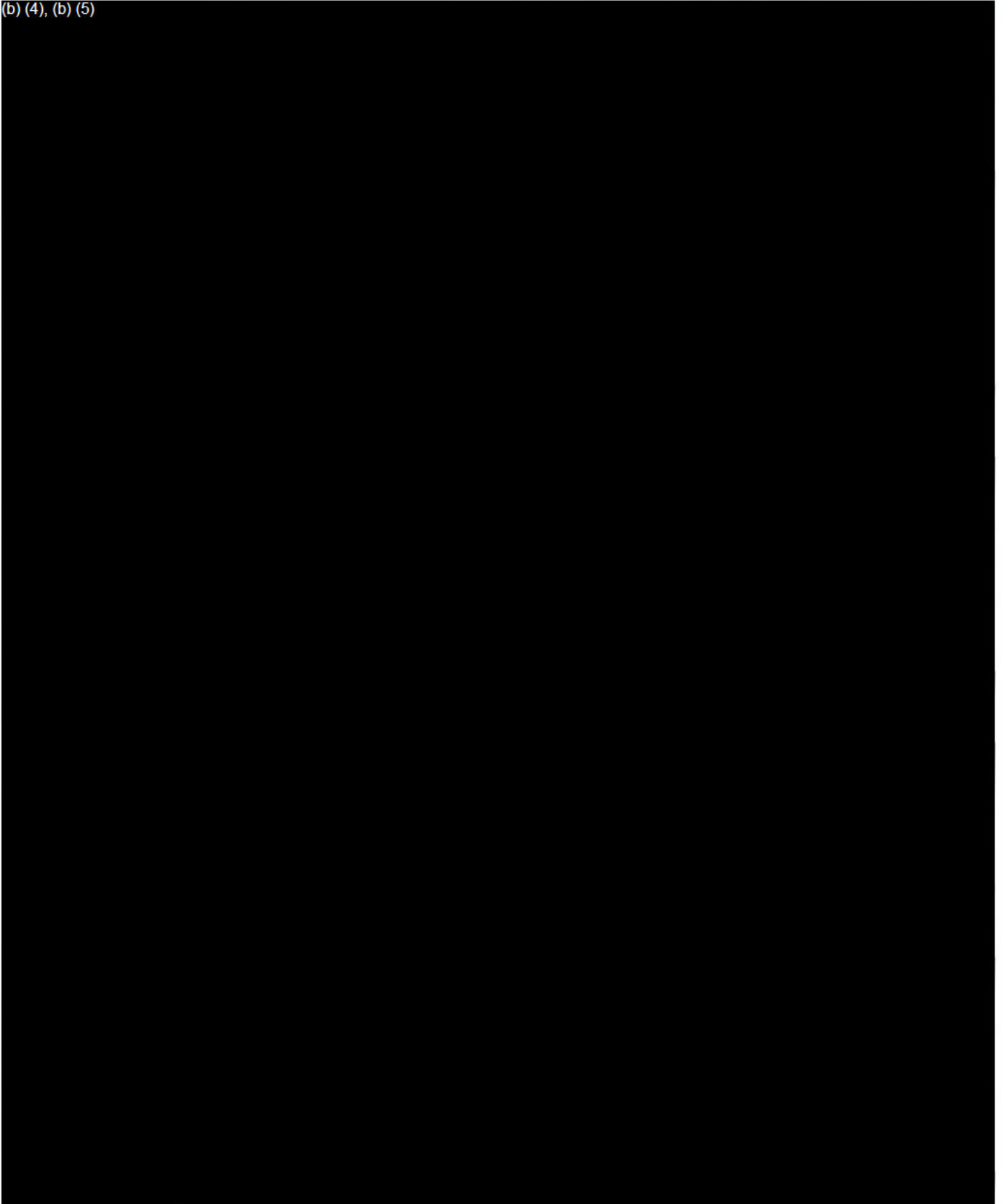
The Project intends to achieve their goals for local employment via a training facility in nearby Pemba. (b) (4), (b) (5)



#### **F. Project Costs**

The Project estimates the all-in project cost at approximately US\$24.6 billion. Table 3 shows the cost breakdown:

(b) (4), (b) (5)



AMA1 has recently provided a preliminary acquisition list that identifies suppliers to the Project such as Anadarko Petroleum Corporation, GE Oil & Gas, Inc., Air Products and Chemicals, Inc., McDermott International, Inc., KBR USA LLC, CB&I LLC, Chiyoda International Corporation, Saipem America, Bechtel Oil Gas and Chemicals Inc. Please see the Exporters and Suppliers lists for more detail. The Project estimates that EXIM supported exports will include approximately 8% Eligible Foreign Content (equipment and services sourced from the U.S. but including components from outside of the US).

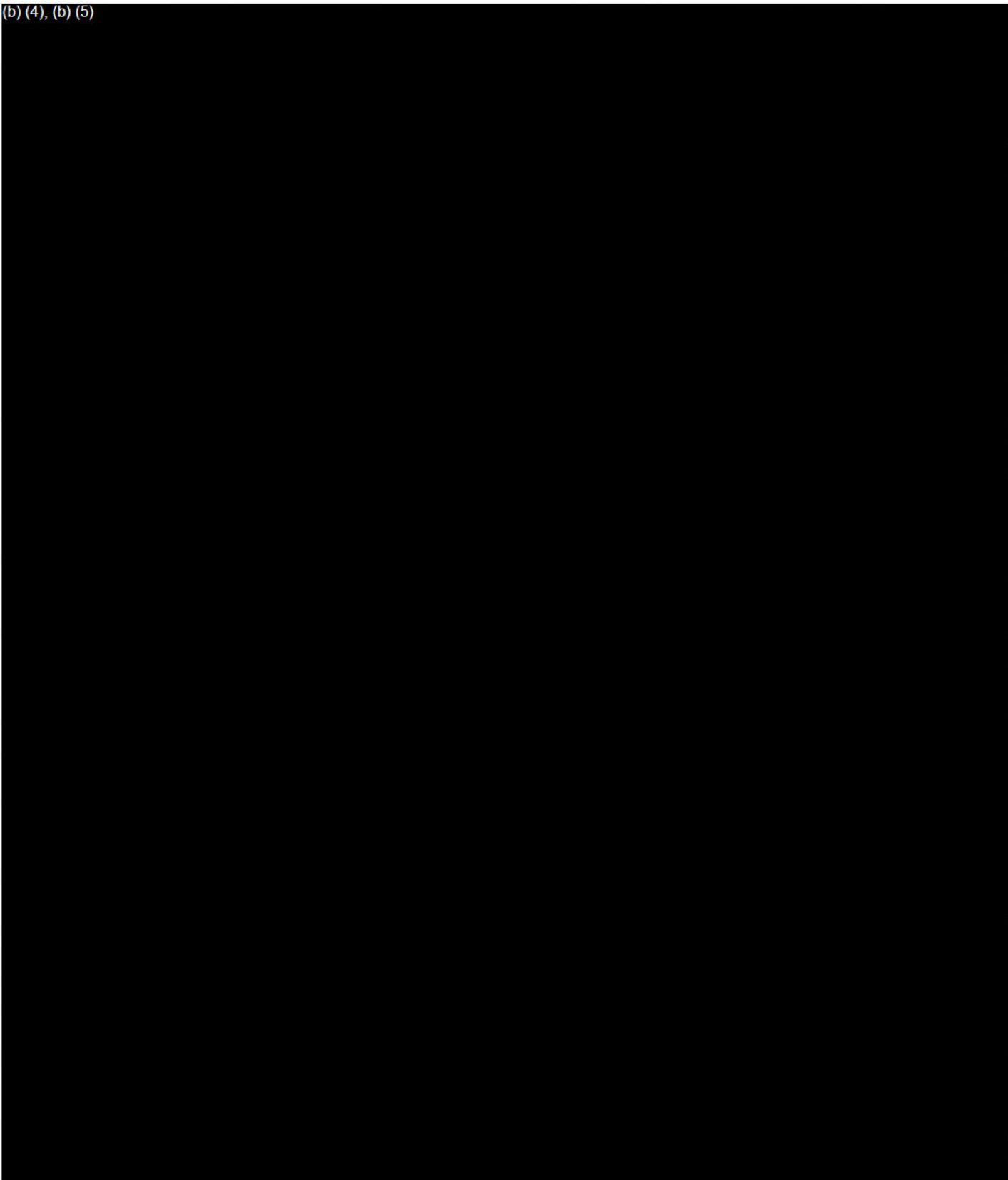
(b) (5), (b) (4)

#### Local Costs

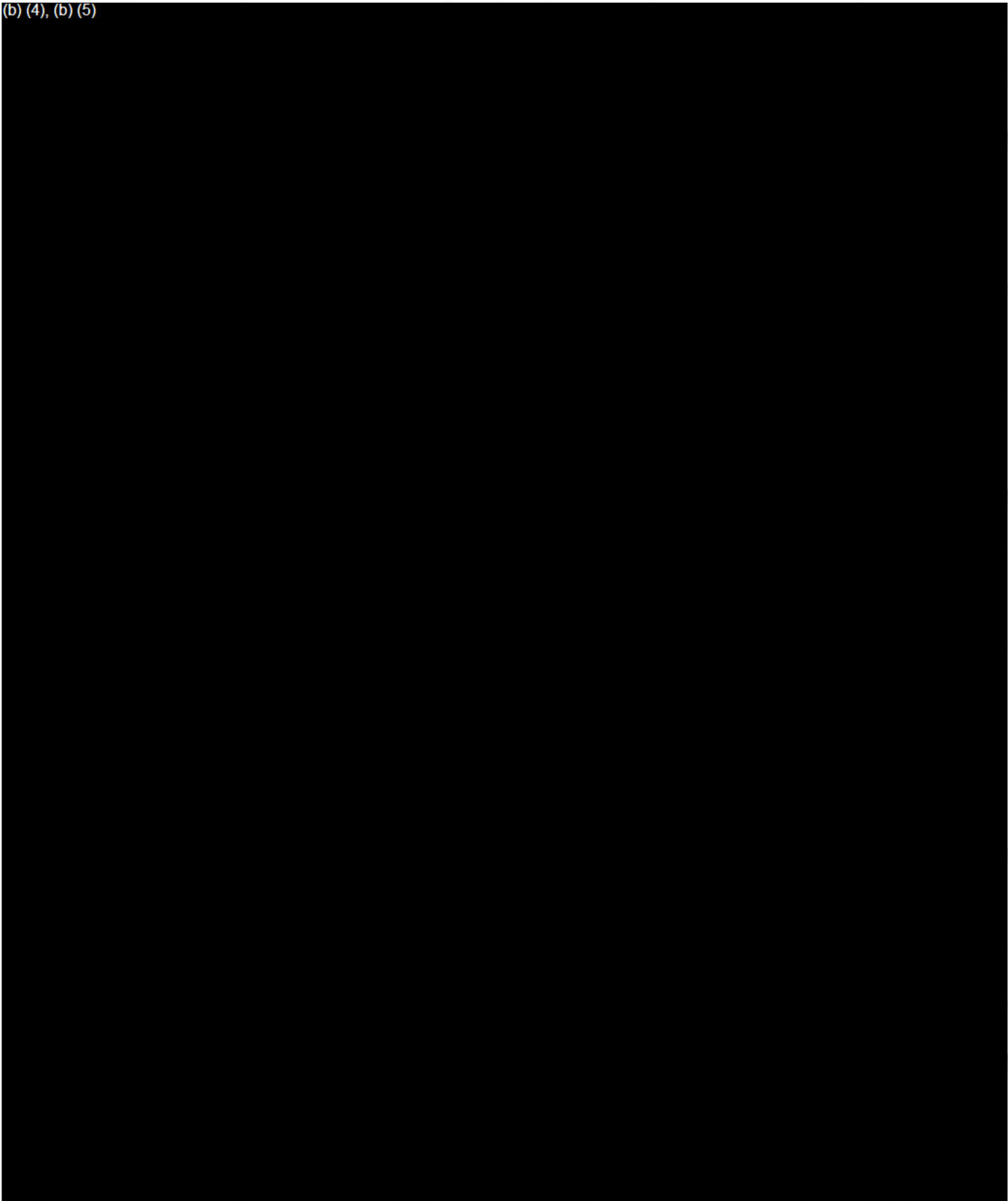
The Project is seeking almost (b) (5), (b) (4) in EXIM support for Local Costs to support U.S. exports. Local cost providers have not been identified at this time, but will include early works contractors for site related roads and bridges, wharf and site preparation, pipeline construction, and other locally sourced services.



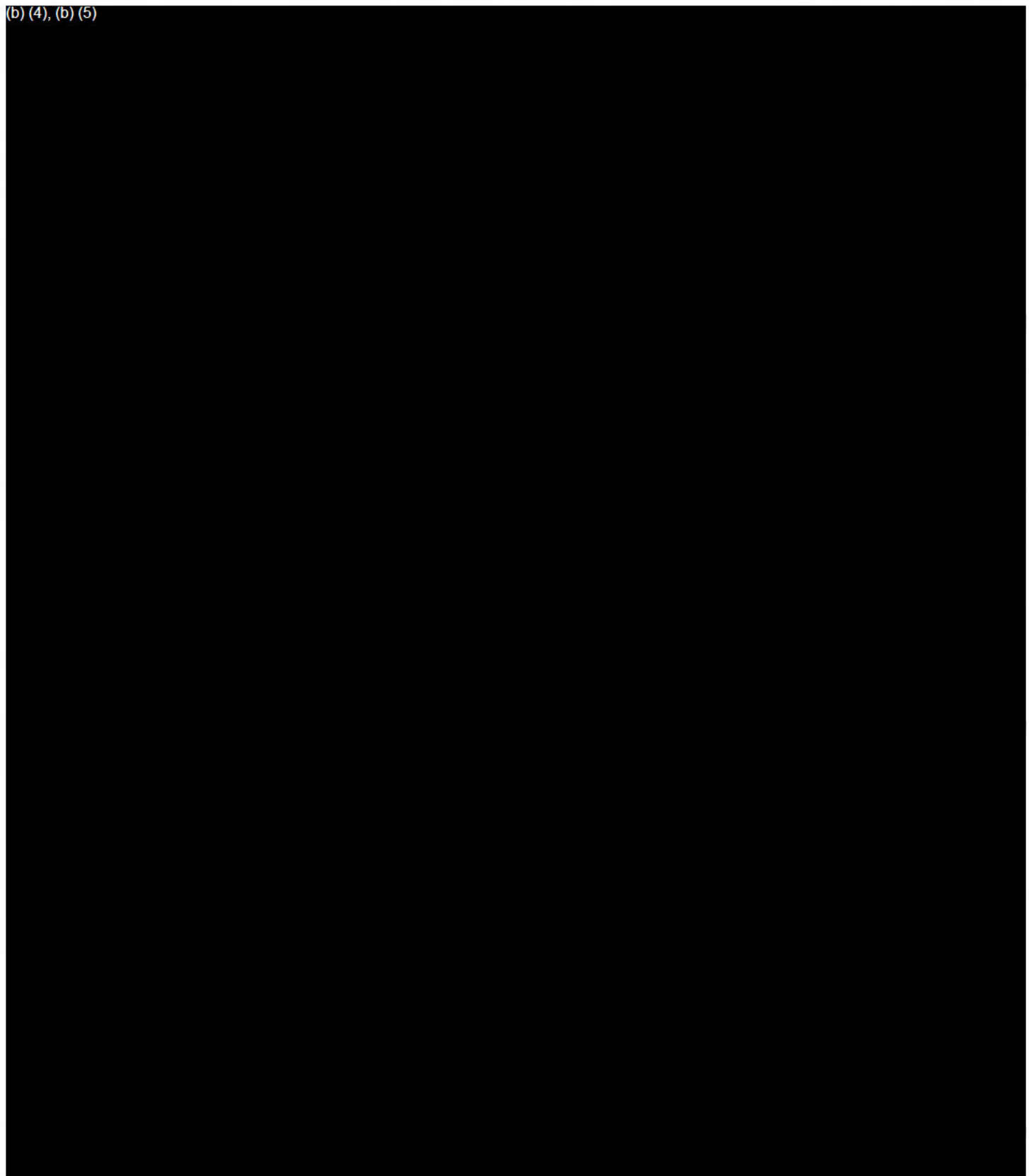
(b) (4), (b) (5)



(b) (4), (b) (5)



(b) (4), (b) (5)



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**Attachment E-1: Updated Golfinho-Atum Reserves Report****A. Background**

The Mozambique LNG Project relies on gas from the Golfinho-Atum field located in Area 1 offshore the Republic of Mozambique (Area 1). Area 1 is being developed under an Exploration & Production Concession Contract (EPCC), (b) (4), (b) (5)

[REDACTED]

[REDACTED]

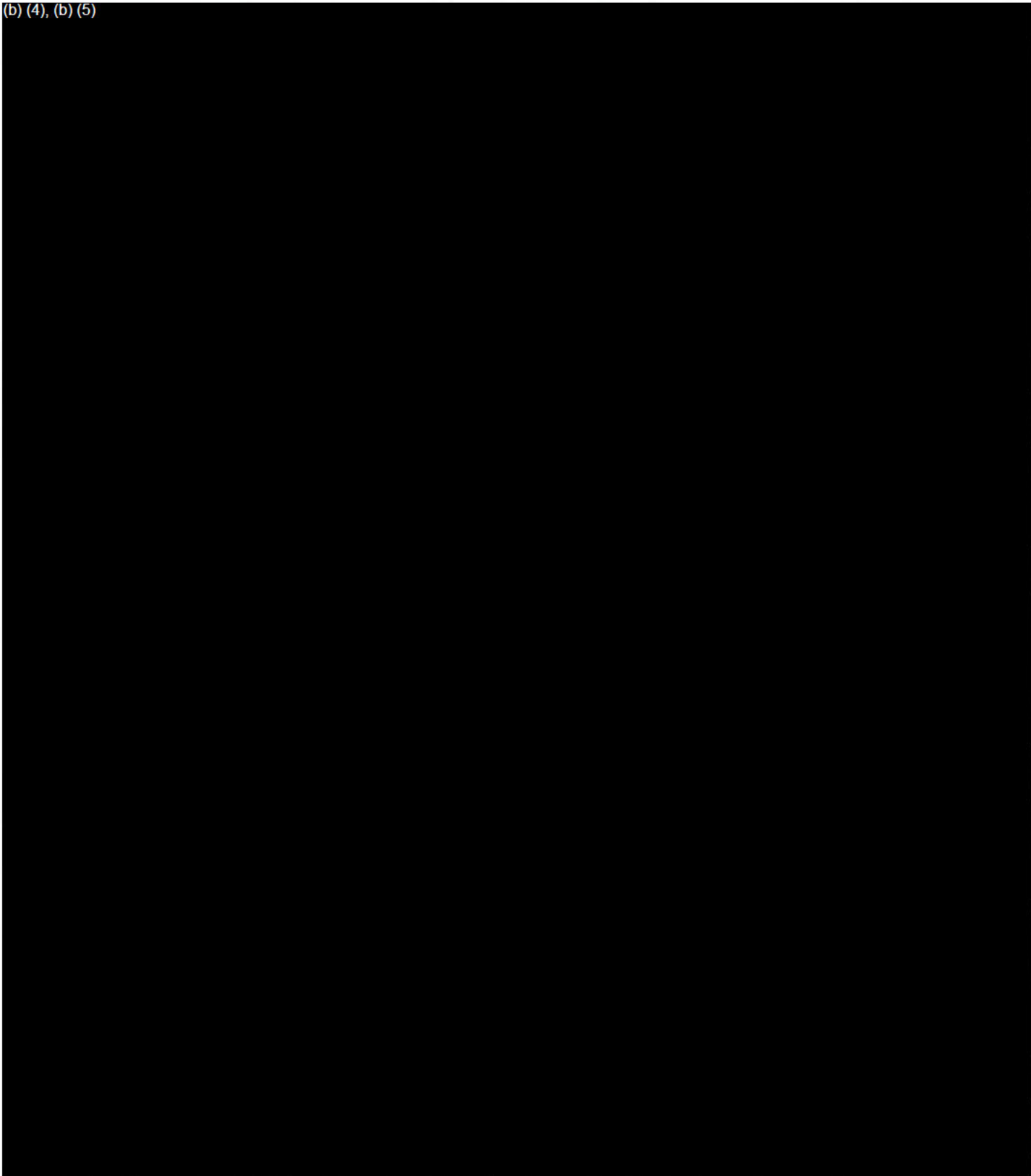
[REDACTED]

[REDACTED]

(b) (4), (b) (5)

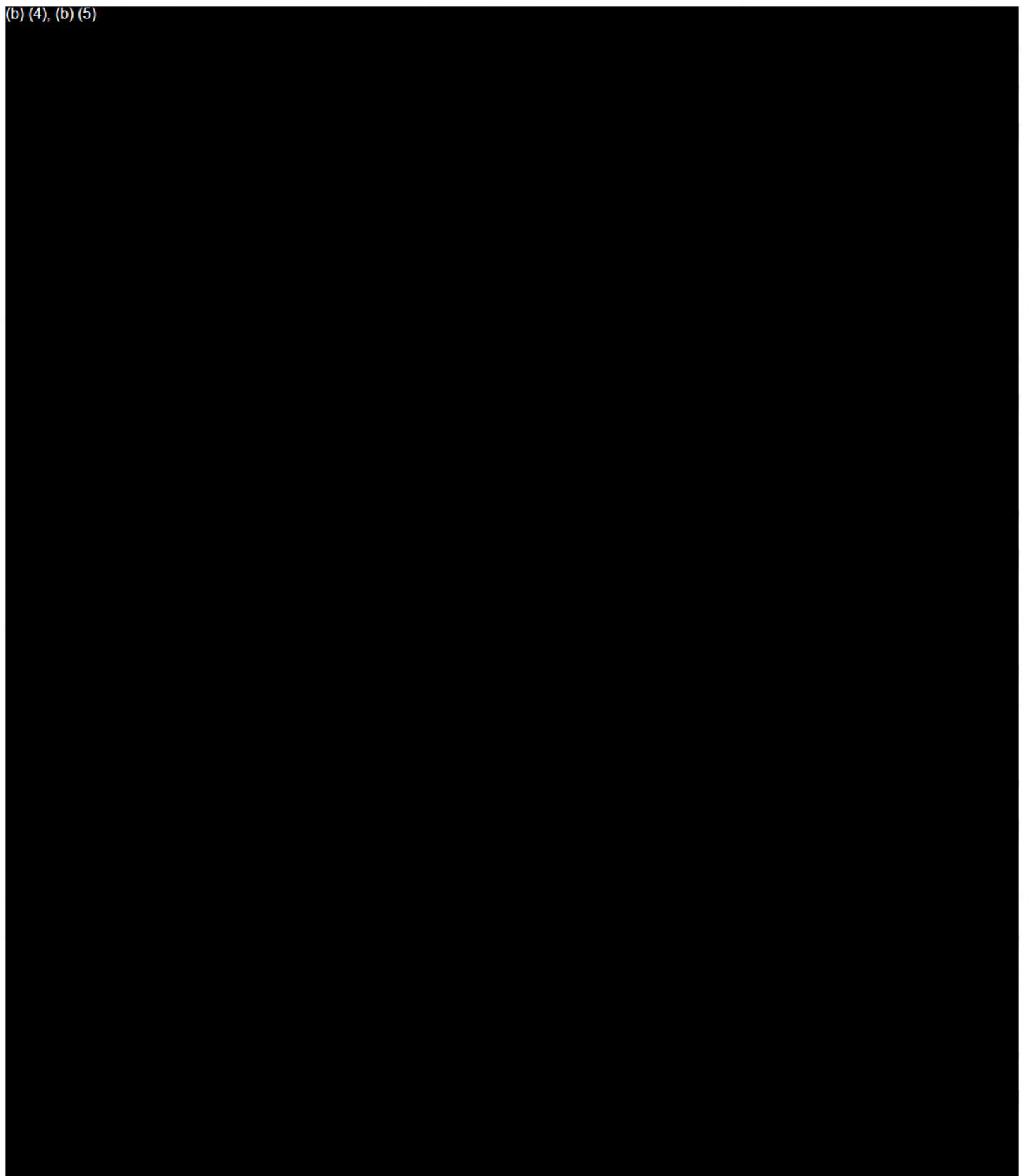
[REDACTED]

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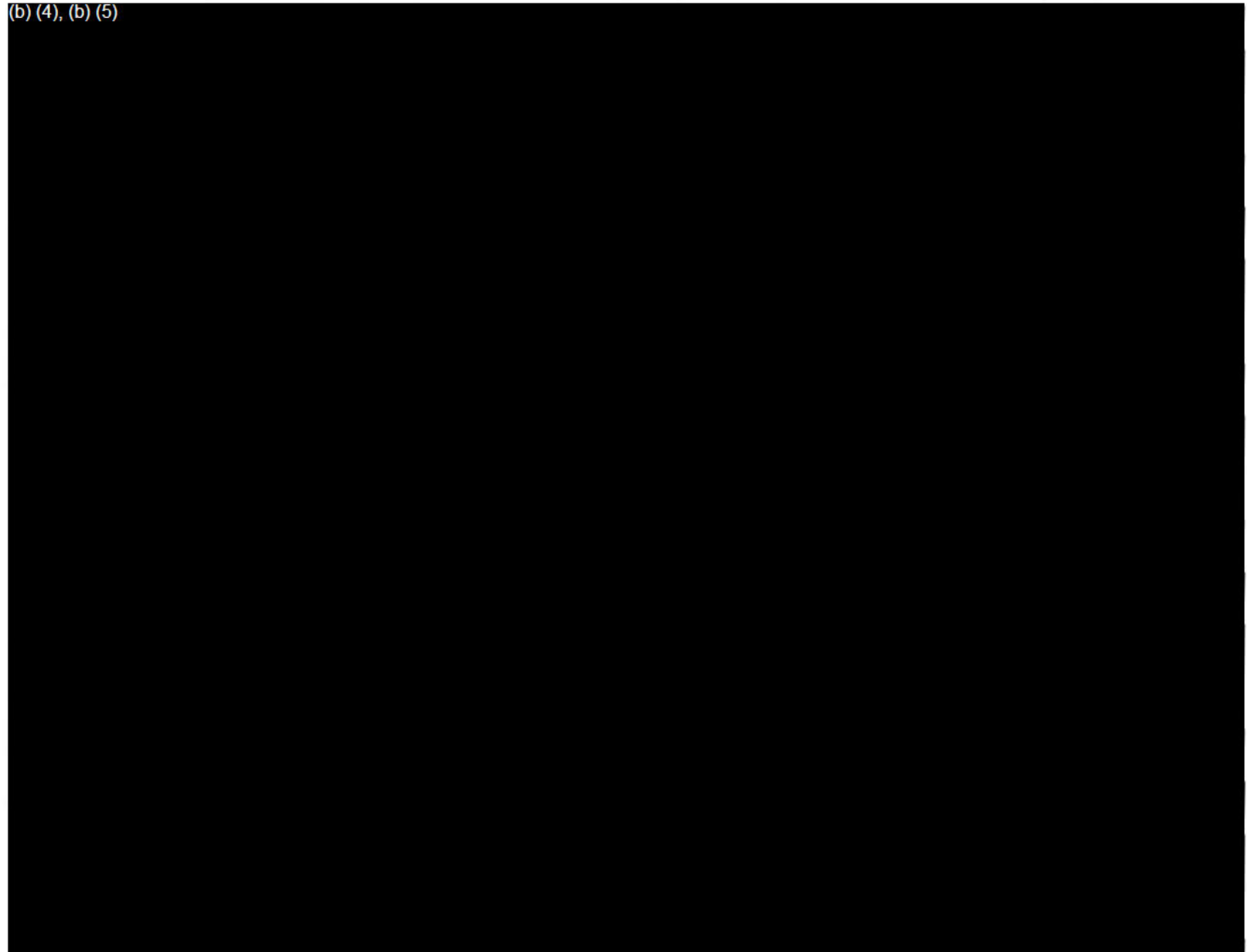




(b) (4), (b) (5)



(b) (4), (b) (5)



E&E FACT TABLE	
--- BASIC ---	
Project Name:	Mozambique LNG
Primary Exporter:	Anadarko Petroleum Company
Primary Supplier:	Anadarko Petroleum Company
Major Products/Components:	Engineering and Technical Services
EPC Contractor:	CCSJV (CB&I-McDermott - US portion)
Operator:	Anadarko Mozambique Area 1
End User:	Anadarko Mozambique Area 1
Buyer:	Anadarko Mozambique Area 1
(b) (4)	
Project NAICS:	211112
Product NAICS:	541330
--- COSTS ---	
Net U.S. Contract Price:	(b) (4)
[Cof] CONTRACT PRICE:	-0-
Local Cost Amount:	(b) (4)
Eligible Foreign Content:	8% estimate
Pre-Exports Payments REQUIRED:	No
--- ENVIRONMENTAL & SOCIAL ---	
Environmental Category:	A
Project Posting Date:	1/20/2016
ESIA Posting/Availability Date:	1/20/2016
Annual GHG Emissions (Metric tons CO <sub>2</sub> eq/Year): [] / Posting Date	5,200,000 tonnes CO <sub>2</sub> eq/Year
NEPA MEMO REQUIRED: Y/N And Date	Yes 8/26/2016
Other Environmental Legal Requirements:	Endangered Species Act opinion
Renewable Energy:	No
Environmental Effect: Y/N And %	No
--- US JOBS SUPPORT ---	
Direct Small Business: %	1.4%
Indirect Small Business: %	0.5% est
--- OTHER POLICIES AND INCENTIVES ---	
Nuclear:	No
Security Forces:	No
Military:	No

**IDENTIFIED U.S. EXPORTERS AND PARTICIPATING SUPPLIERS****IDENTIFIED U.S. EXPORTERS**

Ref.#	Exporter Company	Product	NAICS	Contract Price	Small Business
E1	Anadarko Petroleum Corp 1201 Lake Robbins Dr. The Woodlands, TX 77380	Oil & Gas Production	211130	(b) (4)	N
E2	Bureau Veritas NA, Inc. 1601 Sawgrass Corporate Fort Lauderdale, FL 33323	Testing, Inspection & Certification Services	213112		N
E3	CCL Contracts Consultancy 11200 Richmond Houston, TX 77082	Agency Staffing Services	561320		Y
E4	Ecolyse Inc. 11142 Hopes Creek Rd College Station, TX 77845	Consulting Services	541620		Y
E5	Evans-Hamilton Inc. 3662 Westchase Dr. Houston, TX 77042	Oceanography Study Services	541715		N
E6	Wood Group O&M Int'l 17000 Katy Freeway Houston, TX 77094	LNG Technical Consulting Services	213112		N
E7	FDR Safety LLC 360 Cool Springs Blvd Franklin, TN 37067	Safety Training Services	541690		Y
E8	Gibson Applied Tech & Eng 16360 Park Ten Place Houston, TX 77084	Subsea Engineering Design Services	541330		N
E9	KBR USA 601 Jefferson St. Houston, TX 77002	LNG Design Services	541330		N
E10	PERC Engineering Int'l 1880 S Dairy Ashford Houston, TX 77077	Subsea Engineering Design Services	541330		Y
E11	Brunel Energy, Inc. 9811 Katy Freeway Houston, TX 77024	Agency Staffing Services	561320		N
E12	JES & Associates LLC 18 Stonecroft Place The Woodlands, TX 77381	Environmental Consulting Services	541620		Y



<b>E13</b>	Gate Premier Solutions, Inc. 25211 Grogans Mill Rd. The Woodlands, TX 77380	Agency Staffing Services	561320	(b) (4)	Y
<b>E14</b>	Acorn International LLC 701 N Post Oak Rd Houston, TX 77024	Environmental Consulting Services	541620	(b) (4)	Y
<b>E15</b>	Jonathan Motherwell Assoc 120 Tree Crest Circle The Woodlands, TX 77381	Engineering Consulting Services	541330	(b) (4)	Y
<b>E16</b>	Global Edge Group 2829 Technology Forest The Woodlands, TX 77381	Agency Staffing Services	561320	(b) (4)	N
<b>E17</b>	Kuehne and Nagel Inc. 15450 Diplomatic Plaza Houston, TX 77032	Freight Forwarding Services	488510	(b) (4)	N
<b>E18</b>	Competentia Inc. 11000 Equity Dr. Houston, TX 77041	Agency Staffing Services	561320	(b) (4)	N
<b>E19</b>	Mitsui & Co Inc. 1300 Post Oak Blvd Houston, TX 77056	Personnel Labor Services	561320	(b) (4)	N
<b>E20</b>	MEMS Inc. (Formerly MMGS Inc.) 1300 Post Oak Blvd Houston, TX 77056	Personnel Labor Services	561320	(b) (4)	N
<b>E21</b>	MMI Engineering Inc. 900 Broken Sound Pkwy NW, Boca Raton, FL 33487	Geotechnical Eng. Servs.	541380	(b) (4)	N
<b>E22</b>	King & Spaulding 1180 Peachtree St. NE Atlanta, GA 30309	Legal Services	541110	(b) (4)	N
<b>E23</b>	Moffatt and Nichol 1800 Hughes Landing Blvd The Woodlands, TX 77380	Eng. Consulting Services	541330	(b) (4)	N
<b>E24</b>	Orion Project Services LLC 11200 Westheimer Road Houston, TX 77042	Staffing Agency	561320	(b) (4)	N
<b>E25</b>	PYXERA Global 1030 15 <sup>th</sup> Street, NW Washington, DC 20005	Local Content Consultant	541611	(b) (4)	N
<b>E26</b>	Turner and Townsend Inc. 10777 Westheimer Road Houston, TX 77042	Real Estate Leasing Services	541370	(b) (4)	N

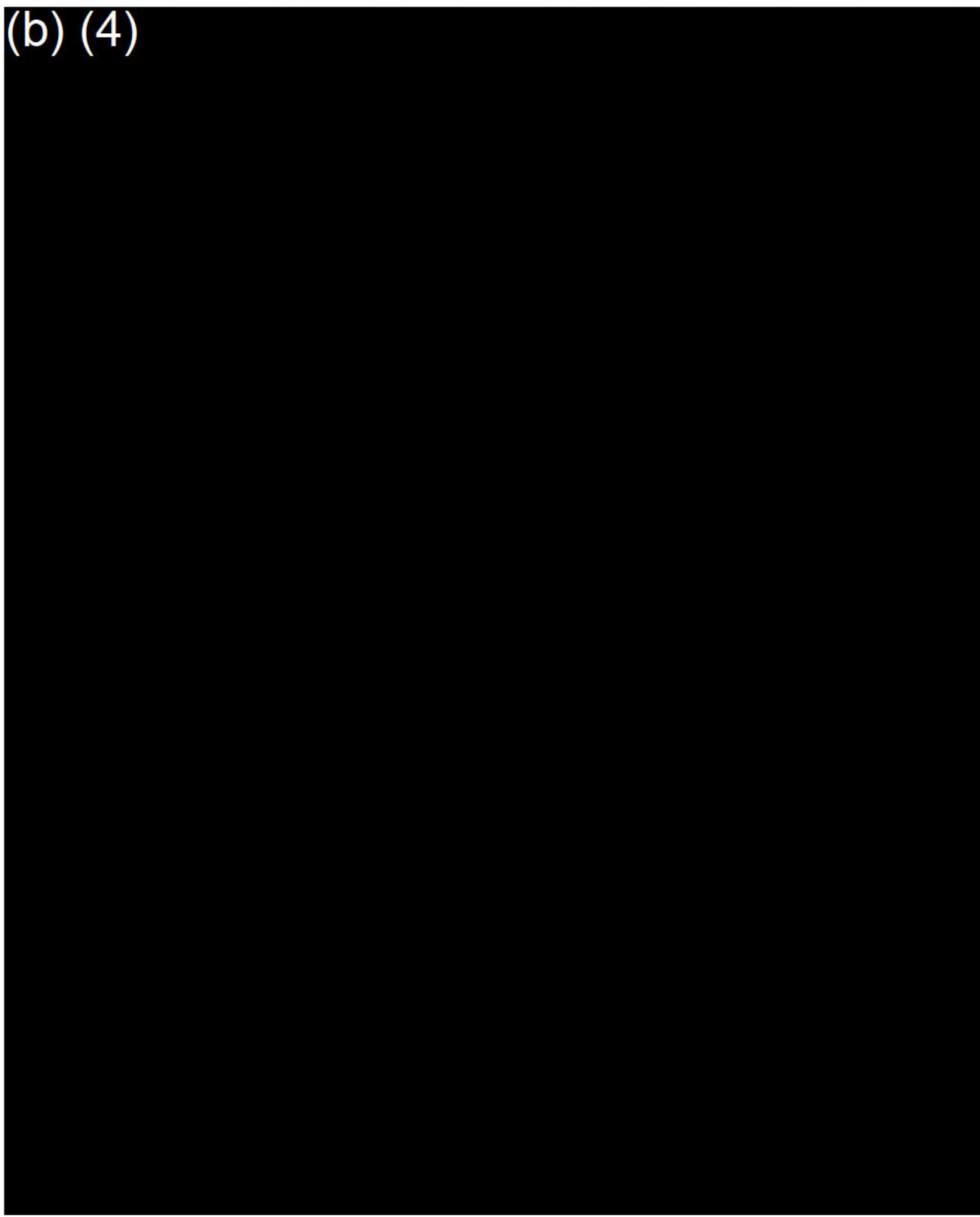


E27	Tessellations Inc. 215 West Greywing Circle Spring, TX 77382	Geographic Info System Consulting Services	541370	(b) (4)	Y
E28	CB&I LLC 2103 Research Forest Drive The Woodlands, TX 77380	FEED Services (Onshore Portion Only)	541330	(b) (4)	N
E29	CHIYODA Intl Corp 2050 W Sam Houston Pkwy Houston, TX 77042	FEED Services (Onshore Portion Only)	541330	(b) (4)	N
E30	SAIPEM America 1311 Broadfield Blvd Houston, TX 77084	FEED Services (Onshore Portion Only)	541330	(b) (4)	N
E31	Bechtel Oil Gas & Chemicals Inc. 3000 Post Oak Blvd Houston, TX 77056	FEED Services (Onshore Portion Only)	541330	(b) (4)	N
E32	Lummus Consultants Intl Inc. 2103 Research Forest Dr. The Woodlands, TX 77380	Lender's Appointed Technical Consultant	541330	(b) (4)	N
E33	DeGolyer & MacNaughton Corp. 5001 Spring Valley Road Dallas, TX 75244	Lender's Appointed Reserves Consultant	541690	(b) (4)	N
E34	Rina USA Inc. (Formerly D'Applonia SPA) 13450 W. Sunrise Blvd Sunrise, FL 33323	Lender's Appointed Environmental Consultant	541620	(b) (4)	Y
E35	Greengate LLC 1660 L Street, NW Washington, DC 20036	Lender's Financial Advisory Servs & US EXIM Model Auditor	523930	(b) (4)	Y
E36	Poten & Partners Inc. 805 Third Avenue New York, NY 10022	Lender's Appointed Shipping Consultant	488510	(b) (4)	N
E37	International Trade & Transportation Inc. 37715 Edgewater Drive Pinehurst, TX 77362	Consultant Servs on EXIM and MARAD Policies and Procedures	488510	(b) (4)	Y
E38	McDermott International, Inc. 757 N. Eldridge Pkwy Houston, TX 77079	Project Management Services	237120	(b) (4)	N

(b) (4)



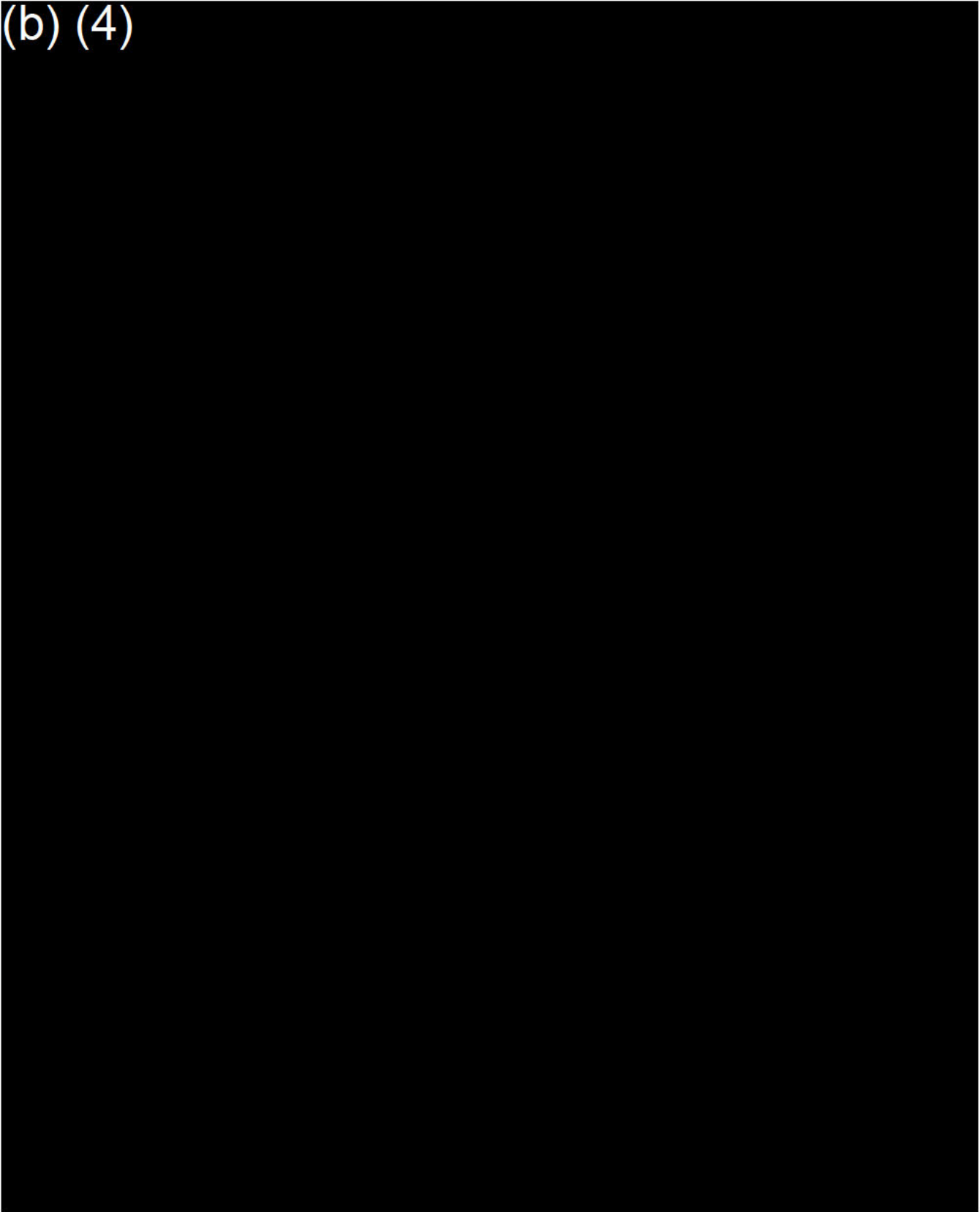
(b) (4)



(b) (4)



(b) (4)





<b>Project Name:</b>	Mozambique LNG - Area 1 Project
<b>Project Location:</b>	Palma District, Cabo Delgado Province, Mozambique
<b>Environmental Category:</b>	A: The Project has the potential to have significant adverse environmental and/or social impacts, which are diverse, irreversible and/or unprecedented.
<b>Analyst:</b>	Masud Hasan, Senior Environmental Engineer, Engineering and Environment Division
<b>Concurrence:</b>	M. Tiffin Caverly, PE, Vice President Engineering and Environment Division

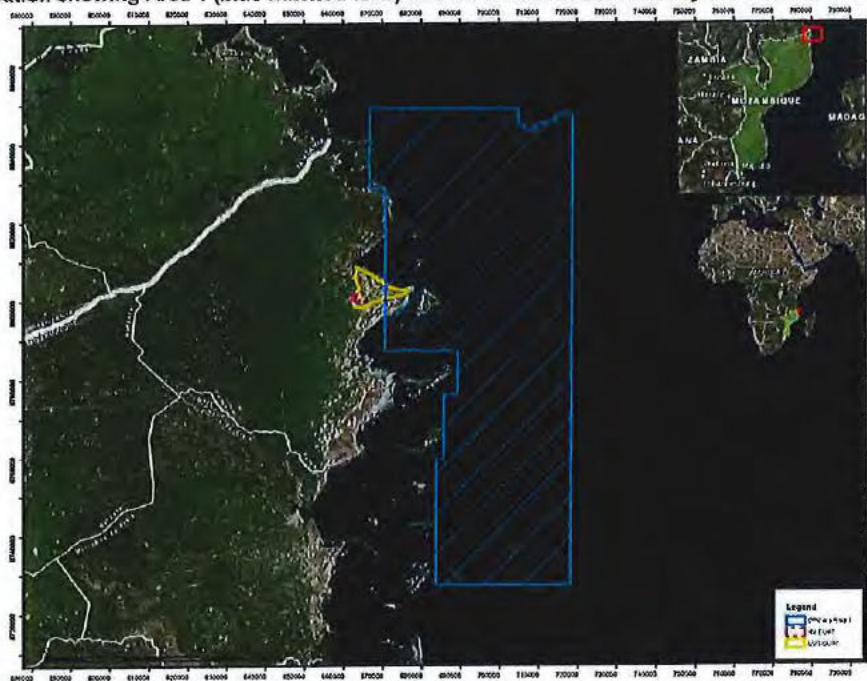
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## ENVIRONMENTAL AND SOCIAL EVALUATION

### A. Description of the Project

Mozambique Area 1 LNG Project ("AMA1" or "the Project") proposes to develop gas resources from Area 1 of the offshore Rovuma Basin in northern Mozambique. The Project is designed to collect, transport, process and export liquefied natural gas (LNG). This process begins at Area 1 concession, 25 kilometers offshore and in the water depth of approximately 1,500 meters, where natural gas will be extracted from gas reservoirs below the seafloor, via subsea wells. The gas will be collected and transported to the onshore LNG facility by feedlines. Once onshore, the gas will be processed, converted to LNG through cryogenic cooling of the gas and stored in on-site tanks. The liquefied gas will then be transported through insulated pipelines to export jetties, where it will be loaded into LNG vessels to be transported to international markets.

Project Location showing Area 1 (blue hatched area) and the land area allocated by the Government (DUAT) areas





The main components of the Project are grouped together and discussed as offshore, onshore and near shore components of the overall Project. These are defined as:

- The Offshore Project components will consist of the Area 1 offshore production wells and the infrastructure necessary to develop the gas reserves. This also includes the offshore pipeline system, which will convey natural gas from the offshore production fields to the onshore facilities. EXIM's scope of supply does not involve this aspect of the project, however, in accordance with EXIM's *Environmental and Social Due Diligence Procedures and Guidelines* (ESPG), the Engineering and Environment Division is including consideration of potential project related impacts associated with this aspect of the Project in this analysis. To date, the development of the AMA1 gas fields is in the Golfinho-Atum Gas Field, in the northern portion of Area 1, and the Prosperidade Gas Field, located to the south.
- The Onshore Project components will comprise the LNG facilities and supporting infrastructure (e.g. worker accommodation facilities, construction areas, access roads and airport).
- The Near Shore Project components will consist of the marine infrastructure within Palma Bay necessary for construction, operation and maintenance of the Project. This includes logistic, support and export facilities within the territorial waters of Mozambique (e.g. shipping channels, Pioneer Dock, Multi-Purpose Dock and LNG Export Jetty).

The Mozambique Rovuma Venture Project ("Rovuma") is similarly developing an onshore LNG facility associated with the offshore gas reserve in Area 4, located adjacent to Area 1. Both AMA1 and Rovuma will separately construct and operate their own respective offshore and onshore



facilities. In parallel, they will jointly design, construct and use certain onshore shared facilities in the land area allocated by the Government (DUAT) and nearshore facilities (Marine Terminals and Material Offloading Facility).

#### Alternatives Analysis

Site selection, pipeline routing and layout alternatives have been evaluated throughout the Environmental and Social Impact Assessment (ESIA) process. The Lenders' environment and social team has worked closely and in cooperation with the engineering/facilities team. In all cases, alternatives were reevaluated based on environmental and social risks and impacts, technical feasibility and financial feasibility criteria. A key focus of the alternatives analysis was to avoid, minimize and mitigate potential environmental and social impacts.

#### **B. Environmental and Social Documents and Disclosure**

In accordance with EXIM's ESPG, AMA1 has been identified as a Category "A" transaction, requiring submittal of an Environmental & Social Impact Assessment (ESIA), reflecting the Project's status as a large-scale oil, gas, or liquefied natural gas development. A link to the ESIA was posted on EXIM's Website on January 20, 2016, to provide access to interested parties.

The Project has attracted interest from Non-Governmental Organizations (NGOs), such as an article posted in September 2016, by Friends of the Earth (FoE) on their website, and an April 2018 letter sent by group of NGOs to certain ECAs, including EXIM, involving in the financing of the Project. The overall tone of the articles and letters appears to be critical of the Project and fossil fuel projects in general, rather than identifying any specific gaps or weaknesses that have been identified in the way that the Project is managing the key Environmental & Social (E&S) issues. Also, EXIM staff met with FoE representatives who raised project specific concerns, like Stakeholder Engagement, Biodiversity and Resettlement and Compensation issues. The EXIM staff took notes of their concerns and forwarded to AMA1 to be addressed in the Environmental and Social Management Plans.

In the opinion of EXIM's staff, AMA1 is systematically responding to all key E&S related issues raised in the letters and articles in question, and forwarded by EXIM. AMA1 and the in-country Project team have strong management systems in place for monitoring stakeholder claims and negative media attention, including by environmental and social NGOs. Processes are in place for addressing those claims deemed to be potentially important to the Project. The articles and letter from FoE have not been deemed to be material to the Project based on the reliance on outdated information, inaccurate factual data and their misrepresentation of the strong buy-in of in-country, national NGO groups and local communities.

AMA1 maintains constructive relationships with numerous national and local NGOs that are involved in the Project. As an example, the project held a workshop with FOCAD, an NGO group in Cabo Delgado province last October with more than 50 NGOs and Civil Society Organizations

(CSOs) in attendance. Also, there is a coalition of five NGOs and several CSOs, which are currently monitoring the project's resettlement activities.

Information gathered from the stakeholder engagement and consultation process is ongoing and has led to the development of numerous mitigation measures that are being incorporated into the Project's design. The Project has a Stakeholder Engagement Plan (SEP) which includes a Grievance Mechanism. Grievances are tracked and addressed in a proactive manner.

### C. Environmental and Social Review

Environmental & Social Due Diligence (ESDD) was conducted by EXIM's Engineering and Environment Division and relied on information provided by the Project and the Lenders' Independent E&S Consultant (IESC), via the ESDD Report. The Engineering and Environment Division's evaluation of the Project indicates that the construction, operation and decommissioning of the Project will have impacts on people and the environment, which must be managed in a manner consistent with the eight World Bank Group International Finance Corporation's (IFC) Environmental and Social Performance Standards (PS).

The summary below provides an overview of the key risks and impacts resulting from the ESDD, following the structure of the IFC Performance Standards.

#### Performance Standard 1 (PS 1) – Assessment and Management of Environmental and Social Risks and Impacts

PS1 requires the development of an Environmental and Social Management System (ESMS) that will incorporate the following elements: (i) policy; (ii) identification of risks and impacts; (iii) management programs; (iv) organizational capacity and competency; (v) emergency preparedness and response; (vi) stakeholder engagement; and (vii) monitoring and review. AMA1 is well advanced in all aspects of their ESMS.

Subsequent to the completion of the ESIA, the Environmental and Social Management Plan (ESMP) was developed. The ESMP consists of a program of measures and actions to manage project-related environmental, social and health risks and impacts on the Afungi Peninsula and wider host country environment, the AMA1 Equivalent to the ESIA, specifically during the construction phase of the project. The ESMP also outlines practical and measurable ways in which to enhance positive impacts and opportunities associated with project development. Collectively, the ESMP articulates the project's approach to environmental and social performance management.

AMA1, in association with the Rovuma project, undertook a process to identify risks and impacts through the mechanism of completing the Environmental and Social Impact Assessment report for the Liquefied Natural Gas Project in Cabo Delgado prepared for national permitting requirements, which was approved in June 2014, by the Ministry of Coordination of Environmental Affairs. Given the changing conditions since 2014, the identification of risks and impacts has been redefined in the ESMPs submitted to the regulatory authority, the Ministry of



Land, the Environment and Rural Development. Deficiencies in the overall process of identification of risks and impacts from Performance Standard requirements have been addressed with supplemental studies that are now described in the ESMPs and a revised Executive Summary for the Environmental, Social and Health Impact Assessment (the Project's equivalent to the ESIA) submitted to the Lenders in April 2019. Both AMA1 and Rovuma have collaborated to quantitatively define cumulative impacts in terms of emissions, sediment dispersion, effluent discharge modeling and impacts to biodiversity, as discussed in various chapters of this report.

At this stage, the Engineering and Environment Division believes that AMA1 has gone, as far as practical, in terms of planning for cumulative impacts that can be reasonably anticipated.

There is still some work to do, but the Engineering and Environment Division considers that the overall process of defining Project-related risks and impacts is consistent with PS1.

Organizational Capacity and Competency: In its review of the July 2018, ESDD report prepared by the IESC, the Engineering and Environment Division noted that no issues were identified, with respect to organizational capacity and competency of the AMA1 staff. This report covers both onshore and offshore activities.

Emergency Preparedness and Response: AMA1 has finalized their Emergency Management Plan (issued on June 23, 2018), that defines an organizational structure that will be implemented with roles and responsibilities assigned to ensure safe, rapid, effective and efficient response to emergency incidents. The Engineering and Environment Division and the IESC have not undertaken a field review of AMA1's emergency response capabilities, but at this stage of the Project there is no obvious risk in terms of compliance with PS1.

Community Investment: EXIM staff and the IESC conclude that the draft Community Development Support (CDS) Plan supported by the assessment for the Community Investment Strategy (CIS) demonstrates good understanding of conditions and needs in the area, as well as the approach to the planning process for an effective community development program. The CDS plan is, at this stage, more of a strategy, than a plan. This stage of development is appropriate, as it is too early to develop support programs that will have long-term development impacts.

#### Performance Standard 2 (PS2) – Labor and Working Conditions

The main Industrial Relations (IR) documentation is in place and continues to be developed and implemented. Some recent revisions were made to key documents, including the IR Policy that now applies to all AMA1 employees, contractors and subcontractors.

The Project workforce in the Afungi area increased significantly in 2018, from over 880 to more than 4,700. Local recruitment has continued to be strong, with approximately 1,600 employees recruited from local communities at the end of 2018.

Main contractors are required to prepare a camp management plan for approval by AMA1. AMA1 has a closed camp policy, but there are some exceptions to this, on a temporary basis. At the end of February 2019, there were approximately 700 workers living outside of the main camps, and a process to move these personnel to the main camps is underway.



The Engineering and Environment Division concludes that the IR management system is compliant with the requirements of PS2, with the exception of the development of measures to assess the supply chain, and finalization and formalization of some key documents that are still in draft form, including the IR Policy and IR Monitoring Plan.

Performance Standard 3 (PS3) – Resource Efficiency and Pollution Prevention

The environmental aspects associated with the Project will be managed in accordance with the Project's ESMP that is still being finalized. The ESMP is intended to function as a framework for the implementation of the Project's environmental and social mitigation, and management commitments. The IESC has confirmed that Corporate-level environmental and social management plans, and Project specific environmental and social commitments, have properly taken Lender requirements into consideration, including PS3 requirements, using best international industry practices and Mozambique requirements.

Resource Efficiency: The two benchmarks for resource efficiency for the AMA1 are water conservation and greenhouse gas (GHG) emissions. Fresh water resources are scarce on the Afungi Peninsula and are the most critical resources to be conserved. Basic conservation procedures are now defined in the Water and Wastewater Management Plan, and in basic contractor Health, Safety and Environment procedures. These procedures outline requirements and practices for the minimization of water use; groundwater abstraction, maintenance and monitoring, including ongoing monitoring and assessments of groundwater levels at defined periods, and evaluation of feasibility of reuse of treated wastewater.

Pollution prevention: AMA1 and Rovuma have agreed to the development of a shared Waste Management Facility (WMF). Waste is managed by a third-party. Currently, the primary disposal solution relies on incineration. Wastewater is currently being managed by treatment and discharge to a leach field. This process is expected to be replaced by a new treatment plant that will also service Operations. The IESC concludes, and EXIM staff agrees, that the waste and wastewater management processes are developing in a manner consistent with PS3 requirements. The procedures for hazardous materials management are also consistent with Lender requirements.

Regarding air emissions and Project impacts, the Project is committed to meeting the World Health Organization air quality levels and/or Mozambique levels for ambient air quality (whichever is most stringent), while offshore activities will be aligned to the marine pollution provisions of Annex VI of the International Convention for the Prevention of Pollution from Ships (often referred to as MARPOL). These commitments are defined in the Air Emissions and Greenhouse Gas Management Plan dated March 27, 2019. In accordance with the ESPG, operations phase emissions have been evaluated on a cumulative basis with emissions from Rovuma. The combined onshore sources show general compliance with the World Bank Group's Environmental, Health and Safety Guidelines with the note that some parameters approach the acceptable limit at the fence line, while modeling of some sources showed exceedances in the marine environment, recognizing that offshore emissions sources will be transient in nature, and there will not be permanent sensitive receptors.

Performance Standard 4 (PS4) – Community Health, Safety, and Security

AMA1, jointly with Rovuma, completed a Regional Health Impact Assessment (HIA). The objective of the HIA was to anticipate (prior to implementation) the potential direct, indirect, and where relevant, cumulative project related impacts on community health in a defined set of potentially affected communities.

The Regional HIA identifies some significant situations that AMA1 and Rovuma will need to address. Given the risk of malaria at the Afungi site and surrounding areas, the two projects have developed a Community Malaria Control Program, which will need to be implemented as soon as possible.

The most significant indirect impacts will be associated with Project-induced in-migration. In-migration can have cross cutting effects across a range of environmental health issues through rapid changes to socio-economic, demographic and environmental factors. There is a high risk of increased transmission of communicable diseases, including HIV and other sexually transmitted infections (STIs), tuberculosis, water/sanitation-related conditions, and diseases with outbreak/epidemic potential.

Physical security has been a subject of concern over the past two to three years, but Project personnel had not been affected directly until February 21, 2019, when an AMA1 convoy on the road from Mocimboa da Praia to Afungi, approximately 20 kilometers from the construction site, was attacked and left six contractor workers injured. A separate attack on a contractor vehicle left three workers with Gabriel Couto (the Airport Contractor) killed. A Memorandum of Understanding (MoU) with the Ministries of Defense and Interior was established jointly with AMA1 and the adjacent Rovuma project. Under the MoU, 520 Government Security Forces were deployed to the area, and additional security personnel are scheduled to be deployed. EXIM's Engineering and Environment Division emphasizes that the potential significant risk of effects on both the Project and the local communities related to recent alleged insurgent attacks in the project area should not be underestimated.

#### Performance Standard 5 (PS5) – Land Acquisition and Involuntary Resettlement

The Project's potential negative social impacts will arise primarily from the physical displacement of approximately 560 households and the economic displacement of approximately 962 additional households. The Project has developed a Relocation Plan (RP) following an extensive consultation process with the affected communities, the government and civil society. The RP includes compensation and livelihood restoration for the displaced households and was approved by the Mozambican government in October 2016.

Since the security incidents in late February 2019, work at the Resettlement Village site, and the resettlement program, more broadly, has been on hold. The resettlement team has continued to communicate with communities, where possible.

The Engineering and Environment Division finds resettlement planning to continue to be largely compliant with the requirements of PS5, as the Project proactively addresses challenges, as they arise.

#### Performance Standard 6 (PS6) – Biodiversity Conservation and Sustainable Management of Living Natural Resources

No legally protected areas are within or overlap directly with the Project sites.



The Palma District, in which the Afungi Peninsula lies is endowed with habitat of very high conservation value, mostly situated in the central and western parts of the District (both of which are more remote with less road access and pressure from settlements). The Palma District comprises a rich and diverse vegetation mosaic with a series of patches of a highly restricted and localized habitat pertaining to the Coastal Dry Forests of the Eastern Africa Coastal Forest ecoregion. The importance of the on-site woodland and wetland habitats for a range of threatened and restricted range species were highlighted in the ESIA, including various avifauna, herpetology and mammal species. In the marine environment, the flora and fauna of the region includes threatened and/or endangered species and habitats, including marine turtles, whales and dolphins, fish (sharks and rays), coral reefs (including several species of reef building corals) and seagrass beds. Coral reefs in the area are considered amongst the most diverse in the western Indian Ocean, and a global hotspot for hard coral diversity.

The Project has sufficiently identified and incorporated both direct and indirect terrestrial and marine aspects into their impact assessment and mitigation hierarchy<sup>1</sup>. The Engineering and Environment Division believes AMA1 has approached the mitigation hierarchy responsibly, and commitments and actions to date indicate that ecological impact avoidance is being given a high priority. EXIM and the IESC find that the Project has made good progress in its efforts to meet PS6 requirements, and EXIM's Engineering and Environment Division concludes that the Project is generally in compliance with the requirements of PS6, with some exceptions that the Project is working on, including additional work on underwater noise modelling.

**Biodiversity Management:** The Engineering and Environment Division reviewed the ESIA, which evaluated direct and indirect impacts related to biodiversity and ecosystem services, including vegetation, herpetofauna, avifauna, mammals, surface water ecology, ichthyofaunal, corals and other marine ecology.

In collaboration with the Rovuma project, the collection of additional ecological baseline data continues, primarily focusing on terrestrial species and habitats to date – of note, is a recently updated ecological evaluation of vegetation species and sensitivity within the DUAT. AMA1 advises that further marine ecological baseline data collection will commence shortly, once a contractor is sourced. This supplementary baseline data will provide updates to the marine species/habitat data already held. The Ecological Monitoring Plan has been further revised, building on experience in the field, and findings from baseline surveys, and the in-field monitoring program is underway.

Joint air emissions and groundwater modelling have already been completed; joint effluent modelling and sediment dispersion modelling is yet to be completed. The need to avoid unforeseen impacts due to simultaneous dredging operations has been flagged. The Project has developed a Biodiversity Guidance Note to advise contractors of expected requirements, including the need to develop procedures and implement mitigation measures related to

<sup>1</sup> The mitigation hierarchy should anticipate and avoid, or where avoidance is not possible, minimize, and, where residual impacts remain, compensate/offset for risks and impacts to workers, Affected Communities, and the environment.

vegetation clearance, alien invasive species (including ballast water, biofouling, and pest management) and Wetland management.

Critical Habitat and Offsets: The CHA has deemed all three Areas of Assessment (onshore, nearshore and offshore) as Critical Habitat (CH), plus areas of both Natural Habitat and Modified Habitat. The list of CH qualifying species is compiled in the CHA report. Currently, the list of CH qualifying ecosystems includes: Onshore – Dry Forest, *Berlinia orientalis* Forest/Thickets, and Coral Rag Forest; Nearshore – Mangroves, Warm-water Corals and Seagrass Beds; and Offshore – Gas Seeps. The CHA reports that Tier 1 CH category thresholds are triggered by several terrestrial flora species, and that much of the onshore Area of Assessment meets the threshold for designation as a Key Biodiversity Area for restricted-range and Endangered plant species

A preliminary biodiversity offset screening analysis has recently been undertaken, also on a joint basis with the Rovuma project, to identify the initial feasibility of different offset program approaches. This process has benefitted from an initial engagement with a small number of stakeholders with knowledge or experience of offsets in Mozambique, or challenges encountered in regional conservation efforts. This process complements the framework for biodiversity offsets being developed by the Government in conjunction with a small number of international conservation organizations. One option under consideration by the Project is for a collaborative approach through aggregated offsets, which could ensure greater potential for achieving the necessary biodiversity gain prescribed in PS6 for CH areas.

In accordance with Section 7 of the U.S. Endangered Species Act, the Engineering and Environment Division and Office of the General Counsel are engaged in a Formal Consultation with NOAA-NMFS in the preparation of a Biological Assessment (BA). As a requirement of the BA, AMA1 is undertaking additional noise Impact assessment work for the nearshore construction activities. Completion of the noise study and subsequent development of a noise management plan is expected to delay the completion of the Lenders' E&S due diligence per the IFC Performance Standards.

#### Performance Standard 7 (PS7) – Indigenous Peoples

The collective research conducted by the Project has provided evidence that the local area is not home to any Indigenous groups, as defined by Performance Standard 7. Therefore, this PS is not applicable to this Project.

#### Performance Standard 8 (PS8) – Cultural Heritage

The Cultural Heritage Management Plan (CHMP) of November 2017, continues to be implemented during the early stages of construction, and is supported by the Curation Management Protocol, Grave Relocation Action Plan and "chance finds" procedures. The Cultural Heritage Inventory has now been reviewed by the Engineering and Environment Division and the IESC and provides a detailed account of all known cultural heritage sites in the DUAT construction footprint and the broader Afungi and Palma peninsulas. A detailed Cultural Heritage Guidance Note has also been provided to contractors to be incorporated into their work activities.



A Licensed Archaeologist continues to be present at site to oversee land clearance activities in accordance with the CHMP. The archaeologists are conducting pre-construction surveys, monitoring earthworks, and training construction teams in the "chance finds" procedure. These processes have resulted in several additional "chance finds" in the past 1-2 years, which are captured in the inventory.

The overall cultural heritage management is in line with best international industry practices and the requirements of PS8, provided the Project addresses the protection of known cultural heritage sites of "high" significance. Several other recommendations have been made by the Engineering and Environment staff and the IESC for meeting ongoing best international industry practices.

#### **D. Monitoring and Reporting**

Under the Environmental and Social Management Plan, a coordinated monitoring regime is contemplated, and is presently being discussed with Rovuma to take advantage of the level of commonality and overlap (shared facilities, etc.) between the projects. This would include monitoring in the preconstruction, construction and operating phases, for pollution protection/compliance, erosion control, and biodiversity. The monitoring regime should also include elements of monitoring by AMA1, the IESC and (particularly for resettlement) NGOs and other CSOs. An Independent CSO Monitoring Program was initiated by the Project to provide a vehicle for Mozambican CSOs and NGOs to actively participate in the monitoring of the Project E&S performance, practices and programs and provide independent opinion on the Project's compliance with applicable E&S standards. Participants in the Program will conduct a resettlement completion audit approximately 36 months, following physical relocation of households.

#### **E. Conclusions and Recommendations**

The Project will create a range of positive economic impacts at the local, regional, and national levels, including income growth (linked to employment and procurement opportunities), capacity development and increased Government revenue. A national content plan has been finalized with the Government with specific commitments on hiring and training of national and local workforce. Given its large size and export orientation, the Project, together with Rovuma would be the largest resource development undertaking in Mozambique's history.

AMA1 is a very large project in a greenfield environment that will impact the site and immediate surrounding environment. However, the controlling Environmental and Social Management Plans for this development are in line with Mozambican regulatory requirements, best international industry practices, and applicable EXIM ESG requirements, including the IFC Environmental and Social Performance Standards. AMA1 will not significantly impact critical habitat, protected areas, or ecologically-sensitive areas, and will not impact any indigenous populations. The critical relocation process for displaced households is being done per a detailed Relocation Plan that has been developed in accordance with Mozambique requirements, and



EXIM's ESPGs, including the IFC Performance Standards, and in consultation with the Project-affected households.

Security of both the Project and local communities is a key area of concern, considering ongoing recent incidents in the surrounding area and AMA1 security is currently at a level of high alert. The Project's Security Consultant's reports indicate that the insurgency is highly likely to target the Project throughout its lifecycle and outline several focus areas and proposed mitigation measures for consideration.

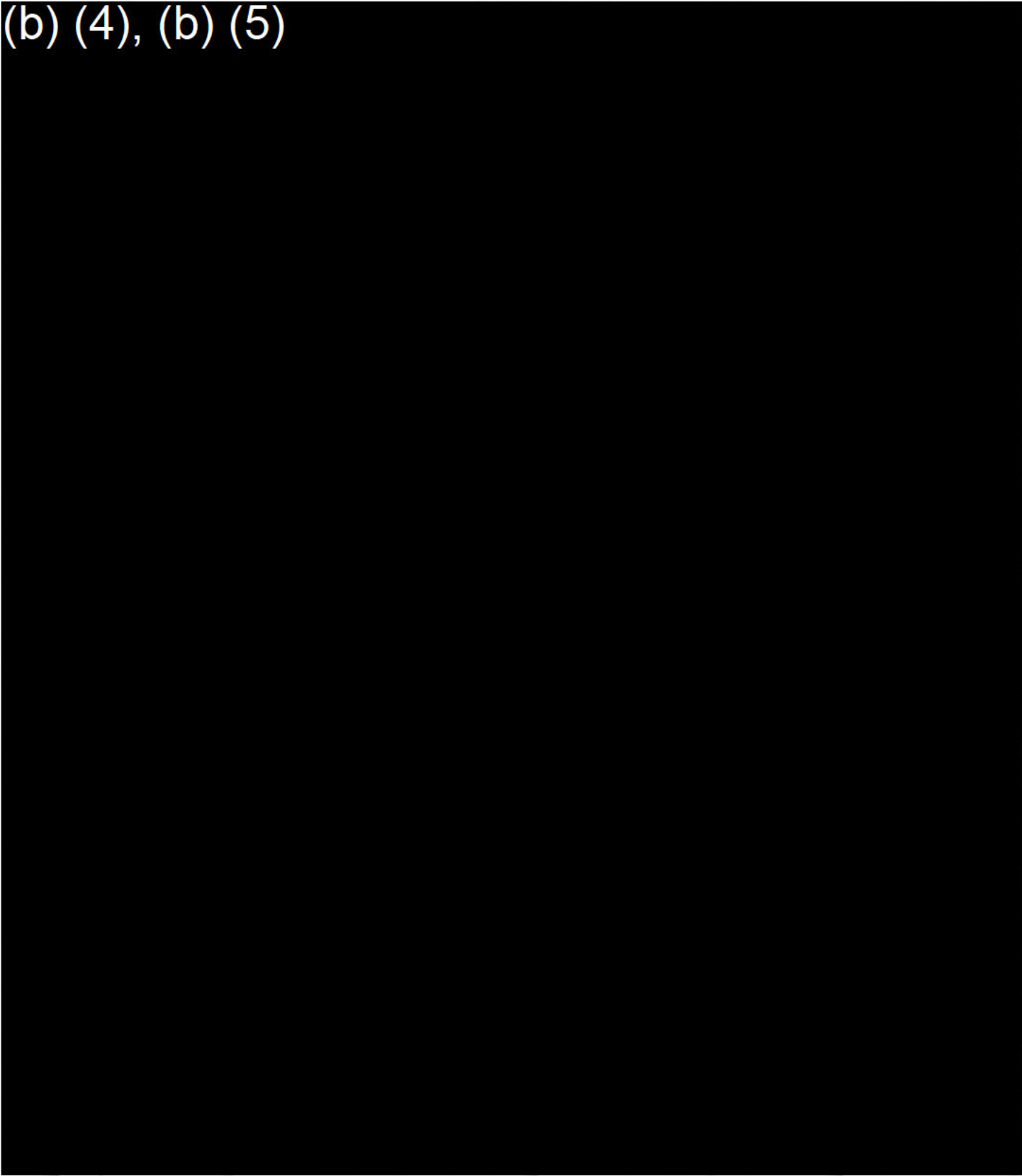
Although AMA1 currently not in a position of full compliance with all World Bank Group IFC Performance Standards, from the information reviewed, discussions held, and commitments made to date, the Engineering and Environment Division expects that the Project will continue to take active steps to bring the project into compliance. Residual points of non-compliance will be addressed in an enforceable Environmental and Social Action Plan (ESAP) that will be prepared and incorporated into the finance documents at the time of financial close. The ESAP will specify action items, milestones and due dates that must be met.

Based on the information provided by AMA1, the Environmental & Social Due Diligence Reports prepared by the Lenders' IESC, and a site visit conducted by EXIM's Senior Environmental Engineer, the Engineering and Environment Division concludes that the design, construction and operation of the proposed AMA1 LNG Project is expected to meet Mozambique's and EXIM's environmental and social requirements, and has no environmentally based objections to support of this transaction.

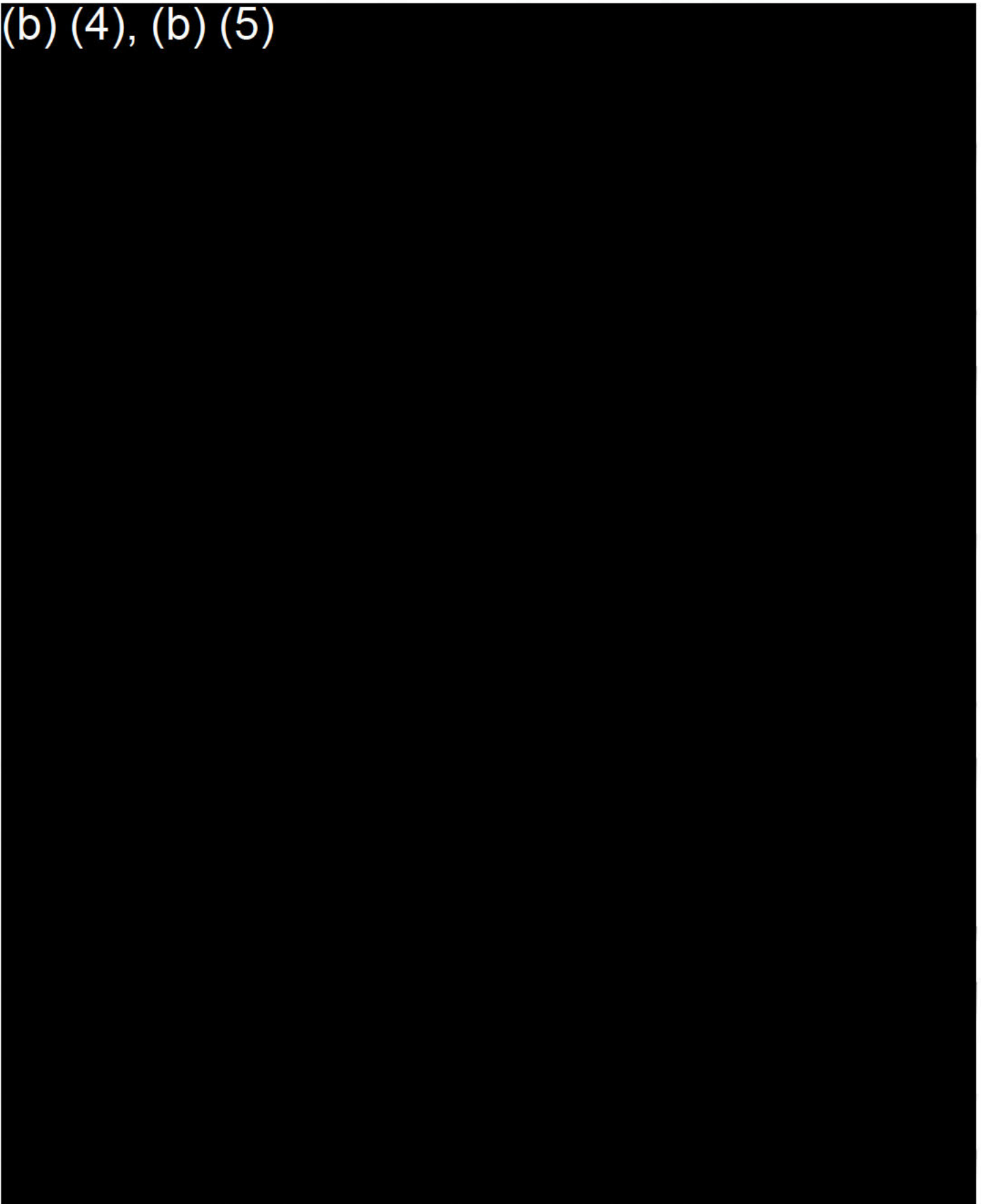
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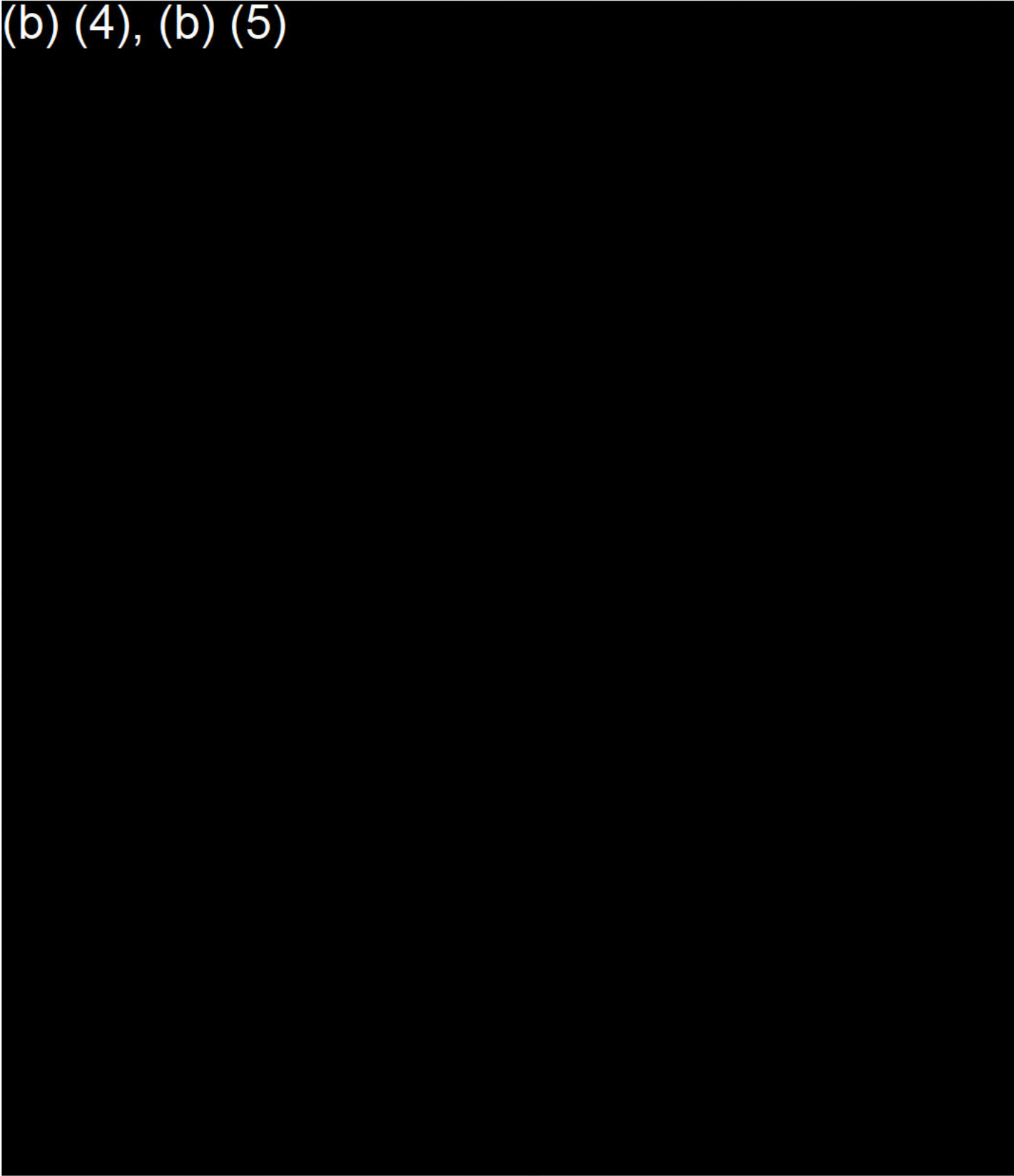
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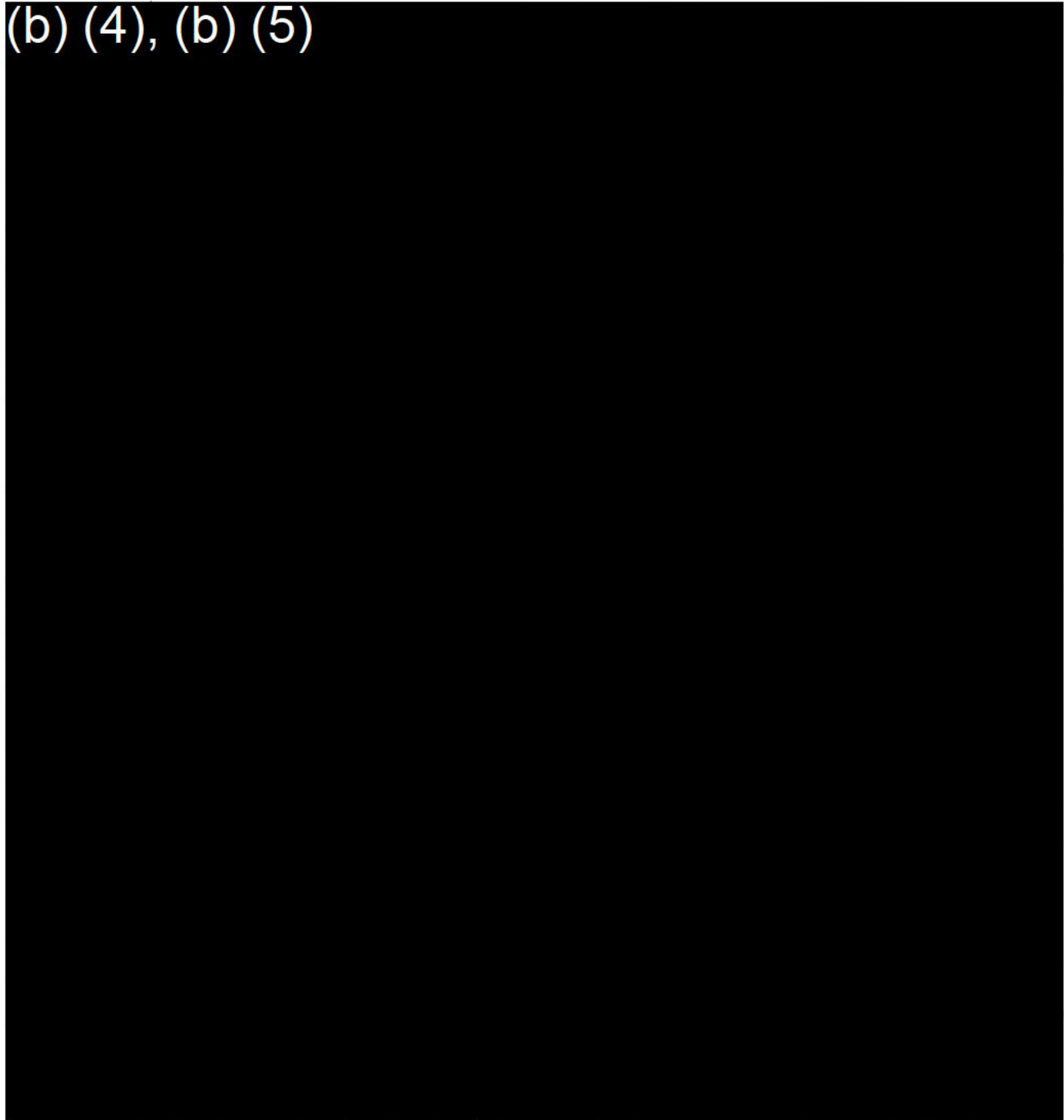


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## Appendix F –Risk Rating and Exposure Fee Calculation

### I. Introduction

An evaluation and risk rating of the obligor transactions based on external and obligor-specific risk factors is the basis of the risk rating and annual report writing process. The evaluation measures the relative risk of the obligor, and determines its accompanying risk rating and EXIM Bank's loan/loss reserve ratio.

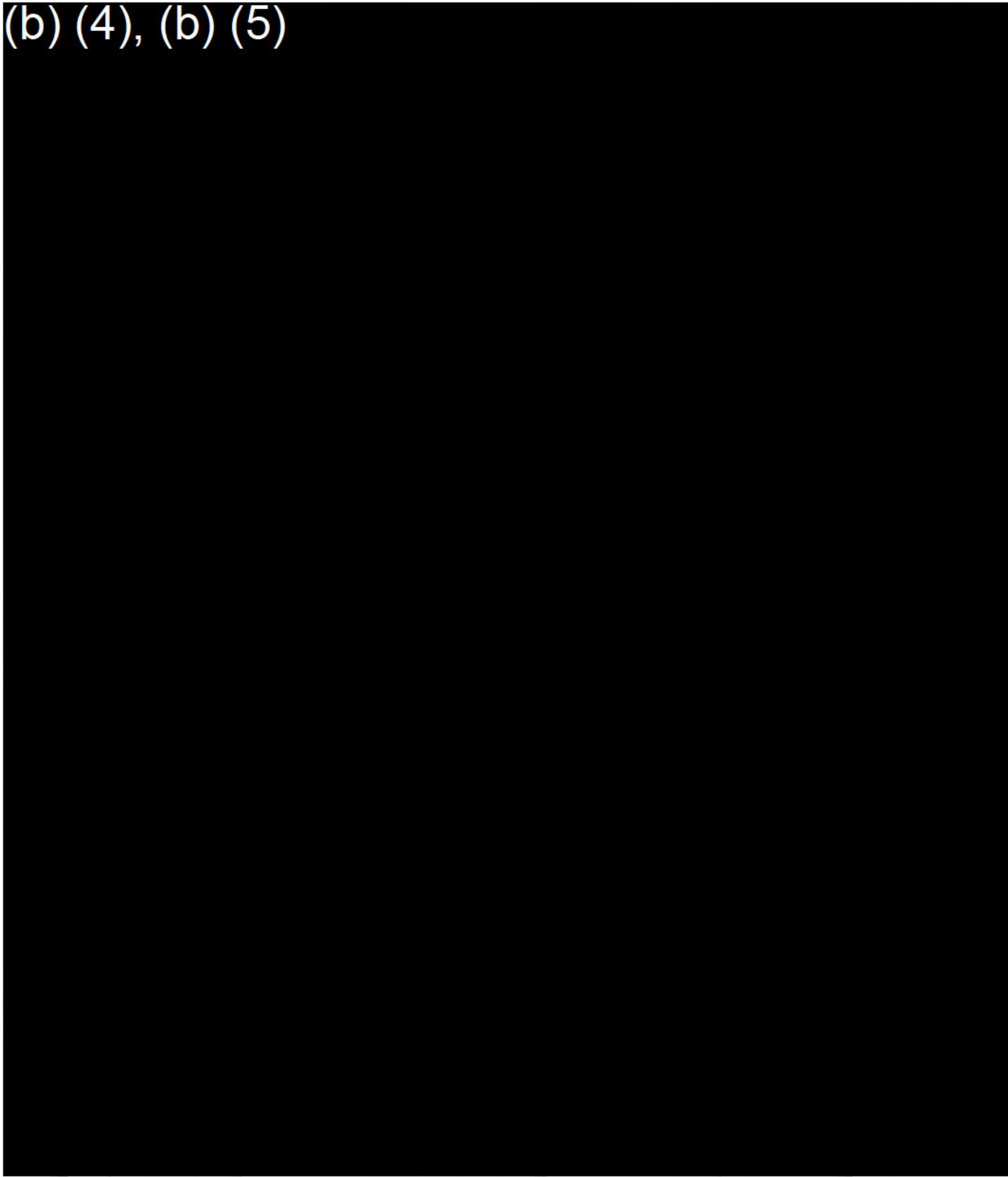
Each risk factor for an obligor risk rating is graded on a scale of 1 to 11 (from little-to-no risk to unacceptably high risk). In doing so, weights are assigned to each factor in order to obtain a "composite" risk rating for the obligor, which serves as a measure of the probability of default. Adjustments to the composite rating can be made based on transaction structure and availability of various credit enhancements, which include, but are not limited to: presence of offshore revenue structure; strong collateral; sovereign guarantee; guarantee of an offshore highly-rated entity; bank guarantee (with adequate financial strength); and/or other credit enhancements, as specified by the loan officer.

See risk rating description below.

FIGURE: DESCRIPTION OF RISK CATEGORY AND BCL EQUIVALENT RATINGS

BCL Rating	Corresponding Risk Level	Description of Credit Quality / Recovery Expectation	S&P Equivalent	Moody's Equivalent	Fitch Equivalent
1	<b>Excellent</b> Little to No Risk	Very best credit quality in the industry.	AAA AA+ AA AA-	Aaa Aa1 Aa2 Aa3	AAA AA+ AA AA-
2	<b>Strong</b> Minimal Risk	Credit quality very high compared to industry.	A+ A A-	A1 A2 A3	A+ A A-
3	<b>Very Good</b> Very Low Risk	Key factors and ratios at or slightly above international standards.	BBB+ BBB	Baa1 Baa2	BBB+ BBB
4	<b>Good</b> Low Risk	Credit risk generally acceptable for most transactions.	BBB-	Baa3	BBB-
5	<b>Satisfactory</b> Low to Moderate Risk	Average quality credit risk for industry.	BB+	Ba1 Ba2	BB+
6	<b>Acceptable</b> Moderate Risk	Credit quality low for this industry.	BB BB-	Ba3	BB BB-
7	<b>Weak</b> Moderate to High Risk	Marginal credit quality. Potential risk for emerging problems. May require special attention.	B+ B	B1 B2	B+ B
8	<b>Sub-Standard</b> High Risk	Marginal credit quality. Emerging problems.	B-	B3	B-
9	<b>Moderately Impaired</b> Very High Risk	Persistent or serious problems.	CCC+ CCC CCC-	Caa1 Caa2 Caa3	CCC
10	<b>Severely Impaired</b> Extremely High Risk	Recovery in doubt.	CC	Ca	CCC
11	<b>Expected Loss</b> Unacceptably High Risk	Unacceptable credit quality. Loss expected.	C D	C	DDD DD D

(b) (4), (b) (5)



**Exposure Fee**

Country Risk Category

Buyer Risk Category

(b) (4)

Credit Enhancement Discount

n/a

Local Currency Discount

n/a

Country Risk Adjustment for Offshore Escrow

Yes

Repayment Term (years)

Disbursement Period (months)

Weighted Average Loan Life during Repayment Period (years)

(b)

(4)

Commitment Fee (p.a.)

OECD-Compliant (Upfront, Not Financed) Equivalent Premium:

As Drawn Financed

(b) (4)



## Appendix G – Country Update

### General Risk Factor: Country Risk – MOZAMBIQUE (July 2019)

**CURRENT SITUATION:** Since 1994, the ruling FRELIMO party has won every election. The main opposition group, RENAMO, participates in the political process but remains armed. Tensions turned violent from 2013-16 as RENAMO attacks forced thousands of Mozambicans to flee. In February 2018, President Nyusi announced an agreement had been reached with RENAMO that included decentralizing the government to allow for more representation by RENAMO at the local levels and the integration of RENAMO fighters into government forces. The integration is ongoing and the agreement remains fragile. A breach of the agreement could be a catalyst for widespread unrest, especially in the lead-up to the October 2019 elections.

External debt is unsustainable, illustrated by sovereign defaults to both official and commercial creditors. Arrears to external creditors have accumulated rapidly, with current estimates of around \$1.2 billion. The majority of these arrears have been incurred since 2016. Further, a clandestine borrowing scandal in 2016 yielded the discovery of \$2.3 billion in hidden external public debt. The discovery caused the withdrawal of financial and donor support, highlighted by the IMF cancelling the second tranche of its Stand-By Arrangement.

A pair of cyclones struck Mozambique in March and April 2019. Cyclone Idai, a category three storm struck Beira, and Cyclone Kenneth, a category four storm, made landfall in Cabo Delgado. The storms caused over 1,000 deaths and destroyed at least \$1.0 billion worth of infrastructure. The two storms highlight the lack of disaster preparedness exhibited by the government and the considerable climate risk of operating in Mozambique.

**OUTLOOK:** The LNG projects (MOZ LNG, Rovuma LNG) could serve as a panacea to Mozambique's dire financial situation as production-driven increases to GDP and fiscal revenues are crucial to achieving long run debt sustainability. However, these projects are threatened by Islamist extremists operating near the projects and an incompetent response from authorities. This threat was realized during a February 21<sup>st</sup> attack that resulted in the death of an Anadarko subcontractor. The insurgents have been able to mount numerous attacks since late 2017. The group may also be connected to international extremist cells. A substantial delay in project execution constitutes the most significant downside risk to economic stability. There is additional risk from the potential diversion of government resources, which remain stretched by large fiscal deficits, defaults on external debts, storm recovery efforts, and the continuing threat from RENAMO.

Regarding the \$2.3 billion worth of hidden sovereign-guaranteed debt, the government is currently in negotiations with those creditors (Credit Suisse and Russia's VTB) and investigations are being conducted by authorities in Switzerland, the UK, and U.S. The government has also

been in negotiations with the IMF to resume their credit facility but negotiations have stalled due to the government's lack of cooperation with the investigation. Further, a debt-restructuring agreement has been struck, in principle, between the government and most of the holders of a \$727 million sovereign Eurobond currently in default. The agreement would see Mozambique swapping this debt for a new bond backed by future revenue from the LNG projects. However, the IMF forecasts arrears will continue to accumulate until at least 2023 when LNG production begins.

**BACKGROUND DATA\*****Country Risk Ratings (effective date):**

ICRAS Sovereign BCL	9 (October 2018)
ICRAS Nonsovereign BCL	9 (October 2018)
OECD Feel Level	7 (June 2019)

**Demographic Indicators:**

Population	27.2 million
Literacy	56%
Life Expectancy	54.1 years at birth

**Trade Activity:**

Current Exposure	\$4.5 million (June 2019)
U.S. Exports	\$171.2 million
% Financed by EXIM	0.08% (2016-18)

Amount Financed by EXIM	\$0.1 million (2016-18, annual average)
U.S. Imports	\$113.0 million

**Business Climate Indicators:**

Doing Business Rank	135 (2019) of 190 and 138 (2018) of 190
WEF Competitiveness Rank	133 (2018) of 140 and 125 (2017) of 135

<b>Economic Indicators:</b>	<b><u>2017</u></b>	<b><u>2018</u></b>	<b><u>2019</u></b>	<b><u>2020</u></b>
Nominal GDP (US\$, billions)	\$12.6	\$14.4	\$15.4	\$16.3
Per Capita GDP	\$426.1	\$475.6	\$493.4	\$509.3
Real GDP Growth	3.7%	3.3%	4.0%	4.0%
Fiscal Balance/GDP	-3.4%	-5.3%	-5.4%	-6.0%
Consumer Price Inflation	15.1%	3.9%	4.2%	5.5%
Current Account Balance/GDP	-20.2%	-34.4%	-51.1%	-63.8%
FX Reserves/1 Month Imports	4.7	3.6	2.8	2.3
External Debt/Exports	357.0%	399.4%	524.5%	589.8%
External Debt/GDP	153.3%	151.4%	197.5%	226.8%
External Debt Service/Exports	20.0%	27.2%	30.8%	30.2%

\*Unless otherwise noted all data refer to 2018. Economic indicators from April 2019 WEO.

Exchange Rate/ Inflation comparison




Year ending 12/31	2016	2017	2018
Metical/US\$	71.35	59.27	61.58
Annual % Change **	55.4%	-16.9%	3.9%

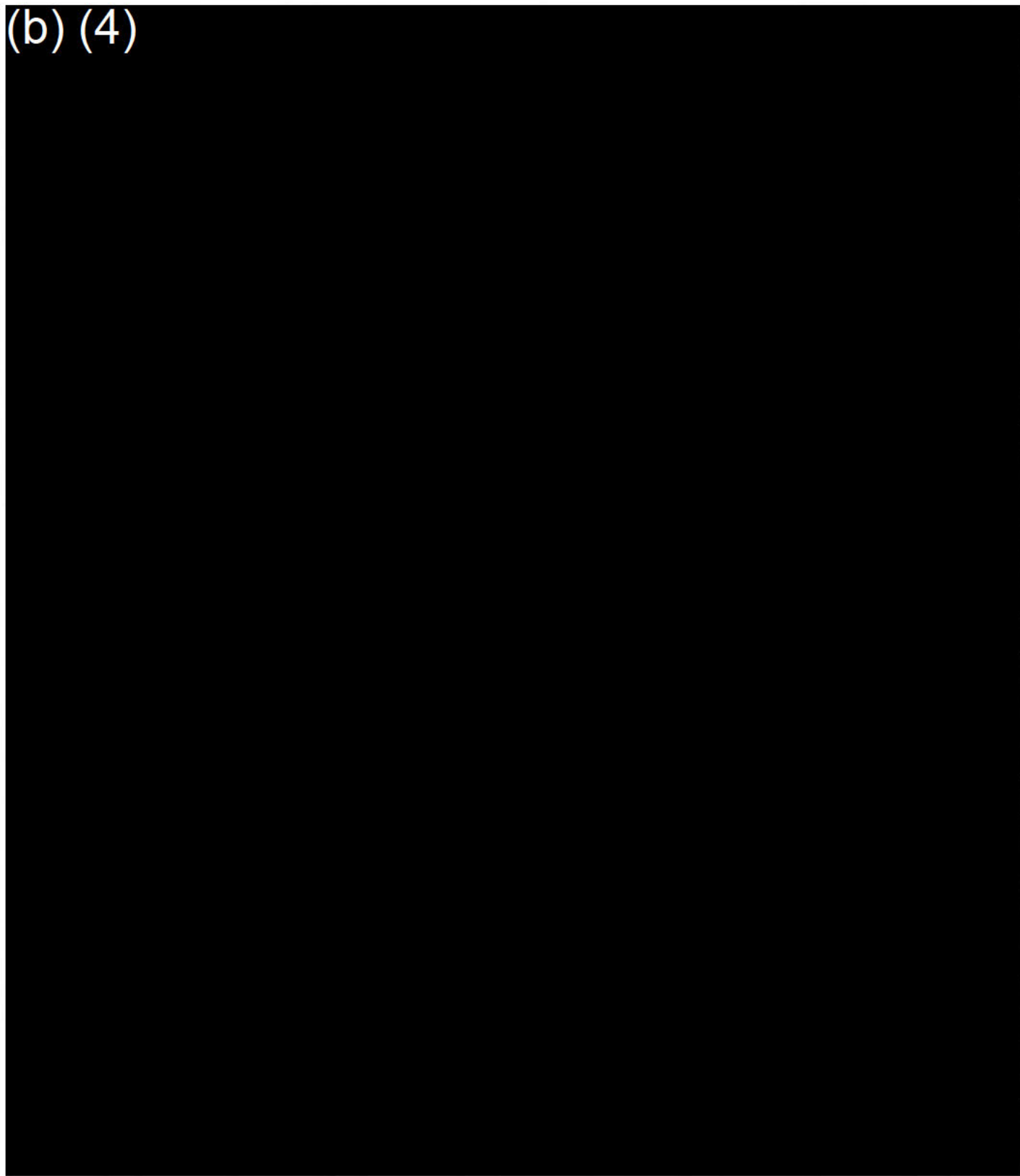
Source: IMF World Economic Outlook, April 2019

\*\*A positive number denotes depreciation of the local currency and vice versa.

(b) (4)



(b) (4)





## Appendix H: Mozambique Security Summary Analysis

Mozambique presents a rapidly evolving security dynamic with an equally challenging physical risk scenario. The ground situation can change very swiftly, and there are multiple, conflicting views of the situation. The security environment is highly variable, security threats and risks to the Project will evolve rapidly, and the situation is likely to worsen before it improves.

Mozambique emerged from decades of civil war in the mid-1990s as a newly established multi-party democracy. The country remains very poor, and natural resources discoveries over the past two decades have yet to provide a significant boost to national economic well-being. Chronically weak governmental institutions and high levels of corruption hamper development. The majority of the population is Christian (56%), but there is a significant Muslim community in the north (18%).

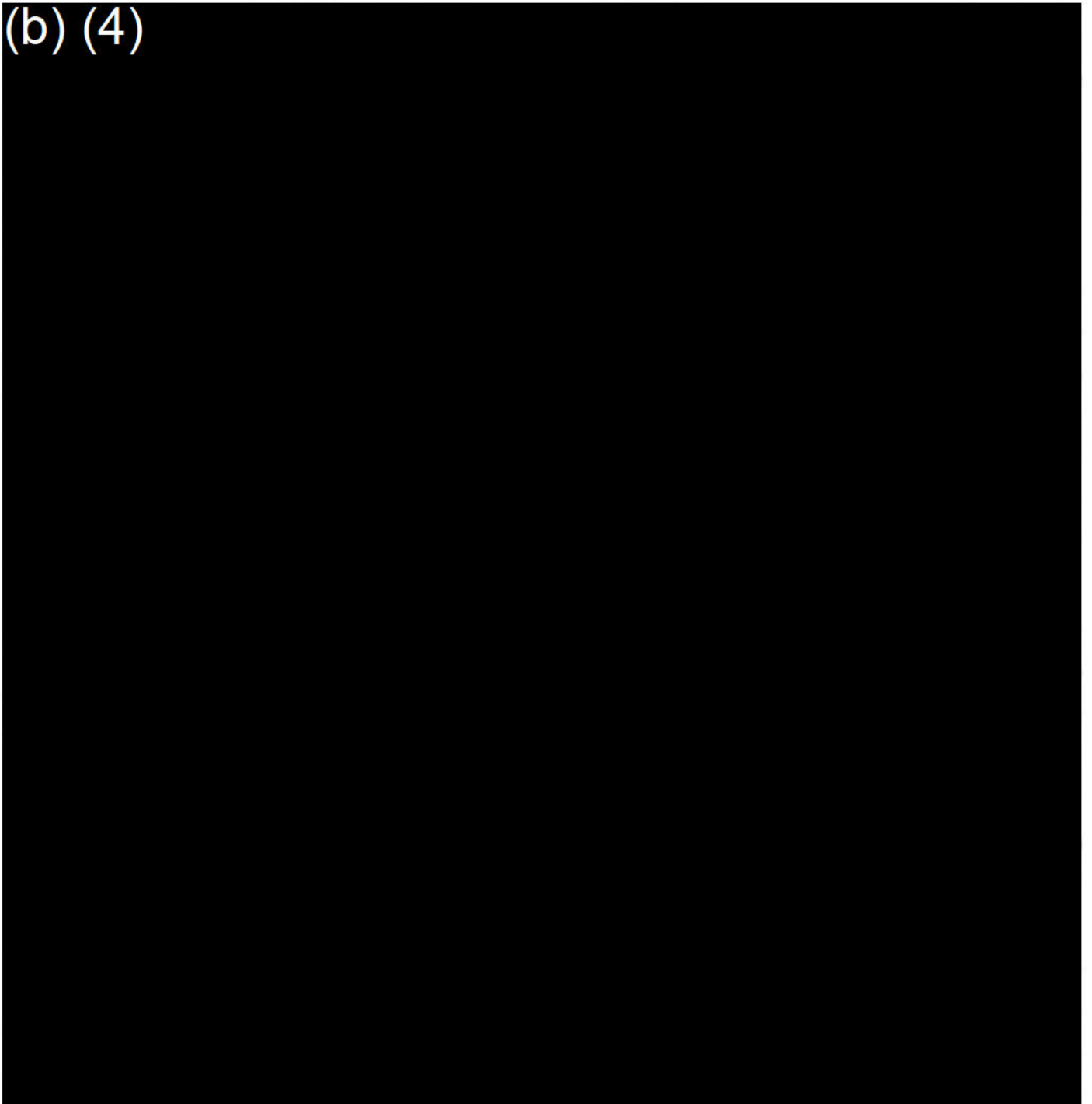
On August 1, 2019, Mozambican President Filipe Nyusi of the Frelimo party and Ossufo Momade, leader of the Mozambique National Resistance Movement, better known as Renamo, signed a peace deal, predicated on disarming Renamo forces, integrating them into the government, and devolving central government power to the various regions. Mozambique's ruling government and Renamo have reached multiple peace deals in the past, only for the agreements to fall apart. The prospects for this peace deal will depend on whether Renamo will keep its remaining 5,000 fighters armed — as it has previously done, after arguing the government was acting in bad faith. However, if both sides implement the deal, it would allow the Mozambican government to commit additional resources toward combating an ongoing Islamic insurgency in the country's north.

Physical security has been a subject of concern throughout the due diligence of this transaction. Project personnel had not been affected directly until February 21, 2019, when an AMA1 convoy on the road from Mocimboa da Praia to Afungi, approximately 20 kilometers from the construction site, was attacked and left six contractor workers injured. A separate attack on a contractor vehicle left three workers with Gabriel Couto (the Airport Contractor) killed.

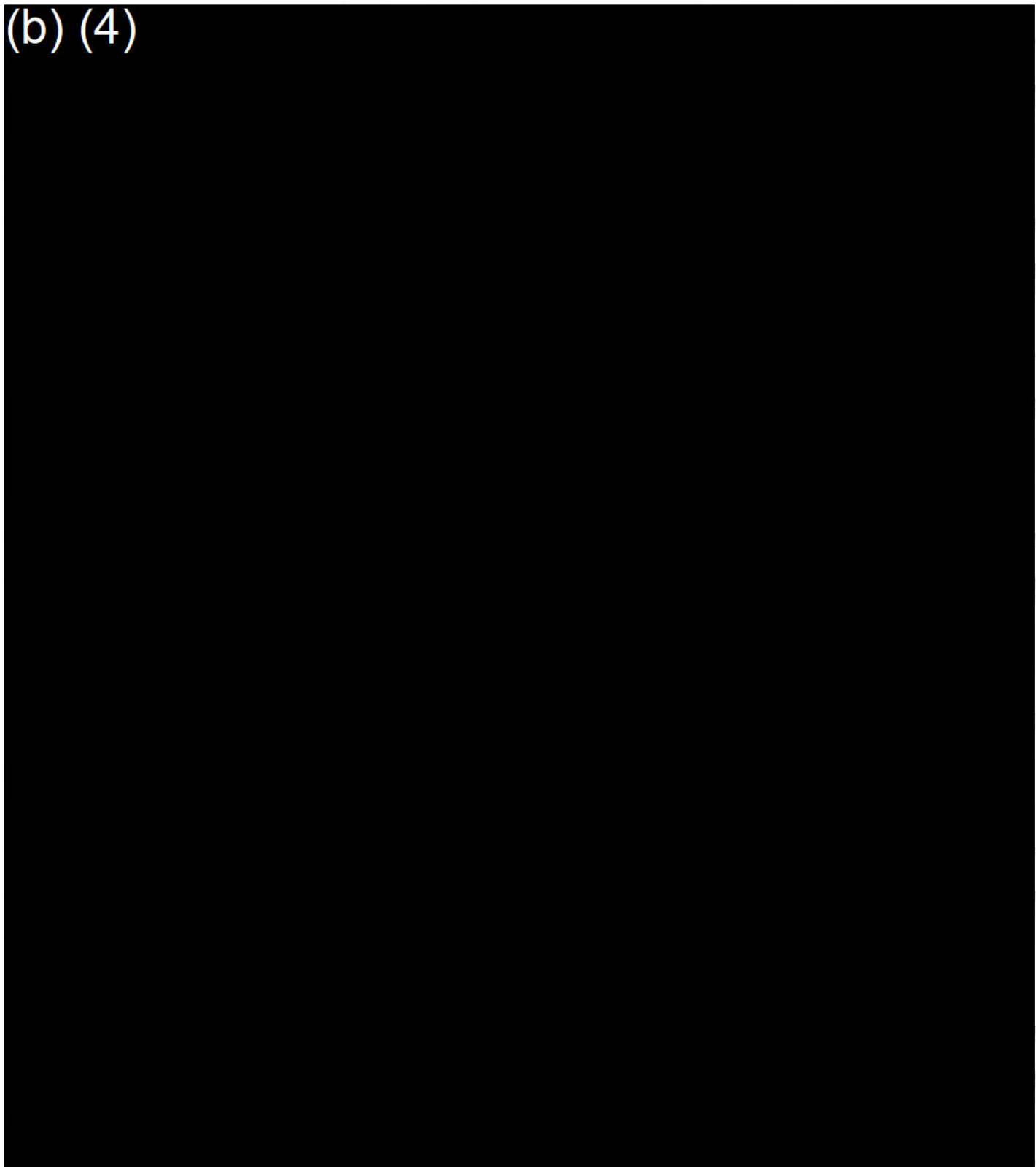
The primary security threat to the Project is the emerging Islamist insurgency involving Ahlu Sunnah Wa-Jamo ("ASWJ"), especially given the resurgence in ASWJ violence in May, resulting in over 30 fatalities. ASWJ presents both direct and indirect threats to schedule and cost, not to mention potential threats to life. Direct attacks against the Project may cause damage to the

facilities and increased costs for upgrading Project security. Indirect attacks, directed toward Project employees and villages outside of the Project perimeter, may discourage local participation in the project and affect labor availability. This is compounded by a potential perception among local Mozambicans that they are not seeing benefits from the Project.

(b) (4)



(b) (4)



## Appendix I: Economic Impact Analysis

### EXPORT-IMPORT BANK OF THE UNITED STATES POLICY ANALYSIS DIVISION

August 6th, 2019

#### MEMORANDUM

Subject: Economic Impact Analysis for Mozambique LNG – AP087889XX

#### EXECUTIVE SUMMARY

In accordance with the EXIM Bank economic impact procedures, Policy staff subjected this transaction to a detailed economic impact analysis. Staff concluded that this transaction will likely have a net positive impact on the U.S. economy based on the following findings:

1. Liquefied Natural Gas (LNG) is not currently, and is not likely to become, in structural oversupply during the repayment of the EXIM Bank facility; and
2. This transaction is estimated to yield a net positive benefit of about \$2.31 billion on the U.S. balance of trade.

#### INTRODUCTION

The products analyzed in EXIM Bank's economic impact analyses are those goods that "hit the market"—the end products that the foreign buyer will sell to other companies on the market—irrespective of whether the EXIM Bank-supported exports directly or indirectly contribute to new production. This guiding principle focuses the analyses on all new foreign production associated with the EXIM Bank-supported project that could compete with U.S. production in the global marketplace.

In this transaction, EXIM Bank will enable the foreign buyer, Anadarko Mozambique Area 1 (AMAI), to purchase U.S. equipment and services to develop natural gas fields, and construct and operate a liquefaction facility, Mozambique LNG, in Northern Mozambique (the Project).<sup>1</sup> The facility will establish production capacity for liquefied natural gas (LNG). LNG is natural gas that has been super-cooled so that it liquefies, facilitating economic transport over long-distances. When the LNG arrives at its destination, it must be re-gasified before it is transported via pipeline to the end user. The LNG produced is expected to be sold to markets in Asia and Western Europe.

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<sup>1</sup> Anadarko is in the process of being acquired, and it is likely Anadarko's stake (26.5%) in the project will be sold to another company (likely Total). This potential sale is not likely materially impact the project plan.



LNG is the main product that will “hit the market”, and the new capacity will exceed 1% of U.S. LNG production. As a byproduct, a certain amount of other condensate/petroleum liquids will be produced and sold on a spot basis.

#### THE PROPOSED TRANSACTION IN CONTEXT

EXIM Bank has received an application from AMA1 for a direct loan of \$5 billion to support the export of approximately \$2.99 billion of U.S. equipment and services for the construction of a liquefaction facility and export terminal in Mozambique. The facility’s total project capital cost is estimated at approximately (b) (4). Thus, EXIM financing will constitute a 20.3% share of the total project capital cost. The repayment term of the EXIM facility is 12.5 years.

AMA1 will use the U.S. equipment and services to develop the offshore Golfhino-Atum field and construct and operate a natural gas liquefaction facility, located on the Afungi peninsula in northeastern Mozambique. The two-train facility (b) (4), (b) (5)

[REDACTED]

[REDACTED]

#### THE PRODUCTS

While the scope of the project includes development of natural gas fields, the gas will be liquefied prior to export. This liquefied gas (i.e., LNG) will be the product that will hit the market and potentially compete with U.S. LNG production. Hence, this analysis focuses on the impact of AMA1’s LNG production capacity on U.S. LNG producers.

In the process of gas separation prior to liquefaction, the Project will also produce condensate/natural gas liquids. These byproducts compete with oil on the world markets. These byproducts will be sold opportunistically into the world market.

#### TRADE-RELATED MEASURES

Currently, there are no pending or outstanding antidumping and countervailing duties or Section 201 trade measures on any petrochemicals from Mozambique.<sup>2</sup> There have been no relevant applications for Trade Adjustment Assistance filed by U.S. LNG producers.<sup>3</sup>

<sup>2</sup> As of April 2, 2019

<sup>3</sup> As of April 2, 2019 using NAICS code 211210 (natural gas distribution) and 21110/211111 (oil and gas extraction)



### ECONOMIC IMPACT ANALYSIS

This portion of the overall evaluation examines empirical data to reach conclusions on three points related to the transaction:

- 1) *The capacity of the proposed project as a percentage of U.S. production:* If this figure is equal to or greater than 1%, a project meets the legislative standard for “substantial injury”. As such, legislation would allow EXIM Bank’s Board of Directors to deny this transaction.
- 2) *The current and projected supply and demand for the product on global markets:* Determining whether there is “oversupply”<sup>4</sup> during the repayment term of the EXIM facility is one of the key legislated considerations for assessing the degree, if any, of actual impact.
- 3) *The economic implication of the exports of the transaction compared to any adverse implications for U.S. output of like or similar products:* This is a legislative consideration for evaluating whether there is a basis for the Bank to approve cases where new production equals or exceeds 1% of U.S. production.

#### **Percentage of U.S. Production**

The AMA1 LNG project will have a nameplate LNG (b) (4). The U.S. produced about 22.3 MTPA of LNG in 2018.<sup>5</sup> Therefore the new capacity would reflect about 58% of U.S. production. (b) (4), (b) (5)

March 2019, meaning new natural gas production in Mozambique will be above 1% of U.S. production as well.

Condensate/natural gas liquids by-product production will be roughly 3.6 million barrels a year.<sup>6</sup> U.S. equivalent production is roughly 4 billion barrels a year. Mozambique production is only .1% of U.S. production. Since the volume of new foreign production capacity does not meet the

<sup>4</sup> The analysis uses the concept of “structural oversupply” as the basis for a conclusion. “Structural oversupply” occurs when supply is chronically greater than demand. “Structural oversupply” suggests that non-market factors are, either directly or indirectly, influencing production volumes in the industry to levels that are not warranted by market forces. “Structural oversupply” is distinct from “cyclical oversupply,” a regularly and naturally occurring phenomenon driven by industries’ business cycles.

<sup>5</sup> Reflecting Cheniere’s Sabine Pass Trains 1-4 and Dominion Cove Point.

<sup>6</sup> Typically Economic Impact examines foreign capacity. In this case production of the byproduct is not the goal of the project, estimated production is used as the denominator in the 1% test as there is no meaningful “capacity” number

1% substantial injury threshold, no detailed analysis is necessary for these by-products. The remainder of this analysis will focus on LNG.

### Analysis of "Oversupply"

This section examines whether Mozambique LNG could possibly start production during a period of oversupply in the global market for LNG.

#### *Supply*

The LNG industry is in the midst of an unprecedented expansion in capacity and will see 150 MTPA of capacity added to the global LNG market by 2020, a 50% increase from 2015.<sup>7</sup> Almost 40 MTPA are expected to come online in 2019 alone, primarily in the United States.<sup>8</sup> The overall expansion is driven by projects in Australia and the United States, though Russia will contribute as well. This expansion reflects final investment decisions (FID) taken prior to 2015, as such projects typically take a half-decade or so to come online. For example, Cameron LNG in the United States took FID in 2014 and will begin operations and exporting this year. Over the 2016-2018 period few new projects moved forward by taking FID. That lull in new investment decisions has begun to change in 2019.

Golden Pass, a joint project of Qatar gas and Exxon Mobil located on the U.S. Gulf Coast, announced in February it was taking FID and moving forward. Sabine Pass Train 6 announced in early June 2019 it was taking FID. Another U.S. project, Calcasieu Pass has not publicly announced FID, but news reports suggest it has done so internally<sup>9</sup> and the EIA includes it on a list of under construction U.S. LNG projects<sup>10</sup>. Finally, the Mozambique LNG project (currently sponsored by Anadarko) took FID in mid-June. (b) (4), (b) (5)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

<sup>7</sup> Corbeau, Anne-Sophie and David Ledesma, *LNG Markets in Transition: The Great Reconfiguration*. 2016. Pg 6.

<sup>8</sup> <https://www.reuters.com/article/lng-outlook/record-lng-capacity-to-get-green-light-in-2019-amid-strong-demand-idUSL3N1Z21KH>

<sup>9</sup> There are news reports that Venture Global, the Calcasieu pass sponsor, has already taken FID but has not publicly announced it yet. See S&P Global Platts "Poland's PGNiG Agrees to buy more LNG from Venture Global project in US". June 12<sup>th</sup>, 2019.

<sup>10</sup> EIA Database of U.S. LNG Export Facilities, <https://www.eia.gov/naturalgas/U.S.liquefactioncapacity.xlsx>

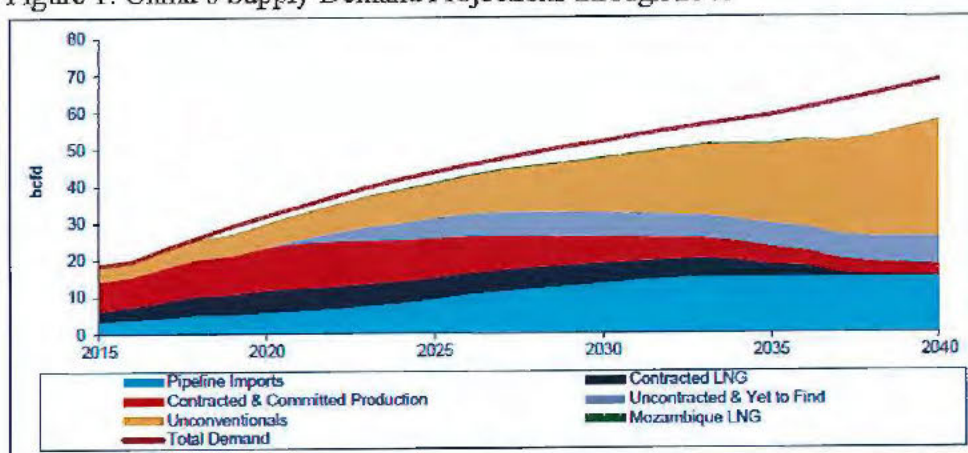
<sup>11</sup> Wood Mackenzie via Societe Generale Information Memorandum, pg 102, 11/2018



### Demand

The wave of projects scheduled to come online in the 2015-2020 timeframe initially drove fears of an oversupply of LNG capacity occurring in the early 2020s. That projected oversupply would have reversed (i.e., moved into balance) around 2023. However, increased demand for LNG has alleviated fears of oversupply. In fact, Bloomberg reports that a supply shortage is expected closer to 2020.<sup>1</sup> Notwithstanding recent weaknesses in spot prices in Asia, the longer-term demand fundamentals remain strong. China's LNG demand is growing much more rapidly than projected, as China looks to transition to cleaner fuel sources. China became the number two importer of LNG in 2017, behind only Japan, and will likely become number one within five years. Even allowing for healthy growth in Chinese shale gas (referred to as unconventional in figure 1), demand for gas in China should outpace supply (from all sources) for the foreseeable future.

Figure 1: China's Supply-Demand Projections through 2040

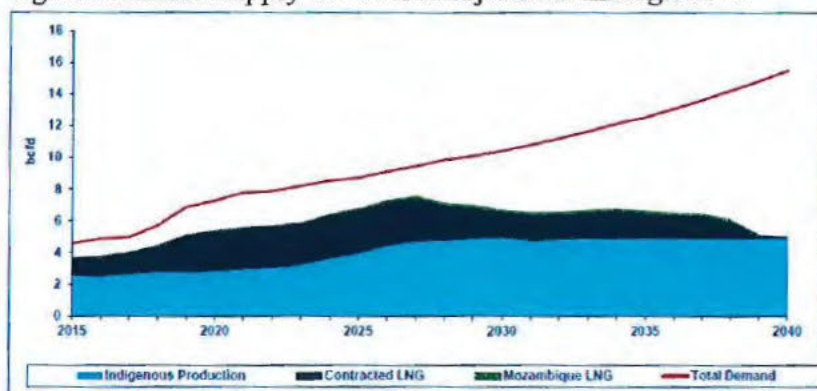


Source: Wood Mackenzie via Societe Generale Information Memorandum, pg 153, 11/2018

Historically Japan has been the largest importer of LNG, followed by South Korea and Taiwan. Demand in those markets is flattening as markets mature and Japan restarts its nuclear reactors following the Fukushima disaster. However, demand for LNG in new markets is growing faster than supply as nations seek to switch to cleaner burning natural gas, rather than coal. As discussed, the environmental benefit has been a key driver for China's growing demand and is also a factor for India as well. Indian demand is project to about double in the next five years, and almost triple by 2030.

<sup>1</sup> Bloomberg Intelligence, "Shortage Draws Nearer on Back of Asia Demand Growth", 5/6/2018.

Figure 2: Indian Supply- Demand Projections through 2040



Source: *Wood Mackenzie via Societe Generale Information Memorandum*, pg 157, 11/2018

Other emerging Asian economies such as Pakistan and Bangladesh are also projected to become major markets over the next two decades. Additional drivers of demand are European countries (particularly in Eastern Europe) looking to lessen their dependence on Russian pipeline gas (see Poland's recent deals to purchase U.S. LNG<sup>2</sup>), and traditional suppliers of LNG running down their resources and needing to import gas (such as Indonesia). Europe is a particularly important back-stop for demand, as it has substantial existing import capacity and gas related infrastructure.

Global demand could total slightly more than 400 MTPA, in 2025, per Wood Mackenzie.

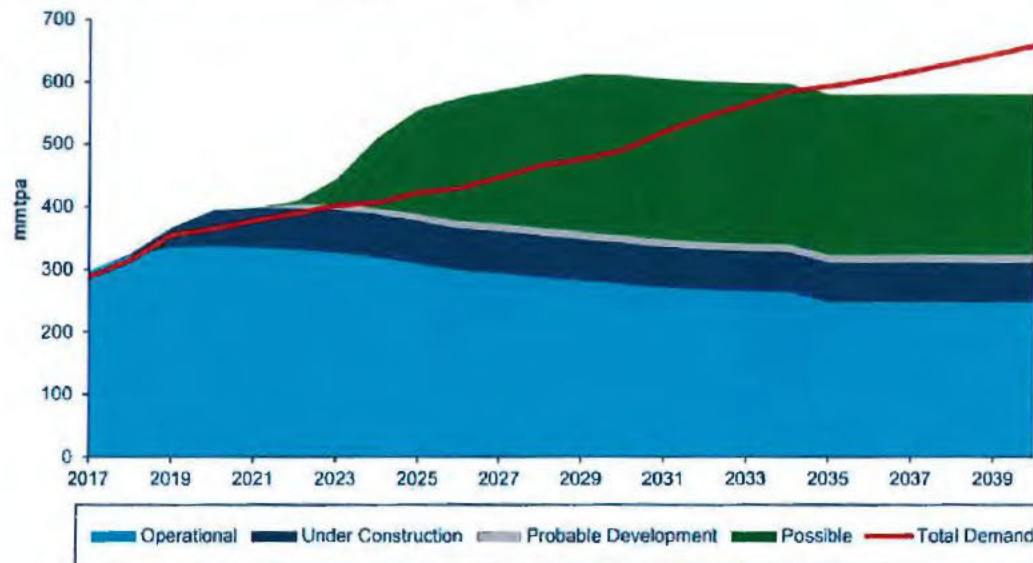
### *Supply-Demand Balance*

LNG industry observers generally agree that there will be a supply-demand gap opening in the early-to-mid 2020s. For example, see Wood Mackenzie's outlook below in Figure 3, which shows demand outpacing current, under construction, and probable capacity around 2024. While various forecasts are not all identical, there is little doubt that currently producing and under construction projects will fall short by 5-10% of satisfying demand sometime in the next five years. Pending new projects, that gap would grow from there.

<sup>2</sup> Polish Oil & Gas Company (PGNiG) has signed long-term deals with U.S. LNG exporters Sempra (<https://www.sempra.com/newsroom/press-releases/sempra-energy-subsiary-and-polish-oil-gas-co-sign-definitive-agreement>), Cheniere (<http://en.pgnig.pl/news/-/news-list/id/pgnig-24-year-contract-with-cheniere-signed-deliveries-of-american-lng-to-poland-will-commence-in-2019/newsGroupId/1910852>) and Venture Global (<http://en.pgnig.pl/news/-/news-list/id/pgnig-and-venture-global-lng-announce-lng-sales-and-purchase-agreements-for-2-million-tonnes-per-year/newsGroupId/1910852>) in the last several months.



Figure 3: Emerging LNG supply-demand gap



Source: Wood Mackenzie via Societe Generale Information Memorandum, pg 102, 11/2018

Additional sources indicate that LNG demand is set to grow substantially over the next ten to fifteen years, beyond the 2025 level. These projections include:

- BP's 2019 Energy Outlook projects the LNG trade to more than double by 2040<sup>14</sup>
- Shell's 2019 LNG Outlook projects LNG demand almost doubling by 2035<sup>15</sup>
- McKinsey's 2018 Global Gas and LNG Outlook to 2035 sees LNG demand growing by ~75%<sup>16</sup>
- Bloomberg Intelligence projects a 75% rise in demand by 2030<sup>17</sup>

Given the reality of limited new supply available within 5-7 years, declines from existing producers and increasing demand, it is unlikely that structural oversupply develops in the LNG market any time in the foreseeable future.

<sup>14</sup> <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/energy-outlook/bp-energy-outlook-2019.pdf>, page 50

<sup>15</sup> [https://www.shell.com/promos/overview-shell-lng-2019/\\_jcr\\_content.stream/1551087443922/1f9de66efc0e3083b3fe3d07864b2d0703a25fc4/lng-outlook-feb25.pdf](https://www.shell.com/promos/overview-shell-lng-2019/_jcr_content.stream/1551087443922/1f9de66efc0e3083b3fe3d07864b2d0703a25fc4/lng-outlook-feb25.pdf), pg 14

<sup>16</sup> <https://www.mckinsey.com/solutions/energy-insights/global-gas-lng-outlook-to-2035/-/media/3C7FB7D7F5B4A47E393AF0CDB080FAD08.ashx>, Pg 26

<sup>17</sup> LNG Supply and Demand Outlook, accessed via Bloomberg Terminal, dated 11/27/2018



### Impact on U.S. Trade Flows

This section of the analysis considers the potential for displacement of U.S. LNG sales from EXIM Bank's support for the construction of Mozambique LNG. The analysis is based on the following generally conservative (i.e., maximizes the level of likelihood of impact) assumptions:

1. There is no change in the supply/demand balance within the relevant region's market for this product, nor any changes in the supply/demand balance within the global market for this product;
2. The potentially displaced U.S. products cannot be sold anywhere else at any price;
3. The potential displacement is based on the U.S. market share in the region for 2018;<sup>18</sup>
4. The net present value of the potential displacement uses the June-July 2019 CIRR for 13-year repayment term of 3.29%
5. The value of the potential displacement each year is based on the three years (to May 2019) average price of \$6.86 per mmbtu;<sup>19</sup> and
6. To bring some balance to the aggregate effect of the conservative bias in the above five assumptions, displacement is presumed to occur every other year to reflect the effect of normal economic cycles.

### Net Trade Flows

U.S. Benefit: The benefit to the U.S. economy resulting from this transaction is represented by the total value of U.S. equipment and services exported to Mozambique, up to \$3.0 billion. In addition, the net present value of follow on equipment and services sales over the 12.5-year repayment period is estimated at an additional \$33million/year with a total discounted U.S. benefit of about \$333.7 million.

These exports can reasonably be considered attributable to EXIM financing as, given the statement by the Chairman of Anadarko in Appendix 1, Anadarko was prepared to source elsewhere if alternate financing was necessary.

Potential Cost to the U.S. LNG industry: (Note that the transaction uses standard OECD arrangement pricing. As the pricing schedule is based on a long-term average of market pricing, EXIM support should not provide any guaranteed pricing advantage in the market. Hence, the displacement figures that follow are based solely on market share in the relevant buyer countries).

<sup>18</sup> US market share, trade and regional supply/demand data came from GII&NL 2019 annual report.

<sup>19</sup> Average price represents that price per MMBTU of cargos Free on Board (FOB) Gulf of Mexico, as reported to the BIA. This price represents only cargos where both the cost of the natural gas (typically 115% of Henry Hub) and the liquefaction fee (\$2.50-3.50 per mmbtu) were reported.

Utilizing standard assumptions previously outlined, staff estimates that this transaction may displace about \$1.01 billion of U.S. produced LNG over the 12.5-year term of the EXIM Bank's facility. Given that effectively all current U.S. LNG exports are under long-term "take or pay" contracts, the impact here can be more appropriately allocated to any indirect costs that might occur due to other effects, such as intermittent supply/demand imbalances during the years of production impacting spot sale prices.

Buyer Market	Moz LNG annual Sales (MTPA)	2018 U.S. Export Sales (MTPA)	2018 Market Demand (MTPA)	US Share	Annual Displacement (MTPA)	Potential Annual Displacement (\$)
Europe	2.5	2.7	48.9	6%	0.138	\$ (49,230,423)
Japan	4.33	2.5	82.5	3%	0.131	\$ (46,828,693)
India	1	1	22.4	4%	0.045	\$ (15,910,794)
China	1.45	2.16	54.0	4%	0.058	\$ (20,689,760)
Indonesia	1	0	2.6	0%	-	\$ -
Portfolio - Global	2.3	22.3	313.8	7%	0.163	\$ (58,305,191)
Potential total Annual Displacement \$Value						\$ (190,964,860.43)
NPV Potential Total Displacement \$Value, over 12.5 years, 3.29% CIRR						\$ (1,011,991,283.89)

*Note: "portfolio-global" sales reflect SPAs signed with companies like BP that may sell their cargoes anywhere in the world. Market Demand/US Share only refers to demand for LNG in the identified markets. In some markets (particularly in Europe) LNG could displace pipeline gas, in which case U.S. market share is overstated and thus displacement is overstated.*

**Net Trade Flow:** Staff posits that this transaction will result in a net positive benefit to the U.S. balance of trade in the amount of about \$2.31 billion.

#### U.S. INDUSTRY AND PUBLIC COMMENTS

The details of this transaction were posted in the Federal Register on November 28, 2018, as well as on EXIM Bank's website with a request for comments from the public about the transaction. The Bank received 2 comments.

From Jack Patton: "I support this loan because it is an investment with a return. The experts have predicted that US will get a return of about 12.38 million tons of natural gas, which is a win in the gas market. I also support this in terms of helping Mozambique. If the United States puts in natural gas mines, this could provide the people of Mozambique with jobs and opportunity in their country."

LNG Allies, a trade group representing the U.S. LNG industry, opposed the transaction on the grounds that EXIM support for overseas LNG projects "could disadvantage U.S. LNG exports, and the realization of proposed U.S. LNG export projects. LNG Allies believes that EXIM

should focus its efforts on supporting U.S. natural gas liquefaction projects, a strategy which would maximize the economic gain to the United States of growing global natural gas markets.” LNG Allies full letter is in Appendix 2.

LNG Allies also shared a study on the economic benefits of U.S. LNG exports. This study did find considerable economic and employment benefits to increased U.S. LNG exports. However, it was not commissioned to look at the effect of foreign competition, nor did it address that aspect. Therefore, the full study has not been included as an attachment to this analysis but can be provided upon request.

#### U.S. GOVERNMENT AGENCY COMMENTS

Staff shared a draft of the economic impact analysis with the Departments of Commerce, State, and Treasury; the Office of the United States Trade Representative; and the Office of Management and Budget.


Commerce, State, USTR and OMB had no objections. Treasury submitted a comment:

(b) (5)





(b) (5)



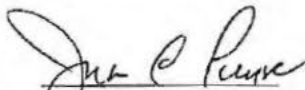
CONCLUSION

Policy concludes that this transaction will not begin producing in a time of oversupply, and it will likely have a net positive effect on the U.S. economy. The former conclusion is supported by every expert forecast EXIM found; the latter is derived from the Bank's own procedures approved in 2013.

The Bank's economic impact procedures, while not explicitly looking at every element which could possibly yield harm to U.S. production and jobs, are intended to generate a worst-case estimate of direct costs that implicitly includes all reasonable indirect costs. This transaction is likely to yield a positive impact of approximately \$2.31 billion on the U.S. balance of trade.



Scott Condren



Concur: James Cruse



Concur: Roger Yergler

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R.A. WALKER  
CHAIRMAN, PRESIDENT AND  
CHIEF EXECUTIVE OFFICER

November 5, 2018

Jeffrey Goettman  
Export-Import Bank of the United States  
811 Vermont Ave., NW  
Washington, DC 20571

Dear Jeff,

**RE: Area 1 Mozambique LNG Project Financing**

In relation to the Area 1 Mozambique LNG project (the "Project"), please see below for a brief update of the expected timing of our financing, and how the status of The Export-Import Bank of the United States ("US EXIM")'s board quorum would impact our finance plan.

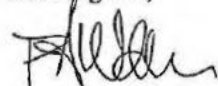
The Project is seeking to have up to 11 MTPA of offtake, which would support US \$14.4 billion of project debt capacity. We intend to launch formally our financing efforts in late November of this year with export credit agency (ECA) indicative commitments due by mid-February 2019. Other ECAs (and country of origin) expected to participate in the project financing include Atradius (The Netherlands), CEXIM (China), ECIC (South Africa), SACE (Italy) and JBIC and NEXI (both Japan).

If US EXIM currently had a board quorum (or a quorum was expected to be obtained prior to year-end 2018), then the Project would seek to secure senior loans of up to \$5 billion from US EXIM. The Project understands that US EXIM's mission is to support U.S. jobs through exports, and that the Project would need to utilize American goods and services in the construction of the Project in order to be eligible for US EXIM financing. According to the 2014 US Bureau of Labor Statistics, \$5 billion of capital spending would generate approximately 32,500 jobs.

If US EXIM does not have a board quorum by the end of 2018, the Project will be forced to seek financing from other ECA sources and reallocate capital spending to support that alternative financing.

Please let me know if you have any questions or if helpful to discuss.

Kind regards,



R. A. Walker

ANADARKO PETROLEUM CORPORATION





December 21, 2018

Mr. Scott Condren  
Export-Import Bank of the United States  
811 Vermont Avenue, N.W., Room 1261  
Washington, DC 20571  
RE: Liquefied Natural Gas/Mozambique

Dear Mr. Condren:

LNG Allies, the trade association of the U.S. LNG industry, opposes any loan or other financial support by the Export-Import Bank of the United States (EXIM) for the liquefied natural gas (LNG) export project in Mozambique referred to in the Nov. 29, 2018, *Federal Register* notice, "Liquefied Natural Gas/Mozambique."

Such support could disadvantage U.S. LNG exports, and the realization of proposed U.S. LNG export projects. LNG Allies believes that EXIM should focus its efforts on supporting U.S. natural gas liquefaction projects, a strategy which would maximize the economic gain to the United States of growing global natural gas markets. (See our attached fact sheet on this subject.)

Global demand for LNG is expected to show robust growth in coming years. However, U.S. LNG project developers face daunting challenges that could severely limit their ability to benefit from this expanding market. Competition in the industry is intense, with new or expanded liquefaction plants likely to move ahead in Russia, Qatar, Australia, Canada, Papua New Guinea, and Senegal, in addition to Mozambique.

A principal difference between these ventures in other countries, and nearly all of those in the United States is the balance-sheet resources of their sponsors. In the United States, most LNG project developers are midstream companies or purpose-incorporated entities that need to raise billions of dollars in non-recourse (off-balance-sheet) project financing for their facilities.

Traditionally, this has been done by signing relatively large (>2 million tons per annum "mtpa") long-term (e.g. 20 year) contracts for the gas with investment-grade offtakers. Such contracts provided requisite security for banks and other lenders.

Unfortunately, such contracts are much more difficult to obtain now than a few years ago due to changing market conditions. Specifically, LNG contract durations and volumes are shrinking and many offtakers that are interested in purchasing U.S. LNG do not have a "bankable" credit rating. For these market reasons, since 2013 only 4.5 mtpa of new LNG capacity has reached a final investment decision in the United States (Cheniere's Corpus Christi, Train 3).

The companies behind liquefaction projects in other countries—including Mozambique—are mostly large international energy companies who can fund the facilities themselves without relying on long-term contracts. This is a major disadvantage for U.S. projects and EXIM would only aggravate the situation by using its financial resources to assist our competitors.

On June 20, 2018, the U.S. Department of Energy (DOE) published a study in the Federal Register entitled: *Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports*. This study is a thorough examination of the broad economic impacts of U.S. LNG exports under various potential global natural gas market conditions. A key finding of this study is that "overall U.S. economic output is higher whenever global markets call for higher levels of LNG exports..." The DOE study indicates that a large share of any increase in U.S. LNG exports would be supplied by an increase in domestic natural gas production.

In addition, a study conducted earlier this year by ICF for LNG Allies (attached), shows that more than half of the economic benefits and additional jobs from increased U.S. LNG exports would be the result of higher natural gas production to supply these exports. Under the scenarios ICF reviewed—all based on cases in the Energy Information Agency's 2018 Annual Energy Outlook—the cumulative economic value added to 2050 from LNG terminals would range from \$716 billion to \$1,267 billion. The cumulative added value from the natural gas supplied to these terminals would range from \$948 billion to \$1,988 billion. The U.S. jobs created from the natural gas supplied for LNG exports would be about three times the jobs created from the LNG terminals themselves.

The DOE and ICF/LNG Allies studies highlight that the largest economic benefit to the United States results from developing our own LNG export terminals supplied by natural gas from U.S. fields. In addition, it is likely that the level of U.S. content will be higher in an LNG terminal built in the United States than one built abroad.

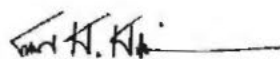
Currently, U.S. LNG export projects with a capacity of over 64 mtpa are fully permitted and awaiting a final investment decision (another ~75 mtpa is operating or under construction). Capacity of an additional 159 mtpa is under formal FERC review with most if not all of that volume expected to be fully permitted by year-end 2019.

The U.S. government—including EXIM—should focus on how to assist as many of those projects as possible. Although it is possible that some of these projects may never be sanctioned, if more U.S. LNG projects are not given a green light soon, then U.S. natural gas production may be restricted in the 2020s due to lack of sufficient domestic market demand. U.S. oil production could also be adversely affected by lack of an outlet for associated gas, especially from the prolific Permian basin in Texas and New Mexico.

Instead of supporting competition to U.S. LNG exports, EXIM should be working with U.S. project developers to help them reach final investment decisions. Among the ways the Bank could help the industry would be enhancing the long-term credit of lower credit-quality overseas buyers of U.S. LNG through insurance or risk guarantees and participating in the financing of U.S. export projects themselves if permitted under U.S. law.

For the reasons of economic harm set forth above, we urge EXIM to not provide the requested \$5 billion direct loan for the Mozambique LNG project and to reject similar requests from other project developers for liquefaction facilities located outside North America.

Sincerely,



Fred H. Hutchison  
President & CEO



Appendix 2

CONTROLLED//DISTRIBUTION LIST ONLY

# US LNG EXPORTS

## CUMULATIVE VALUE ADDED (2013-2050)<sup>1</sup>

- 7.3-15.5 Million Job-Years
- \$1.6 - \$3.2 Trillion to US Economy

## GLOBAL DESTINATIONS (2016-2018)<sup>2</sup>



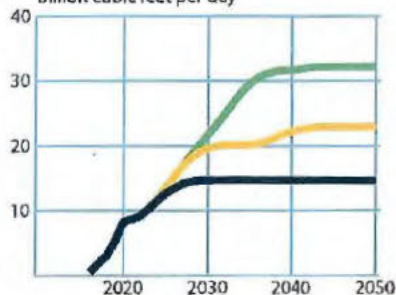
1. Calculating the Benefits of US LNG Exports, ICF for LNG Allies (April 2018).

2. LNG Monthly, US Department of Energy (April 2018).

LNG & Allies

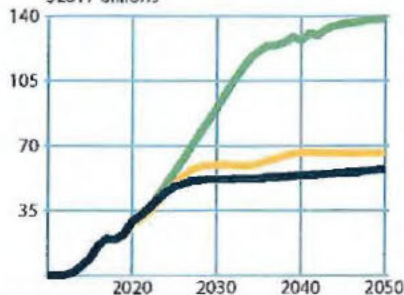
### FUTURE US LNG EXPORT LEVELS

billion cubic feet per day



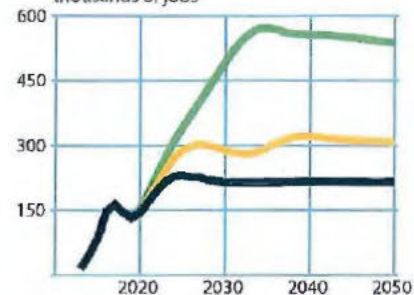
### VALUE ADDED BY US LNG EXPORTS

\$2017 billions



### JOBS ADDED BY US LNG EXPORTS

thousands of jobs



ICF calculated the direct, indirect, and induced value added by US LNG exports based on three scenarios in EIA's 2018 Annual Energy Outlook:

• Reference Case • High Oil & Gas Technology and Resource Case • High Oil Price Case (Download the report: [www.lngallies.com/jobs.pdf](http://www.lngallies.com/jobs.pdf))

The level of output in an industry is often measured in terms of "value of shipments" and "value added." Value of shipments is the total value (price x quantity) of what an industry produces in terms of goods or services. Value added can be computed as value of shipment minus the value of imported intermediate goods and services (all along the supply chain) and is a measure of contribution to Gross Domestic Product (GDP). Calculating the value added to the U.S. economy in this way differs from calculating value added of just one specific industry whereby the costs of the intermediate goods and services are deducted whether imported or domestic. On the other hand, the value added for the aggregate GDP includes domestic intermediate goods and services (all along the supply chain) because they also are part of U.S. GDP, and so, only imported intermediate goods are subtracted.

The convention used by ICF is to estimate the value added associated with capital stock such as liquefaction plants in the year in which the capital expenditures are made. In this way the value added (GDP contribution) occurs in the same years as are the jobs associated with the construction of the capital stock and the mining and manufacturing of materials and equipment used in the capital stock. To avoid double counting of the GDP contribution from the capital stock, depreciation of the capital stock is subtracted when production occurs. More specifically, the equation used to estimate value added in given year is:

$$\text{Value Added}_t = \text{Value of Shipments}_t - \text{Imported Intermediate Goods}_t - \text{Depreciation}_t + \text{Capital Expenditures}_t - \text{Imported Capital Goods}_t$$

Where:

Value Added<sub>t</sub> = the contribution of industry i to the U.S. GDP in year t.

Value of Shipments<sub>t</sub> = the total revenue received for goods and service produced by industry i in year t.

Imported Intermediate Goods<sub>t</sub> = the value of goods and services imported to U.S. for foreign countries for materials, feedstocks, operations and maintenance in year t.

Depreciation<sub>t</sub> = the cost of prior year's capital investments (which were counted in prior year's GDP) that must be subtracted to avoid double counting.

Capital Expenditures<sub>t</sub> = new capital investment made in year t.

Imported Capital Goods<sub>t</sub> = foreign purchases of goods and services used in new capital investment made in year t.

This method of calculating value added is different from what might be done by the Department of Commerce or other sources for a given industry in that we are adding in the value added by domestic intermediate goods (other than fuels and feedstocks). Our method is also different in that we count capital expenditures in the year in which they are made (so that they will align year-by-year with related construction and capital good jobs) and (to avoid double counting) remove annual depreciation. Conceptually, the method used by ICF should over time yield the same total value added as the Department of Commerce method, but might differ either in terms of which industry for which the value added is counted or in terms of the annual pattern.

\* \* \*



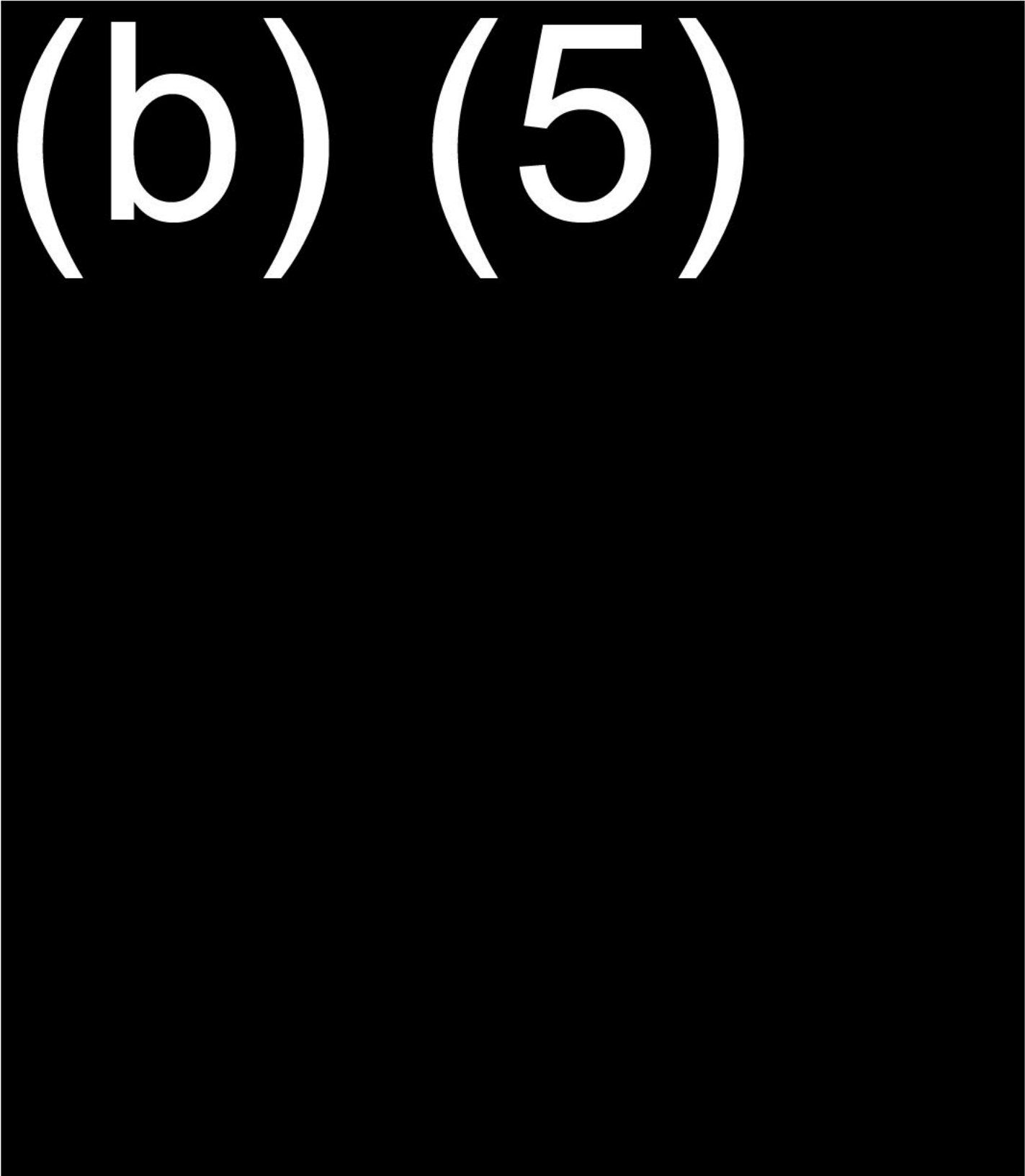


## Appendix J: Legal Analysis and Special Conditions

### 1. MOZAMBIQUE LAW AND LEGAL FRAMEWORK

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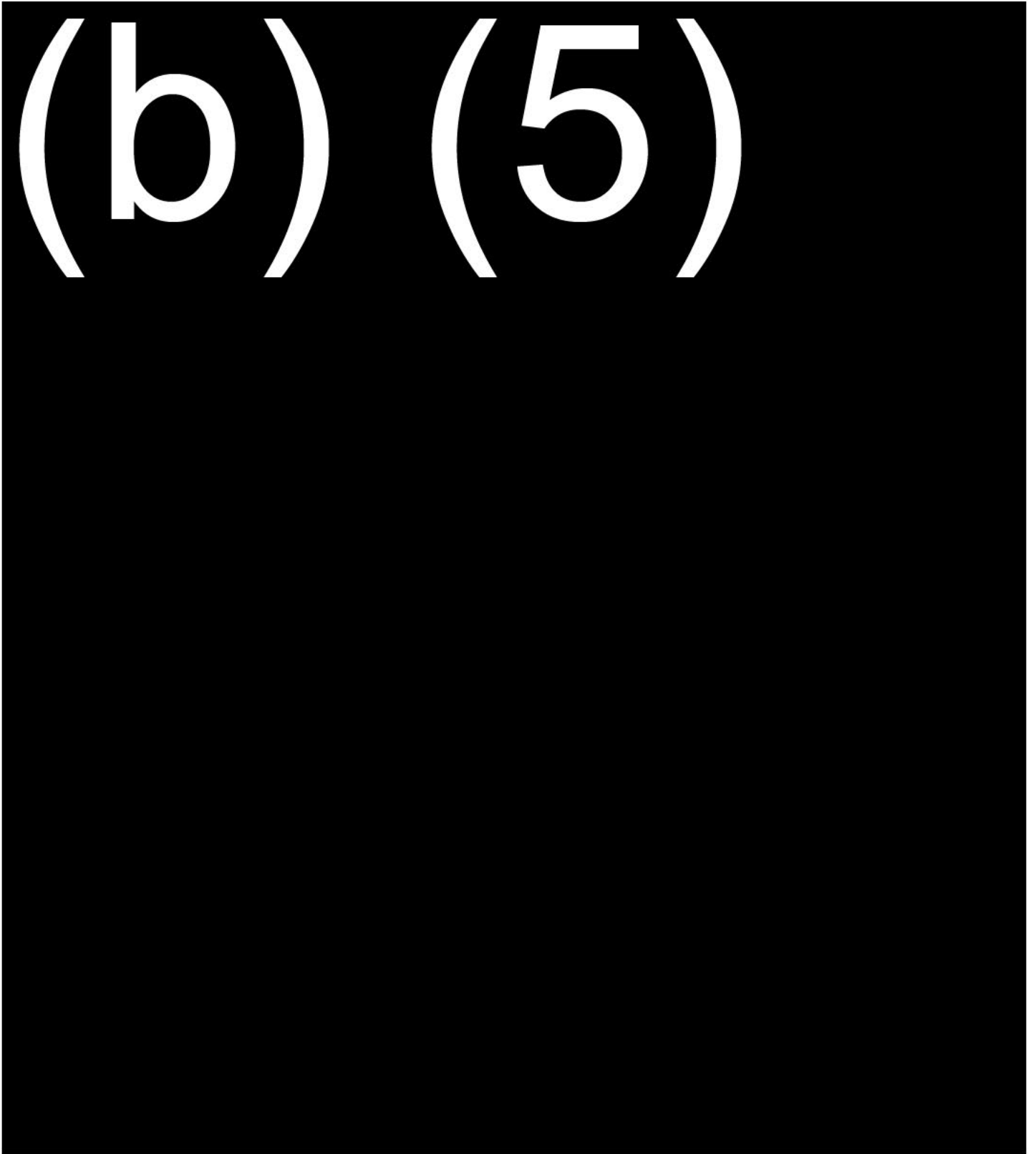


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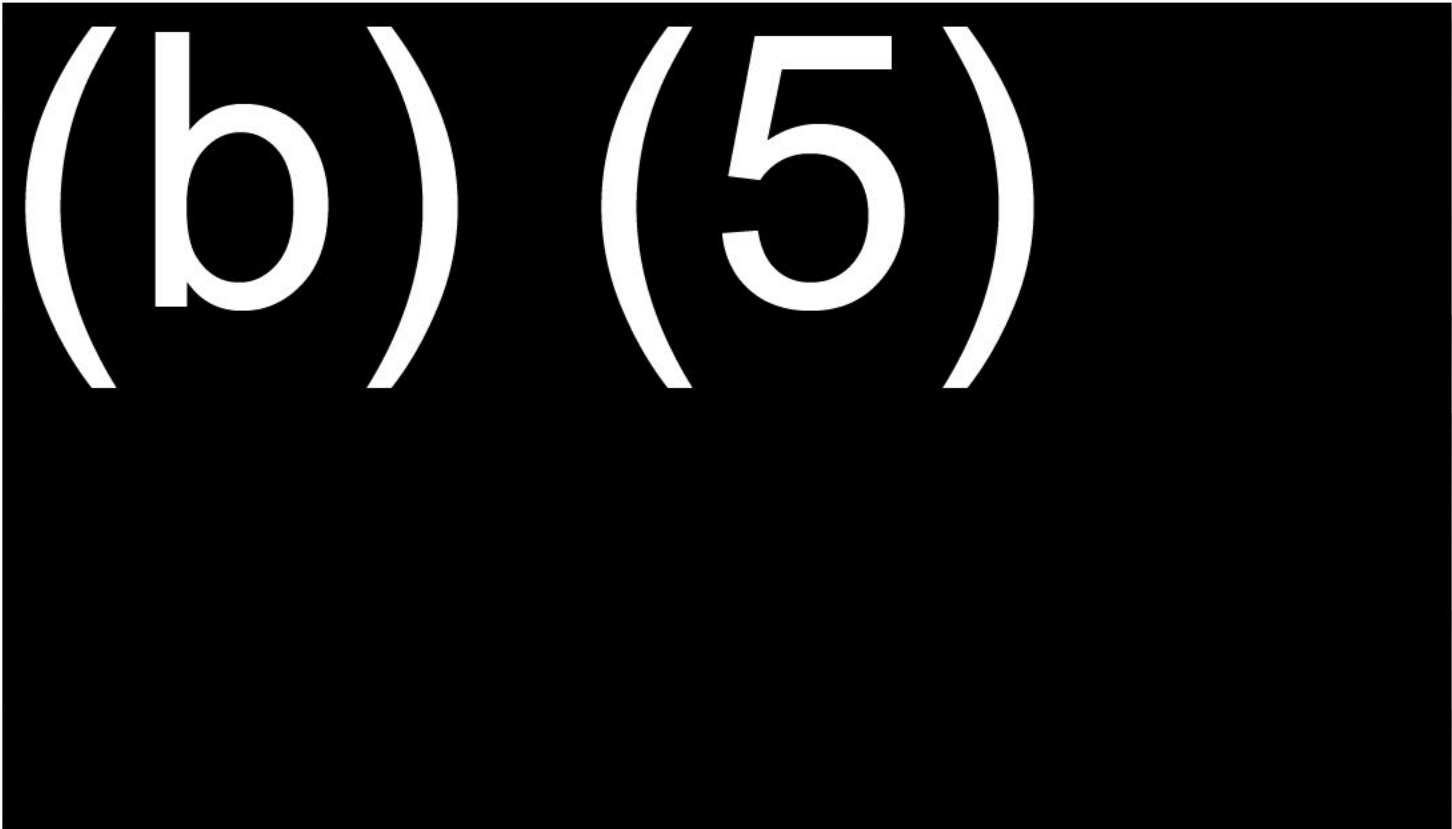


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2. ADGM LEGAL FRAMEWORK

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(b) (5)

### 3. GOVERNING LAW OF THE FINANCE DOCUMENTS

The majority of the finance documents will be governed by English law with the exception of the EXIM Bank loan facility agreement (which will be governed by New York law), certain Security Documents (which will be governed by the laws of the jurisdiction in which the relevant assets are located) and the GDA, which will be governed by the laws of Mozambique. The charge over the shares of the Holdco and of the Borrower will be governed by ADGM law. Other offshore Security Documents will be governed by the laws of England, Singapore and Cyprus (see Appendix J (*Mozambique Security Package*)).



(b) (4)

**b. General Overview**

The Project that is being financed by EXIM Bank and the other Lenders is a fully integrated LNG Project encompassing: (i) the development of the Golfinho-Atum gas field within the Area 1 block, located in the deep offshore waters of the Rovuma Basin in northern Mozambique; (ii) the construction and operation of related gas processing equipment, various related facilities, and the subsea infrastructure and gathering system; and (iii) the construction and operation of a two train onshore LNG facility and the necessary equipment for processing and sale of domestic gas. As noted above, the right to undertake exploration and production of hydrocarbons in the entire Area 1 Block of the Rovuma Basin was awarded by the GoM to the Area 1 Concessionaires through the Area 1 EPCC, although the Project being financed by the Lenders relates only to the development of the gas reserves located in the Golfinho-Atum field, and does not extend to other

Discovery Areas within the Area 1 block, the development of which may constitute a "Non-Project Operation" for the purposes of the finance documents (as described below).

The relationship as between the Area 1 Concessionaires vis-à-vis the development, construction and operation of the Project is primarily governed by the terms of the Joint Operating Agreement in respect of the Area 1 EPCC (the JOA), as further described below.

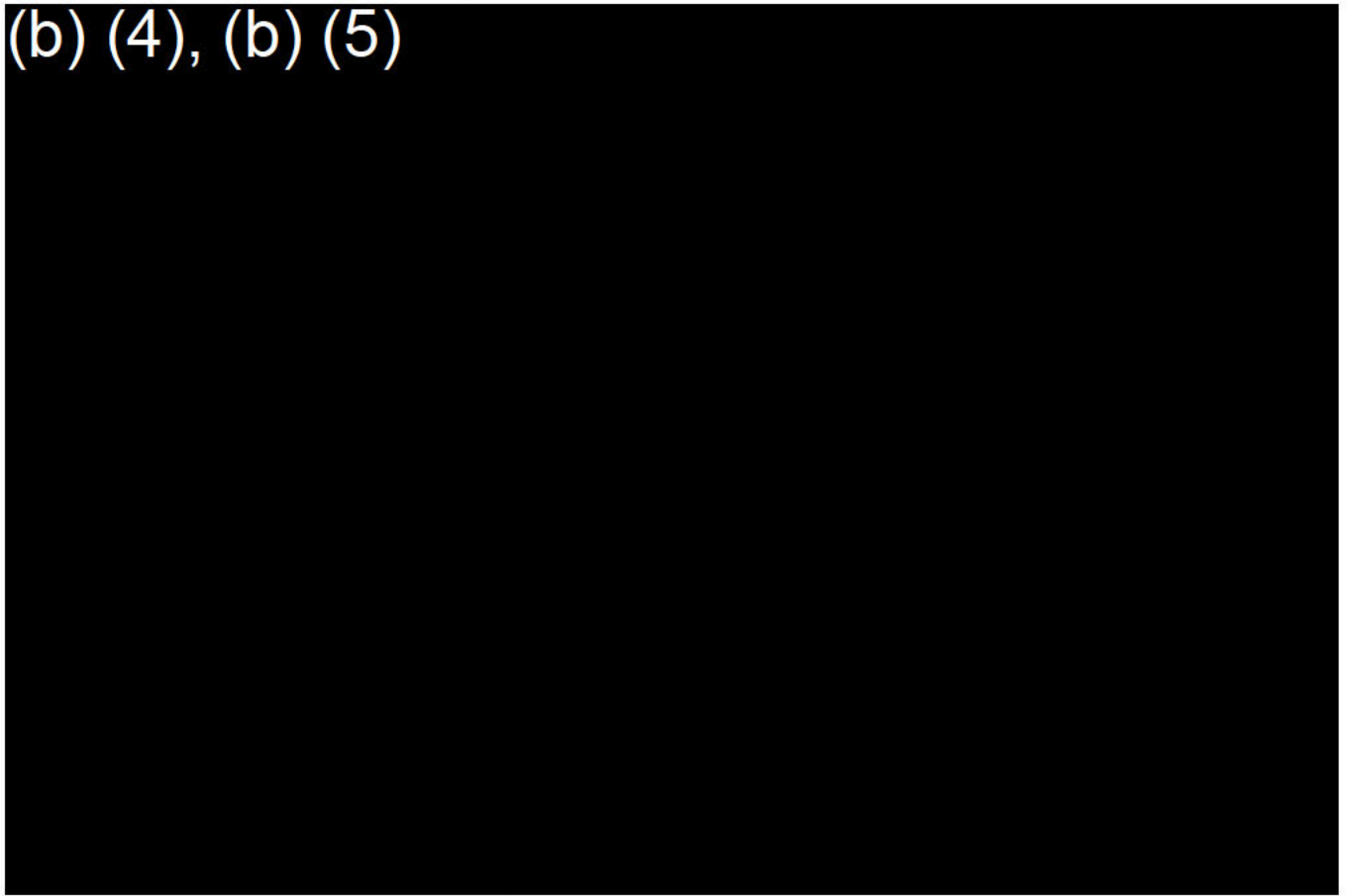
The right to use the land on which the onshore facilities (both Area 1 and Area 4) will be constructed has been granted under the terms of a "DUAT". The DUAT was issued to RBLL (a Mozambique-incorporated company under common control of Area 1 and Area 4) which has then assigned the rights to use certain portions of this DUAT area to the Area 1 Concessionaires and Area 4 Concessionaires separately under certain assignment of exploitation agreements (and jointly in respect of the Shared Facilities – see below).

**c. LNG SPAs**

The Area 1 Concessionaires (through the dedicated Seller) will sell the LNG produced by the Project to purchasers pursuant to long-term LNG sale and purchase agreements (collectively, the "LNG SPAs"). As of the date of this memorandum, the Seller has executed 8 LNG SPAs with separate, non-affiliated offtakers ("LNG Buyers"), with varying tenors (b) (4)

(b) (4)

(b) (4), (b) (5)



**d. Commitment Agreements**

To enable the Seller to fulfil its obligations under the LNG SPAs, each Area 1 Concessionaire (including ENH) severally commits to sell and deliver its share of LNG to the Seller under the LNG Commitment Agreement. All payments under the LNG SPAs will be paid in US Dollars directly to a secured offshore account operated in accordance with the requirements of the financing documents. The Seller will only pay to each Area 1 Concessionaires its "Revenue Entitlement" in respect of LNG sales when paid by the applicable LNG Buyer and in accordance with the priority of payments set out in the Project finance documents.

The GoM has elected to participate in the sales of LNG from the Project and commits its share of "Profit Petroleum" for sale by the Seller. (b) (4), (b) (5)

(b) (4), (b) (5)

e. **Joint Operating Agreement ("JOA")**

The JOA establishes the rights and obligations of the Area 1 Concessionaires and the "Area 1 Operator" (an Anadarko entity, AMA1) with regards to joint petroleum operations under the Area 1 EPCC. Consistent with the provisions in the Area 1 EPCC, all rights and interests in and under the Area 1 EPCC, joint property and any LNG produced from Area 1 shall be owned proportionally by the Area 1 Concessionaires in accordance with their respective participating interest in the Area 1 EPCC.

(b) (4), (b) (5)

f. **Shared Facilities Agreements and DUAT Commons Facilities Agreement**

The Project requires the construction and use of certain facilities which will be common to both Area 4 and Area 1. The Area 1 Concessionaires' share of the costs of these "**Shared Facilities**" will form part of the "Project Costs" falling within the scope of the financing.

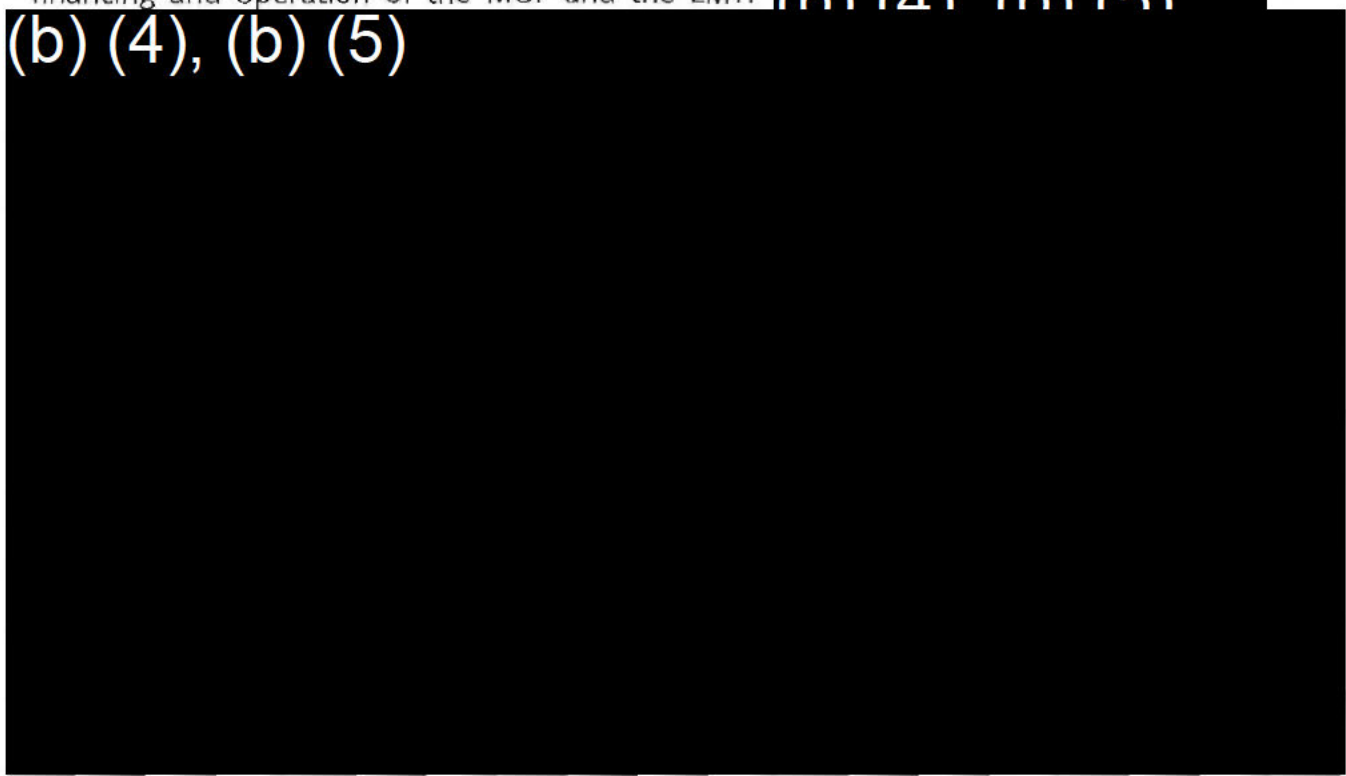


The Area 4 Concessionaires' share of the costs of the Shared Facilities are currently subject to a "deferred funding" regime under the terms of an Implementation Agreement agreed between the Area 1 Concessionaires and the Area 4 Concessionaires, meaning that Area 1 Concessionaires will initially fund 100% of the costs of the Shared Facilities (subject to certain conditions and repayment, plus interest).

The "**Shared Facilities**" within the Afungi LNG Park are the LNG Marine Terminal (the export jetty), relevant substructures and shore protection (the "**LMT**") and the Material Offloading Facilities (the "**MOF**").

The legal structure for the Shared Facilities is set out in the "**Shared Facilities Agreements**", a set of documents laying out the principles and the rules that ensure the cooperation between Area 4 and Area 1 in all stages of the development, construction, financing and operation of the MOF and the LMT. (b) (4) (b) (5)

(b) (4), (b) (5)



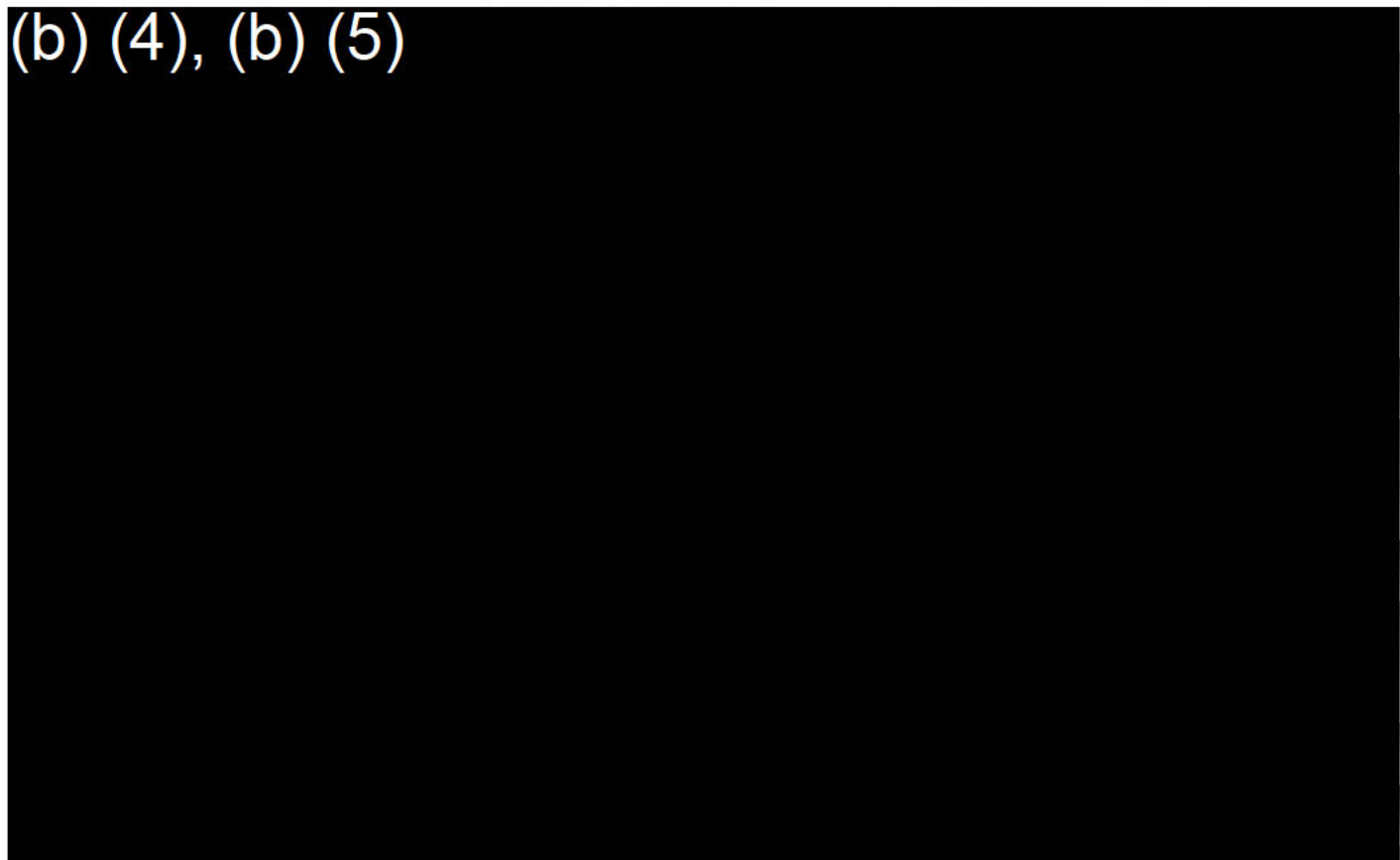
The Project also will require the use of certain "Common Facilities", which facilities are expected to consist of infrastructure such as roads, an airstrip and fencing within the Afungi LNG Park area to be shared with Area 4. The Area 1 and Area 4 operators are

expected to enter into a DUAT Common Facilities Agreement on terms similar to those contained in the Shared Facilities Agreement.

**g. EPC Contracts**

The Area 1 Operator (on behalf of the Area 1 Concessionaires) has entered into two key construction contracts in respect of the construction of the Project:


(b) (4), (b) (5)




**h. Debt Service Undertaking**

Each DSU Provider will enter into, on a several basis, a DSU with the CSA Security Agent (acting on behalf of the Lenders) in respect of all of the Obligors' secured debt obligations in proportion to such DSU Provider's related participating interest (the "**DSU Covered Proportion**").

(b) (4), (b) (5)

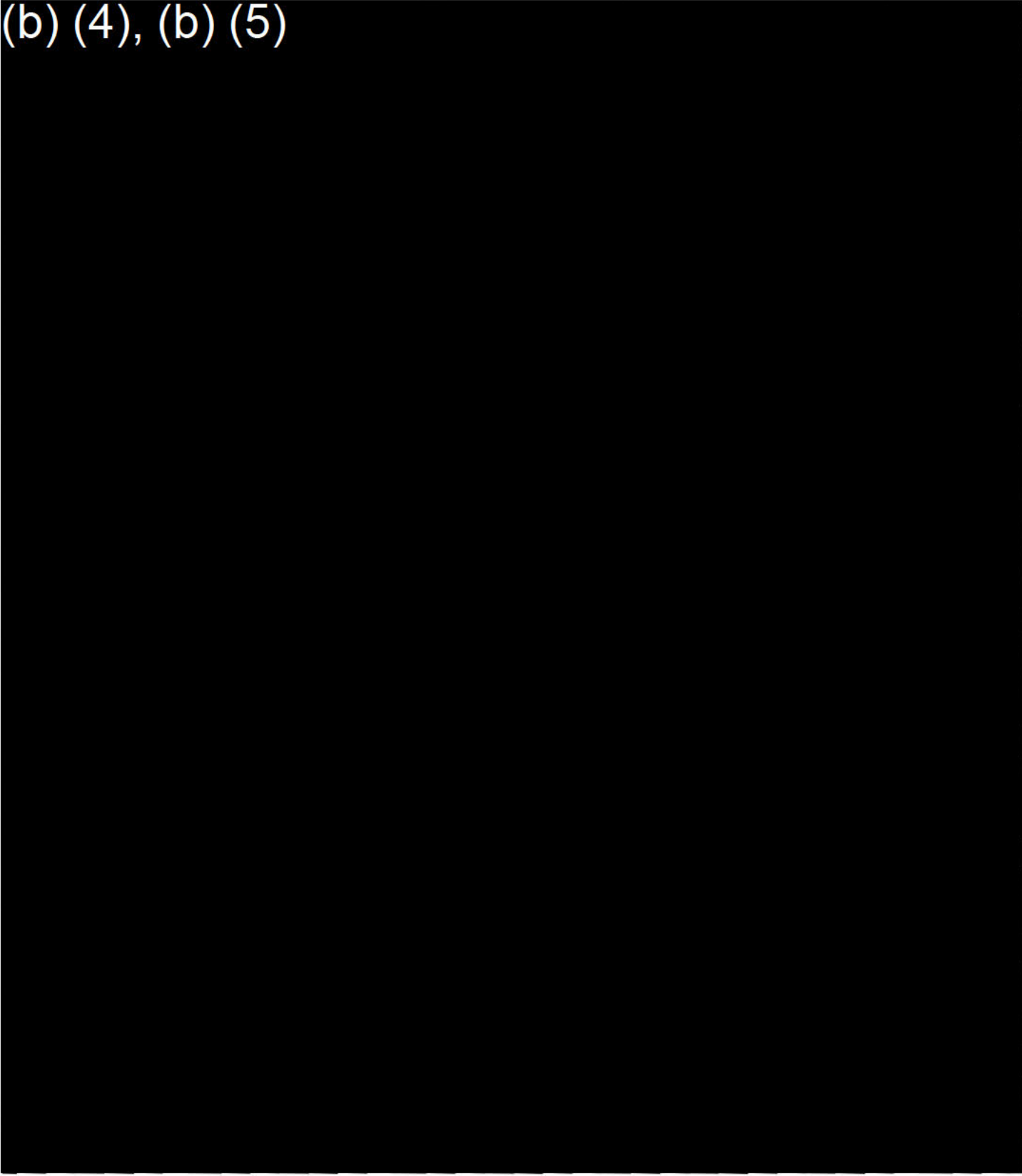


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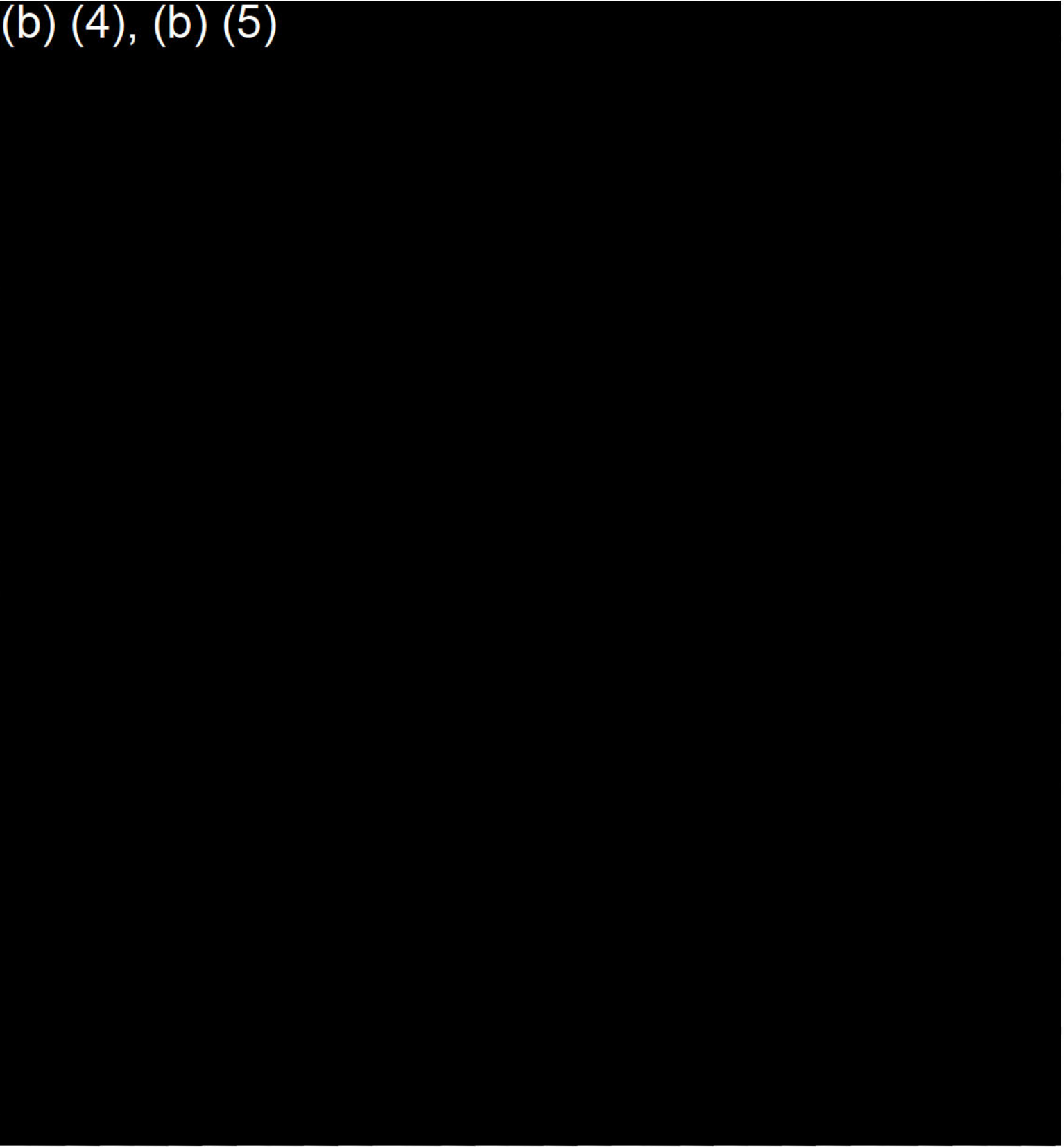





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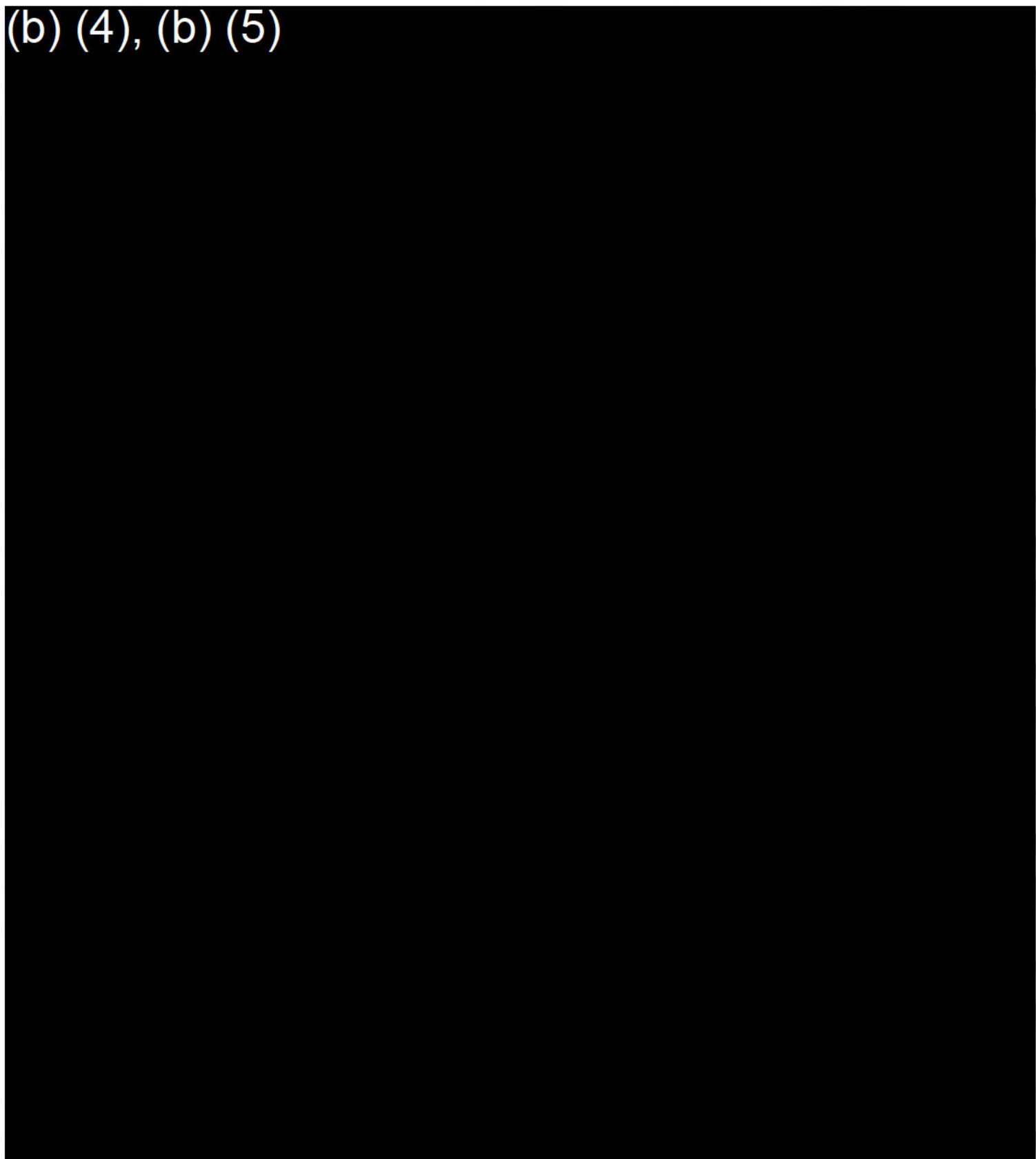
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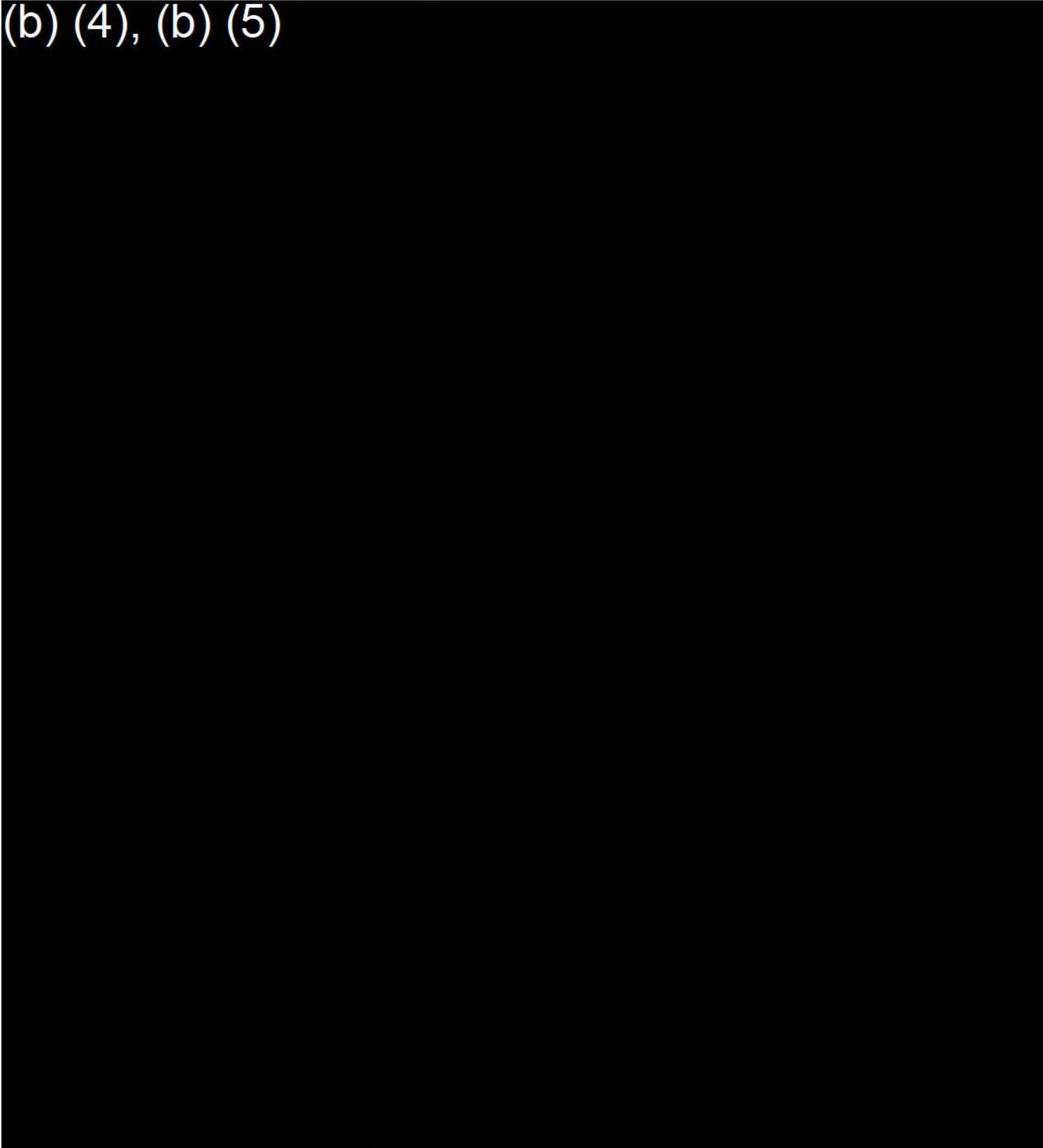


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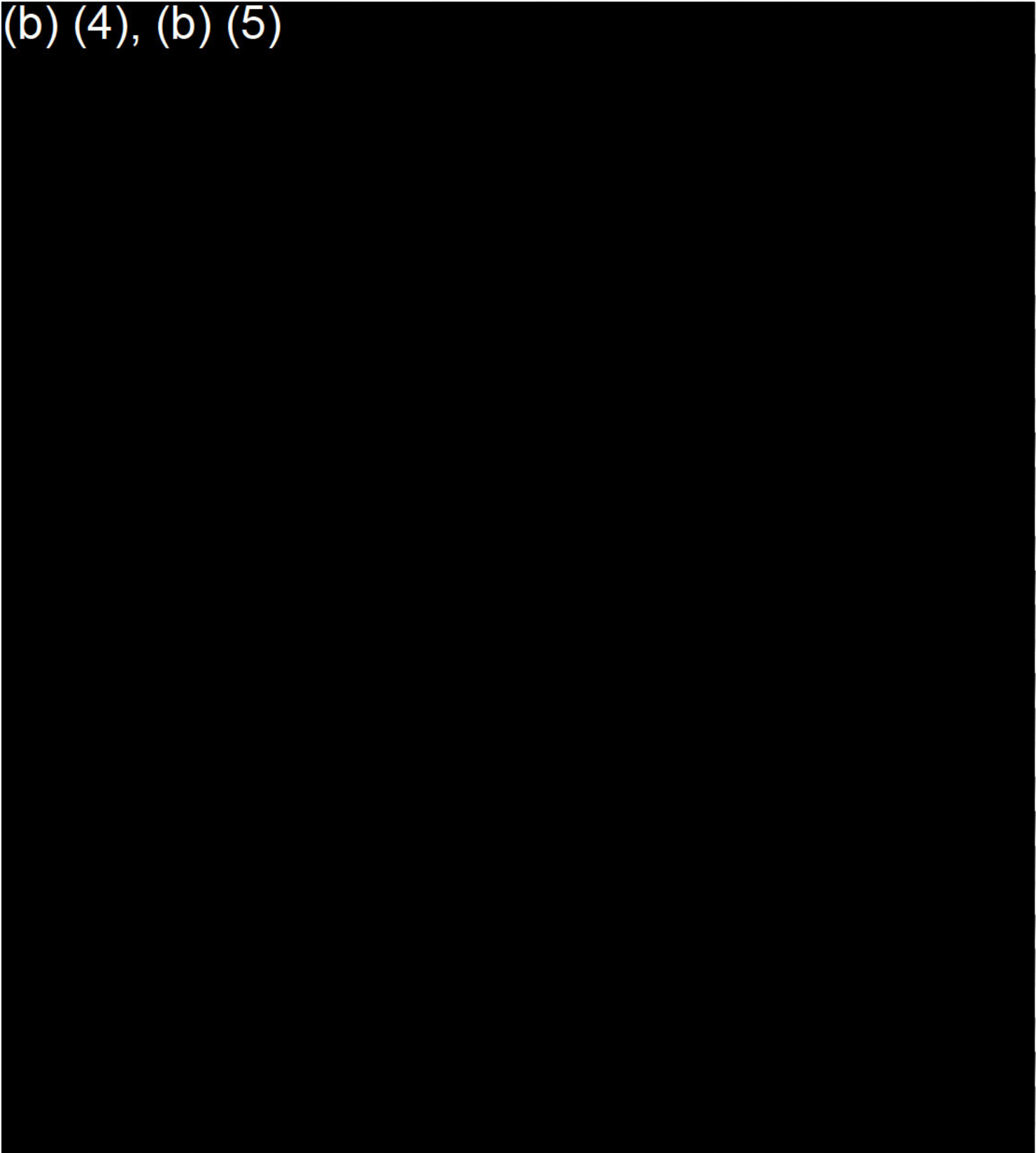




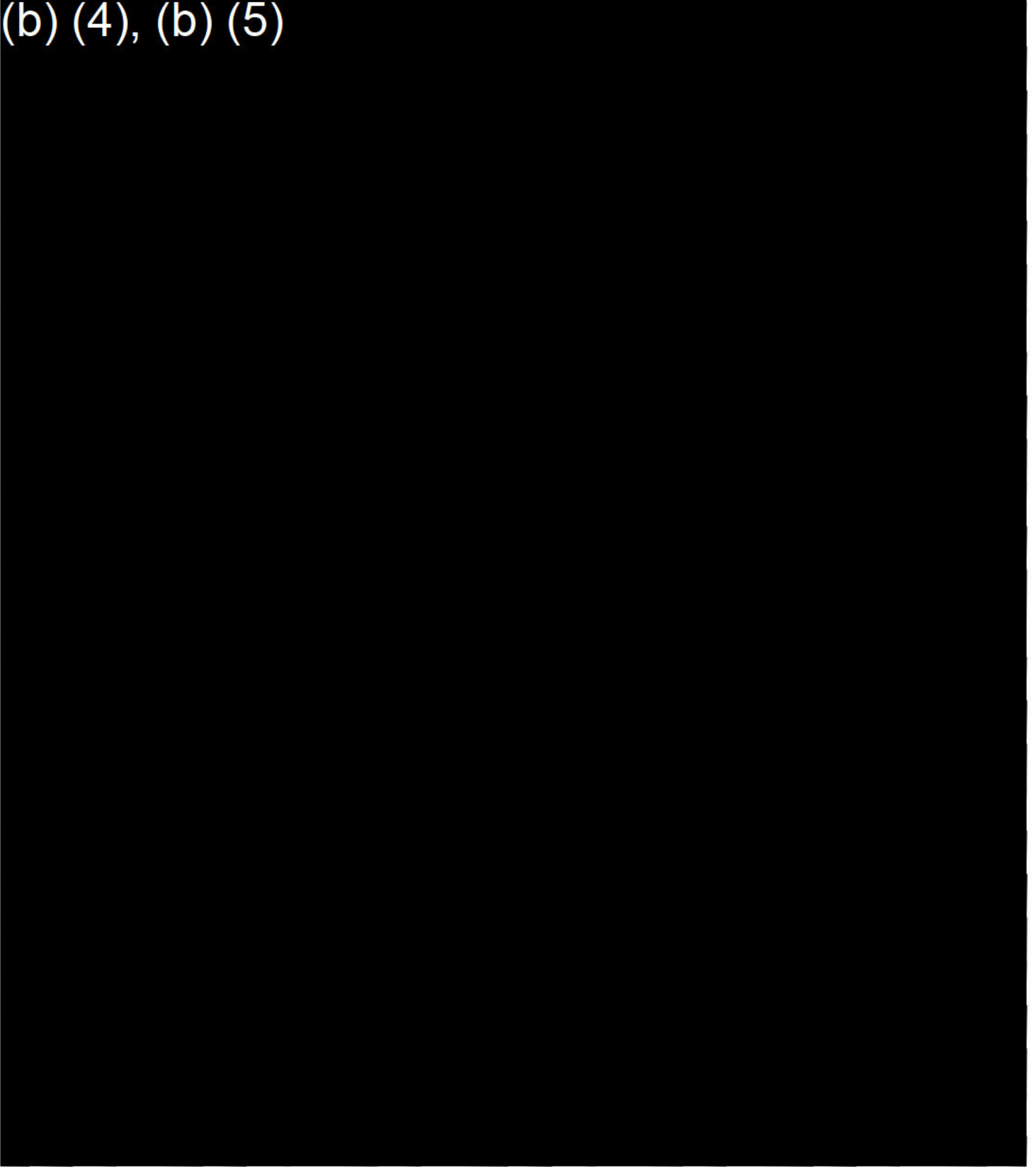
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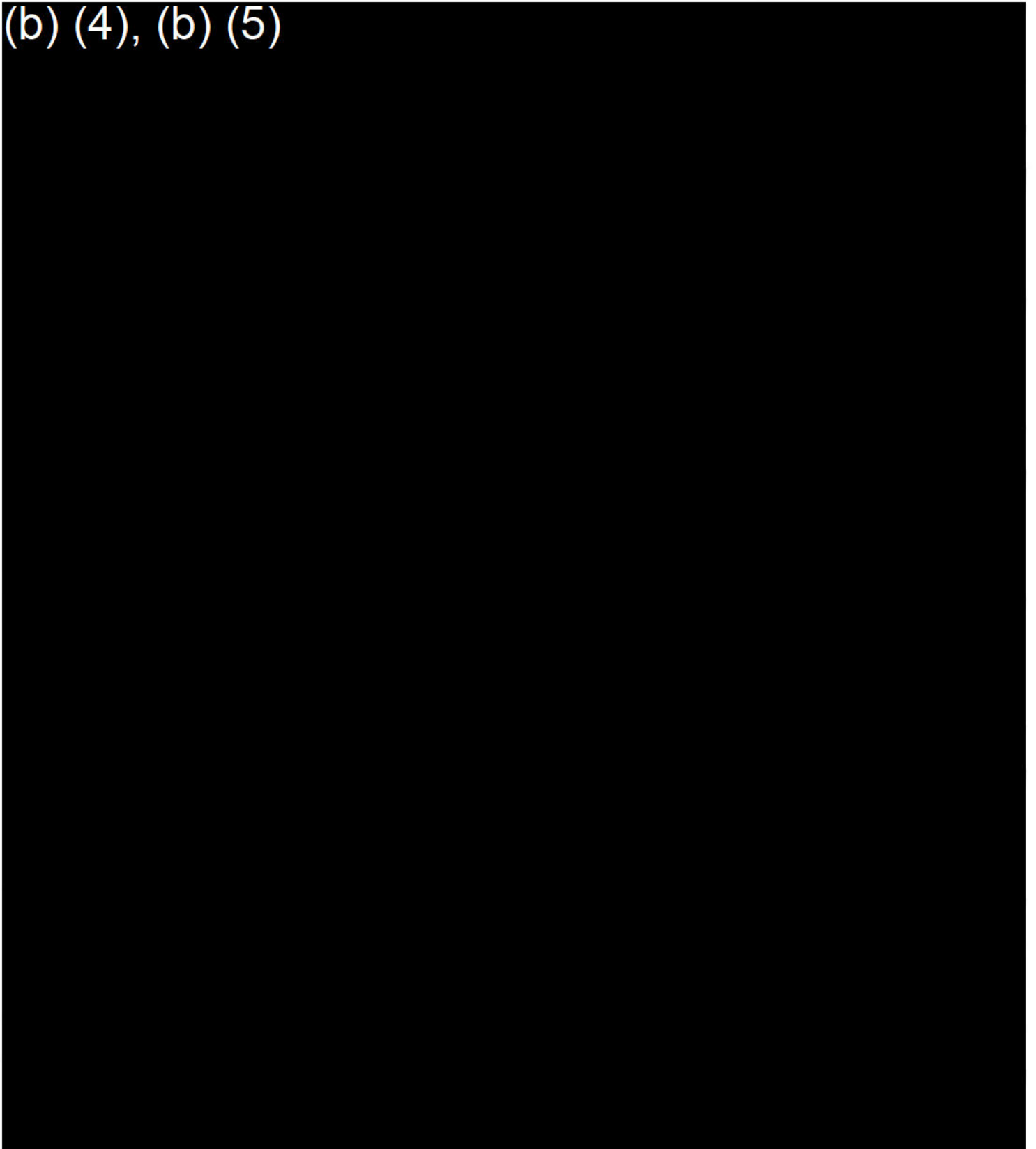
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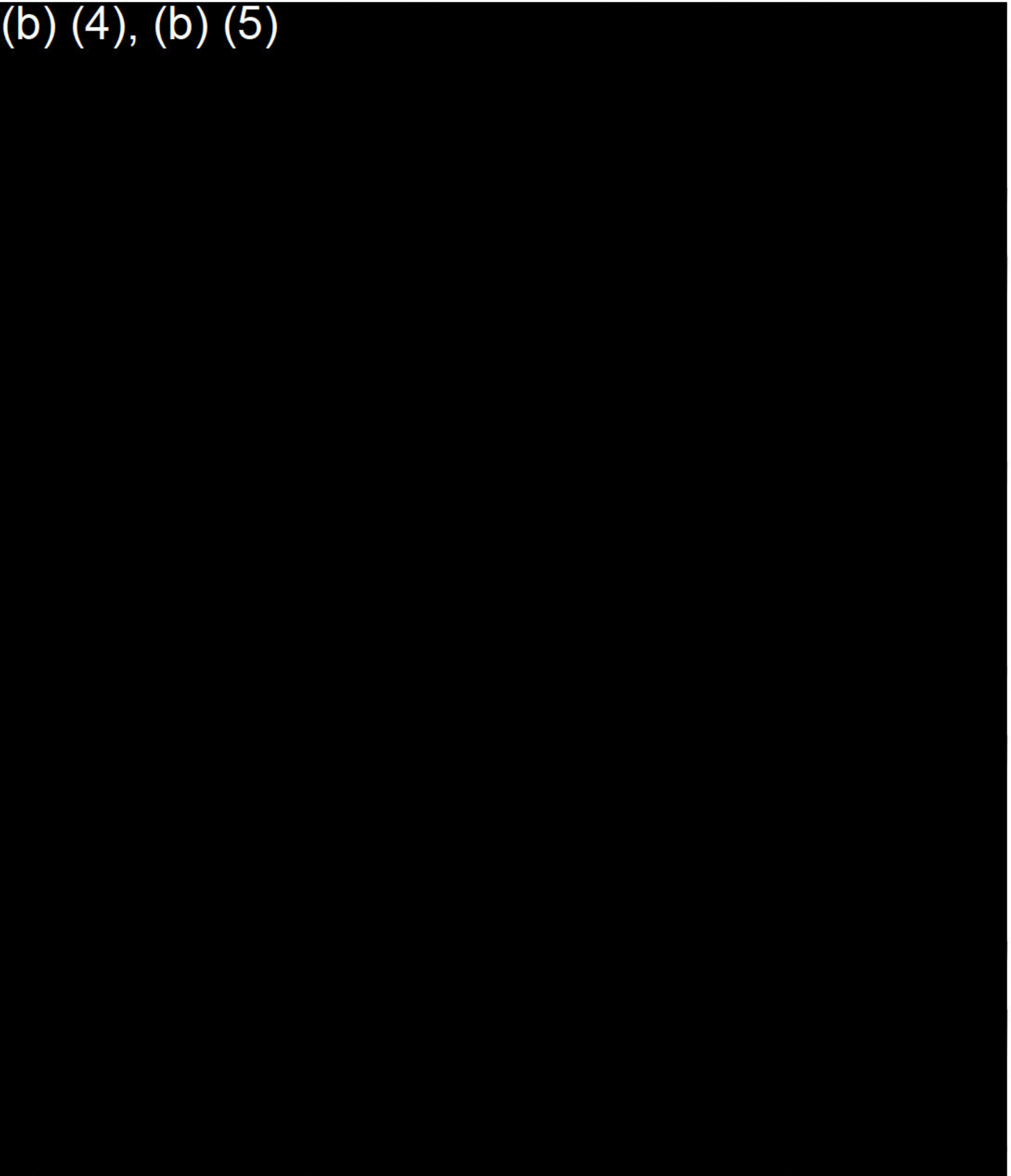
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(b) (4), (b) (5)




(b) (4), (b) (5)






(b) (4), (b) (5)



(b) (4), (b) (5)



## Appendix L: APS Action Memo

EXPORT-IMPORT BANK OF THE UNITED STATES  
MEMORANDUM TO THE BOARD OF DIRECTORS08/03/19  
AP087889XX

Division	STRUCTURED FINANCE	Date Application Received	04/10/15
Country	MOZAMBIQUE	Date Application Complete	04/10/15
		No of Days In House	1576
Request	FINAL COMMITMENT CONVERSION OF: LI087889XX	Financing Type/Term	STANDARD/L-T
		Financing Options 1	(SEE FINANCING ATTACHMENT)
Applicant	ANADARKO MOZAMBIQUE AREA 1, LTDA, Maputo MOZAMBIQUE		
Borrower	MOZ LNG1 FINANCING COMPANY, LTD.		
Guarantor	NONE		
Buyer	ANADARKO MOZAMBIQUE AREA 1, LTDA, Maputo MOZAMBIQUE		
End-user	ANADARKO MOZAMBIQUE AREA 1, LTDA, Maputo MOZAMBIQUE		
Exporter	VARIOUS		
Supplier	VARIOUS		
Guaranteed Lender	NONE		

Project Name MOZ LNG  
 Project Description LIQUEFIED NATURAL GAS PROJECT  
 Product Description FACILITY SUPPORT SERVICES & ASSOCIATED PRODUCTS

US Content  
 Foreign Content  
 Net Contract Price

Cash Payment  
 Financed Portion of US Contract Price

Financed Local Costs  
 Capitalized Interest During Construction

Financed Amt (Excl Exp Fee)  
 Exp Fee Level/Risk Increment  
 Exp Fee Amt/Rate  
 Total Fincd Amt (Incl Exp Fee, If Fincd)

\$ (b) (4)

5,000,000,000

Budget Cost Level  
 Prog Budget Amt/Rate

(b) (4)

Initial Eligibility Date

04/10/13

Risk Category PRIVATE

Rptm Term 12 YR/6 MO

Total Term 17 YR/11 MO

Qualifies For Enviro Exp Pgm NO

Small Business- Direct:

0.1% Indirect: 0.5%

Estimated Number of Jobs Supported/Created: 16,400

Key Features SUBJECT TO PUBLIC NOTICE; IDC; SCULPTED PAYMENTS; OECD NOTIFICATION,  
 ECONOMIC IMPACT, ASSET BACKED, LOCAL COSTS, CIDC

Special Conditions SEE BOARD MEMO FOR DESCRIPTIONS

Recommendation APPROVAL

Loan Officer LYMAN ARMSTRONG/PAULA SWAIN

Concur BONNIE CYBULKO

ACTING VP PROJECT FINANCE

Counsel LISA G. GERBERTH

EXPORT-IMPORT BANK OF THE UNITED STATES  
MEMORANDUM TO THE BOARD OF DIRECTORS  
FINANCING ATTACHMENT

08/03/19  
AP087889XX

## FINANCING SUMMARY

Option 1 Component 1 US COST LOAN  
Component 2 LOCAL COST LOAN  
Component 3 CIBC LOAN  
Exp Fee (b) (4) Subsidy (b) (4) Total Term 17 YR/11 MO

## FINANCING TERMS

Option 1 - Component 1  
Component US COST LOAN  
Loan Amount (b) (4)  
Commitment Fee Rate (b) (4)  
Exposure Fee Rate/Amount (b) (4)  
Interest Rate Type FIXED  
Fixed Rate Basis/Rate CIRR/ 3.1500%  
Hold Rate (CIRR Cap) N/A  
Starting Point Event COMM PROJECT  
Starting Point Date 01/01/25  
Final Disbursement Date 04/15/25  
No./Frequency Of Installments 25/SEMIANNUAL  
First Principal Payment Date 06/15/25

Option 1 - Component 2  
Component LOCAL COST LOAN  
Loan Amount (b) (4)  
Commitment Fee Rate (b) (4)  
Exposure Fee Rate/Amount (b) (4)  
Interest Rate Type FIXED  
Fixed Rate Basis/Rate CIRR/ 3.1500%  
Hold Rate (CIRR Cap) N/A  
Starting Point Event COMM PROJECT  
Starting Point Date 01/01/25  
Final Disbursement Date 04/15/25  
No./Frequency Of Installments 25/SEMIANNUAL  
First Principal Payment Date 06/15/25

Option 1 - Component 3  
Component CIBC LOAN  
Loan Amount (b) (4)  
Commitment Fee Rate (b) (4)  
Exposure Fee Rate/Amount (b) (4)  
Interest Rate Type FIXED  
Fixed Rate Basis/Rate CIRR/ 3.1500%  
Hold Rate (CIRR Cap) N/A  
Starting Point Event COMM PROJECT  
Starting Point Date 01/01/25  
Final Disbursement Date 04/15/25  
No./Frequency Of Installments 25/SEMIANNUAL  
First Principal Payment Date 06/15/25

**Appendix M: Principal Lending Terms, Intercreditor Voting and Debt Service Undertakings****Part 1: Principle Lending Terms**

Each individual Senior Debt Facility will provide for harmonized lending terms under a Common Terms Agreement. The principle terms are summarized in the tables below.

**Table L-1**

<i>Term</i>	<i>Conditions</i>
(b) (4), (b) (5)	



(b) (4), (b) (5)



(b) (4), (b) (5)




(b) (4), (b) (5)

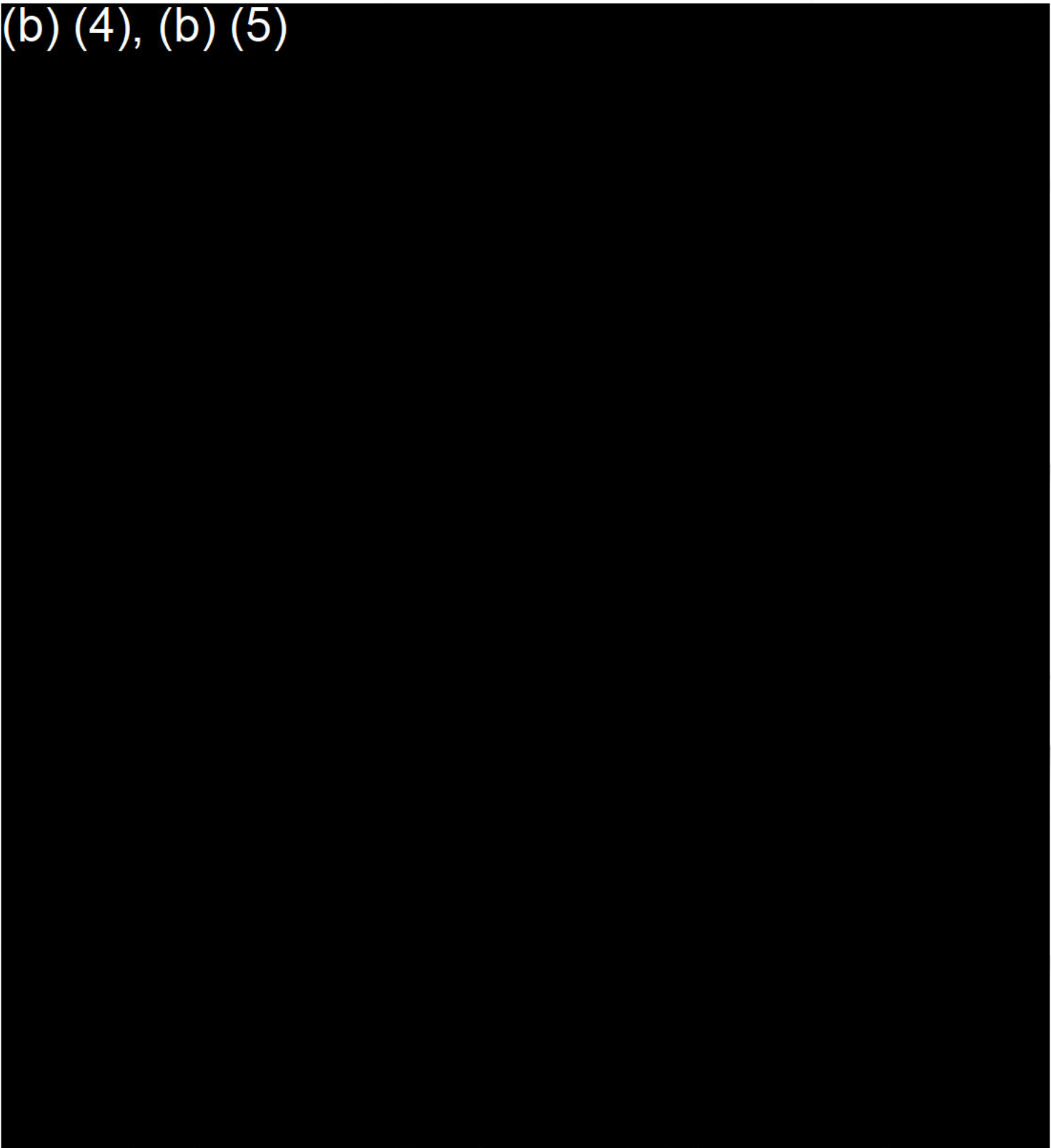
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(b) (4), (b) (5)





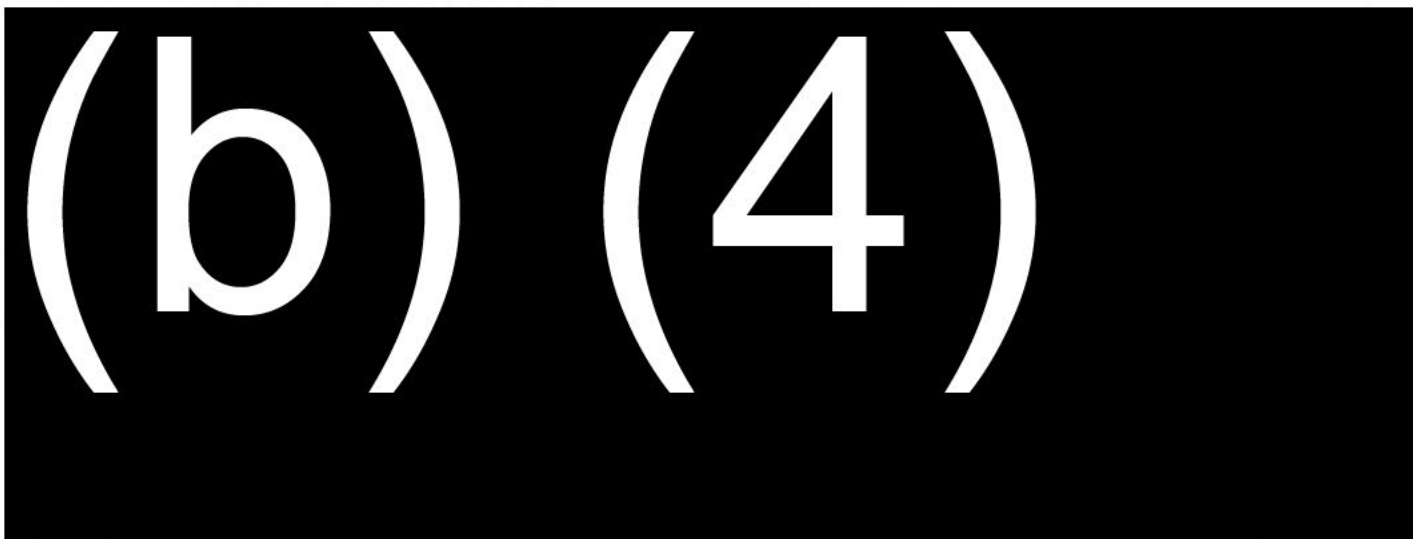
## Appendix O. Major Project Participants, Company Summaries

This section contains three parts:

- Part A. Sponsor Company Review
- Part B. EPC Contractor Company Review
- Part C. LNG SPA Counterparty Company Review

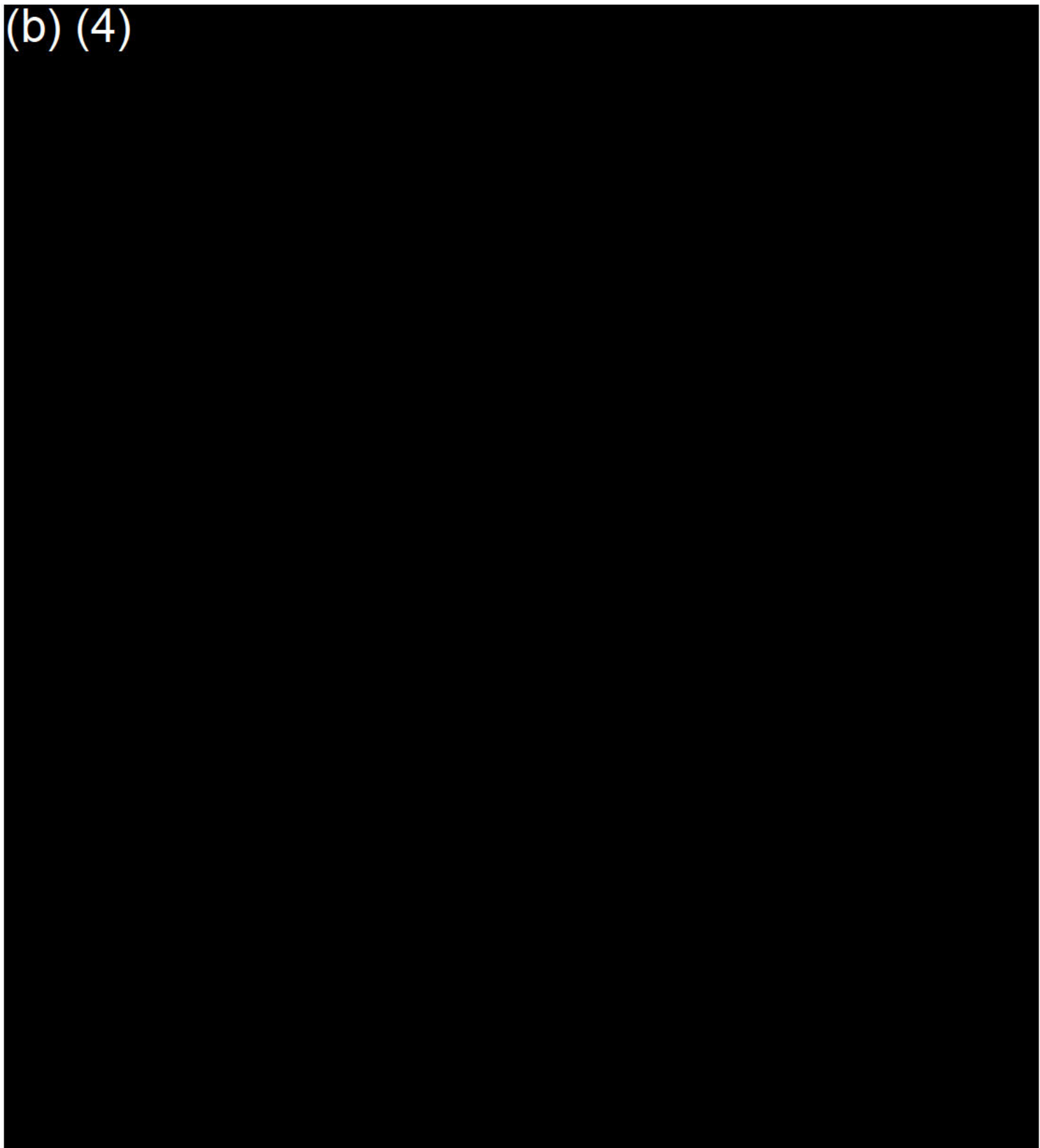
Please note that the majority of the Project Sponsors are credit worthy, investment grade rated or higher with the exception of ENH, the state-owned oil company of Mozambique. Likewise, the majority of the SPA counterparties are investment grade rated or higher with the (b) (4)

██████████ Detailed analysis of the Sponsor, EPC Contractor, and LNG SPA counterparties is found below.

**Part A. Sponsor Company Summaries****Anadarko Petroleum Corporation**

**Company Overview:** Headquartered in Texas, APC is an oil and gas exploration and production company that was founded in 1959 to explore natural gas found in the Anadarko Basin. Its main operating base is in the US and Gulf Mexico and has additional operations in Africa and South America. Traded on the NYSE, APC is also engaged in the gathering, processing and transportation of oil, gas and other byproducts. The company reported 1.5 billion barrels of oil equivalent in proved reserves as of end 2018. APC employs about (b) (4) people and has oil and gas assets in the Rocky Mountains, the southern U.S., the Appalachian basin and Alaska. The company is also a large producer in the deepwater Gulf of Mexico and has exploration and production activities worldwide, including in Algeria, Ghana, Mozambique, Colombia, Côte d'Ivoire, New Zealand and Kenya. APC's U.S. operations accounted for 86 percent of sales volumes and 82 percent of sales revenues during 2018, and 69 percent of proved reserves as of year-end 2018. The company operates three segments: (i) Oil and gas exploration and production, which explores for and produces oil, condensate, natural gas and natural gas liquids and plans for the development and operation of Mozambique LNG; (ii) Midstream, which engages in gathering, processing, treating, and transporting APC and third-party oil, natural gas and natural gas liquids (the company owns and operates gathering, processing, treating, and transportation systems in the U.S.); and (iii) Marketing, which sells much of APC's oil, natural- gas and NGLs production as well as third-party purchased volumes.

(b) (4)



Oil and Natural Gas Corporation Limited

(b) (4)

**Company Overview:** ONGC, 67.7% owned by the Government of India, was incorporated in 1956 and is India's largest upstream energy company (i.e., oil and gas exploration and production) and has significant downstream refining operations, primarily through its subsidiaries, Mangalore Refinery and Petrochemicals Ltd ("**MRPL**") and Hindustan Petroleum Corporation Limited ("**HPCL**"). Its shares trade on the Bombay Stock Exchange and the National Stock Exchange of India.

ONGC contributes approximately 70 percent of India's hydrocarbon production (b) (4) as of March 2018. Most of ONGC's upstream production is from Indian fields (approximately 78%). ONGC's domestic oil and gas production in fiscal year 2018 was 49.08 million tonnes of oil equivalent, up three percent from the year prior. Production is roughly split in half between crude oil and natural gas. As of March 2018, ONGC reported an estimated 547 million metric tons of proven reserves of crude oil and 435 billion cubic meters ("**bcm**") of proven reserves of natural gas.


ONGC has three major subsidiaries:

1. ONGC Videsh: ONGC's international exploration and production operations are managed through its ONGC Videsh subsidiary. Overall, ONGC Videsh is engaged in 41 projects in 20 countries – 15 in the production stage, 4 in discovery, 18 in exploration, and four pipelines. Non-Indian oil and gas production was mainly from fields in Russia (56 percent), Vietnam (12 percent), Azerbaijan and Myanmar (7 percent each), and Brazil and Venezuela (5 percent each). The company has increased the pace of its international expansion over

the last few years in line with government policy, which encourages domestic petroleum companies to invest in overseas oil and gas assets to support domestic demand.

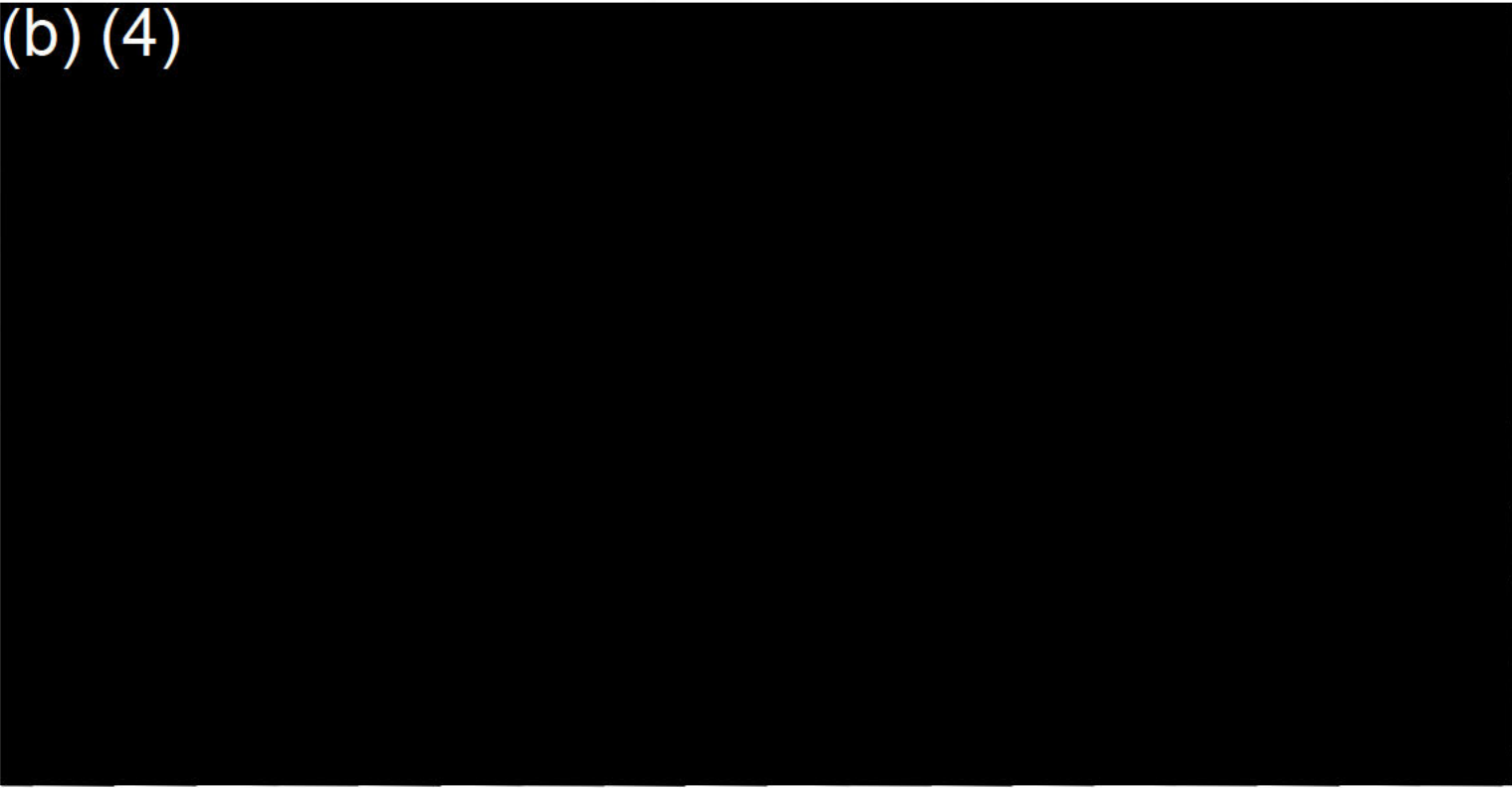
2. MPRL, the downstream subsidiary, owns a 15 mtpa refinery and achieved its highest ever crude oil throughput of 16.31 million metric tons ("MT") of crude oil during fiscal year 2018.
3. HPCL owns two large refineries (the 7.5 mtpa Mumbai Refinery and the 8.3 mtpa Visakh Refinery) and achieved a 2017 crude throughput of 17.81 MMT.

(b) (4)





(b) (4)



Empresa Nacional de Hidrocarbonetos E.P.

(b) (4)

**Company Overview:** ENH was established in 1981 and is wholly owned by the Government of Mozambique. Law No. 21/2014 (Hydrocarbon Law) passed in 2014 mandates that ENH represent the State in hydrocarbon operations, participate in both upstream and midstream operations, manage quotas of oil and gas channeled to the domestic market, and enter into a partnership with any investor seeking to exploit the hydrocarbon resources of the State. ENH's activities are supervised by the Ministry of Mineral Resources and Energy, though it maintains financial and administrative autonomy. ENH acts as a holding company with the following key subsidiaries:

- a. CMH SA, through which ENH holds a 17.5% ownership interest in the Pande Temane project with Sasol and the International Finance Corporation;
- b. CMG SA, through which ENH holds a 25% ownership interest in the Republic of Mozambique Pipeline Company ("ROMPCO"), a natural gas transportation company, with Sasol and iGas; and
- c. ENH Logistics, a logistics and services company in which ENH holds a 100% ownership interest.

In addition to its (b) (4) in the Project (Area 1), ENH holds (b) (4) in Area 4.

(b) (4)



Mitsui & Co., Ltd.

(b) (4)

**Company Overview:** Mitsui, originally established in 1947, is a general trading company of the Mitsui Group that manages the Group's investments in Japan and around the world in the metals, infrastructure, mobility, energy, chemicals, agriculture, telecommunications, and healthcare industries, among others. Mitsui's consolidated entities employ (b) (4) Mitsui is listed on the Tokyo, Nagoya, Sapporo, and Fukuoka stock exchanges in Japan.

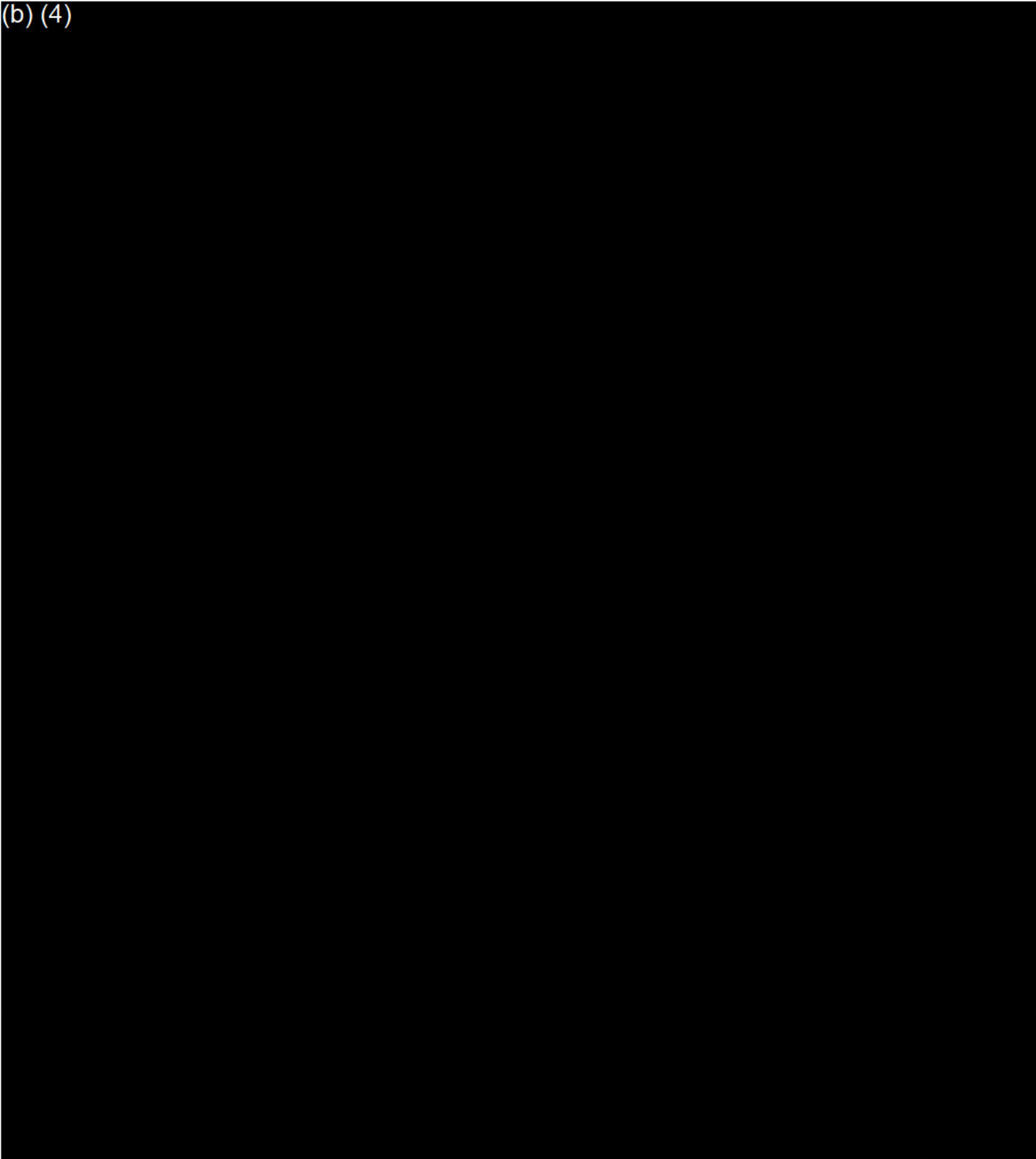
Mitsui's energy segment generated 5 billion USD in revenues from April 2017 to March 2018 ("FY2018"), or 11 percent of Mitsui's total revenue during FY2018. Mitsui has been investing in the LNG business, from production to marketing, since the 1970s. The company owns equity interests in LNG projects around the world including the ADNOC LNG facility in Abu Dhabi (15.00 percent), the North West Shelf LNG Project in Australia (13.33 percent)<sup>20</sup>, Qatargas 1 (7.50 percent), Qatargas 3 (1.50 percent) the Oman LNG Project (2.77 percent), the Sakhalin II Project in Russia (12.50 percent), the Tangguh LNG Project in Indonesia (2.01 percent),<sup>21</sup> the Equatorial Guinea LNG Project (8.50 percent), the Cameron LNG Project (16.60 percent) in the U.S., and the Browse Natural Gas Development Project in Australia (7.50 percent).<sup>22</sup> Mitsui is also an offtaker for various LNG projects throughout the world.

<sup>20</sup> Mitsui owns 50 percent of Japan Australia LNG, which owns 16.67 percent of the North West Shelf LNG Project

<sup>21</sup> Mitsui owns 20.1 percent of two companies which jointly own 10 percent of the Tangguh LNG Project

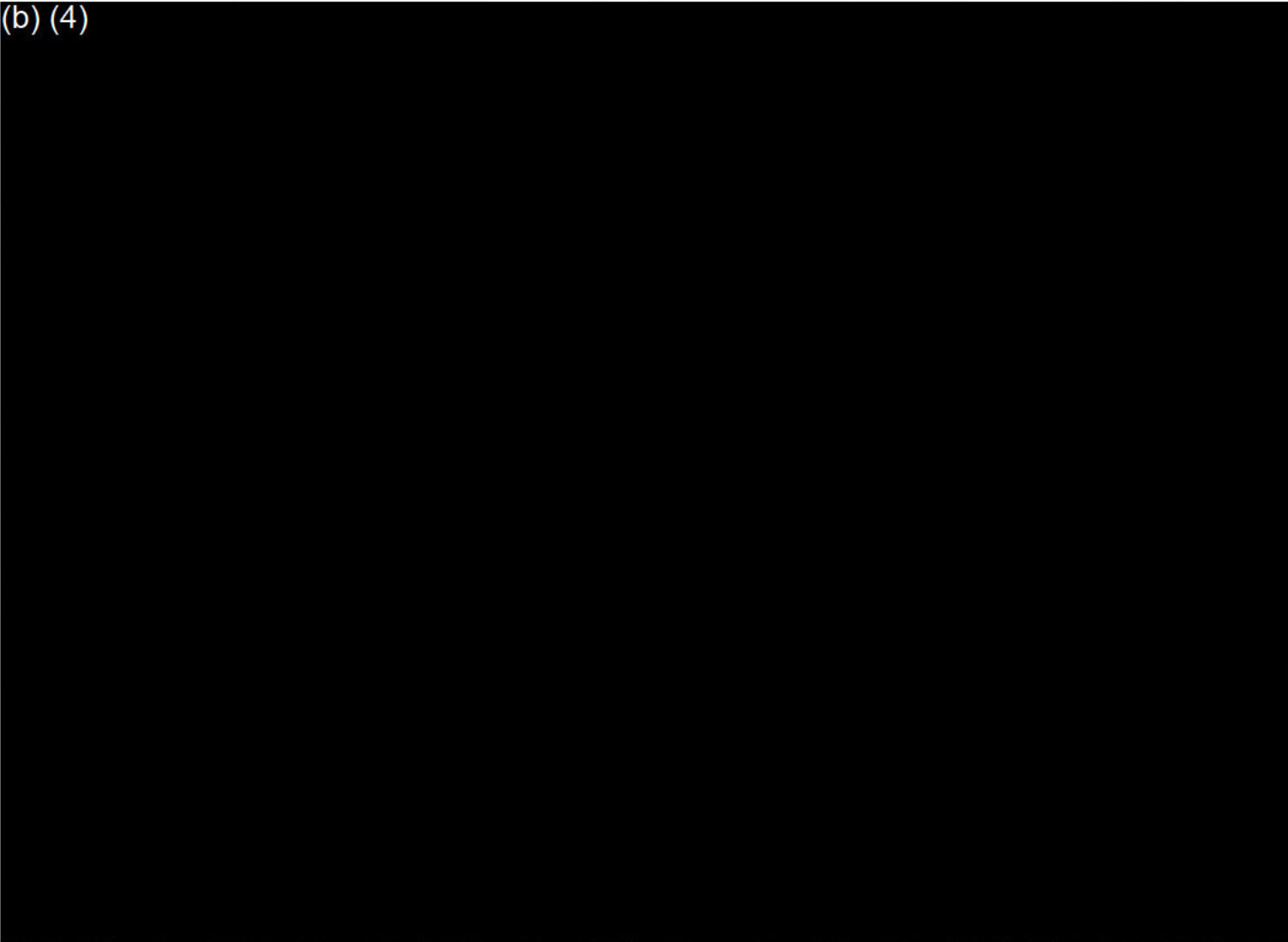
<sup>22</sup> Mitsui owns 50 percent of Japan Australia LNG, which owns 15 percent of the Browse LNG Project

(b) (4)





(b) (4)



Japan Oil, Gas and Metals National Corporation (JOGMEC)

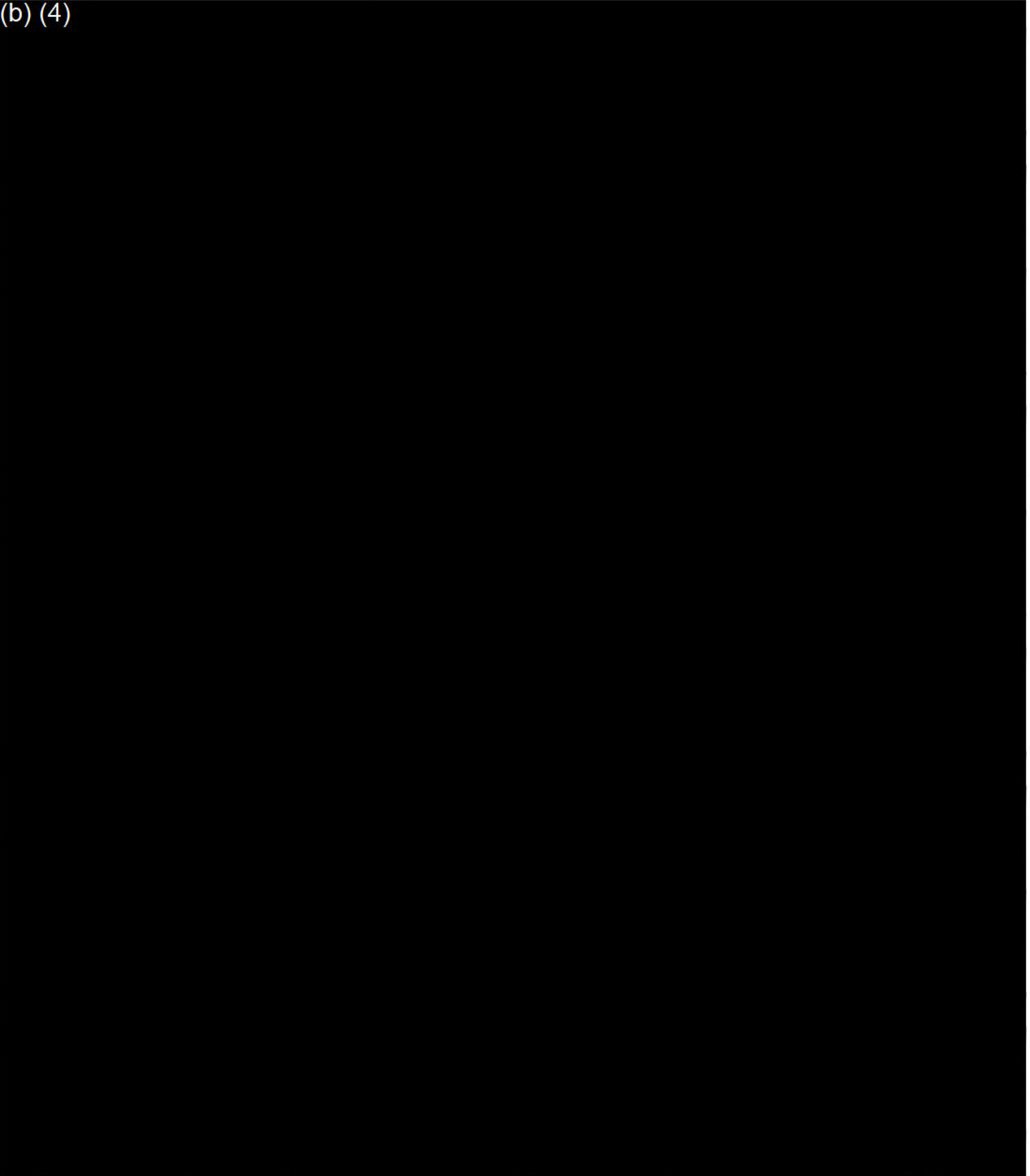
(b) (4)

**Company Overview:** JOGMEC is a state-owned company established in 2004 to integrate the functions of the former Japan National Oil Corporation and the Metal Mining Agency of Japan. JOGMEC's mission is to secure a stable supply of oil, natural gas, coal, geothermal energy, nonferrous metal, and other mineral resources for Japan as well as implement mine pollution control measures.

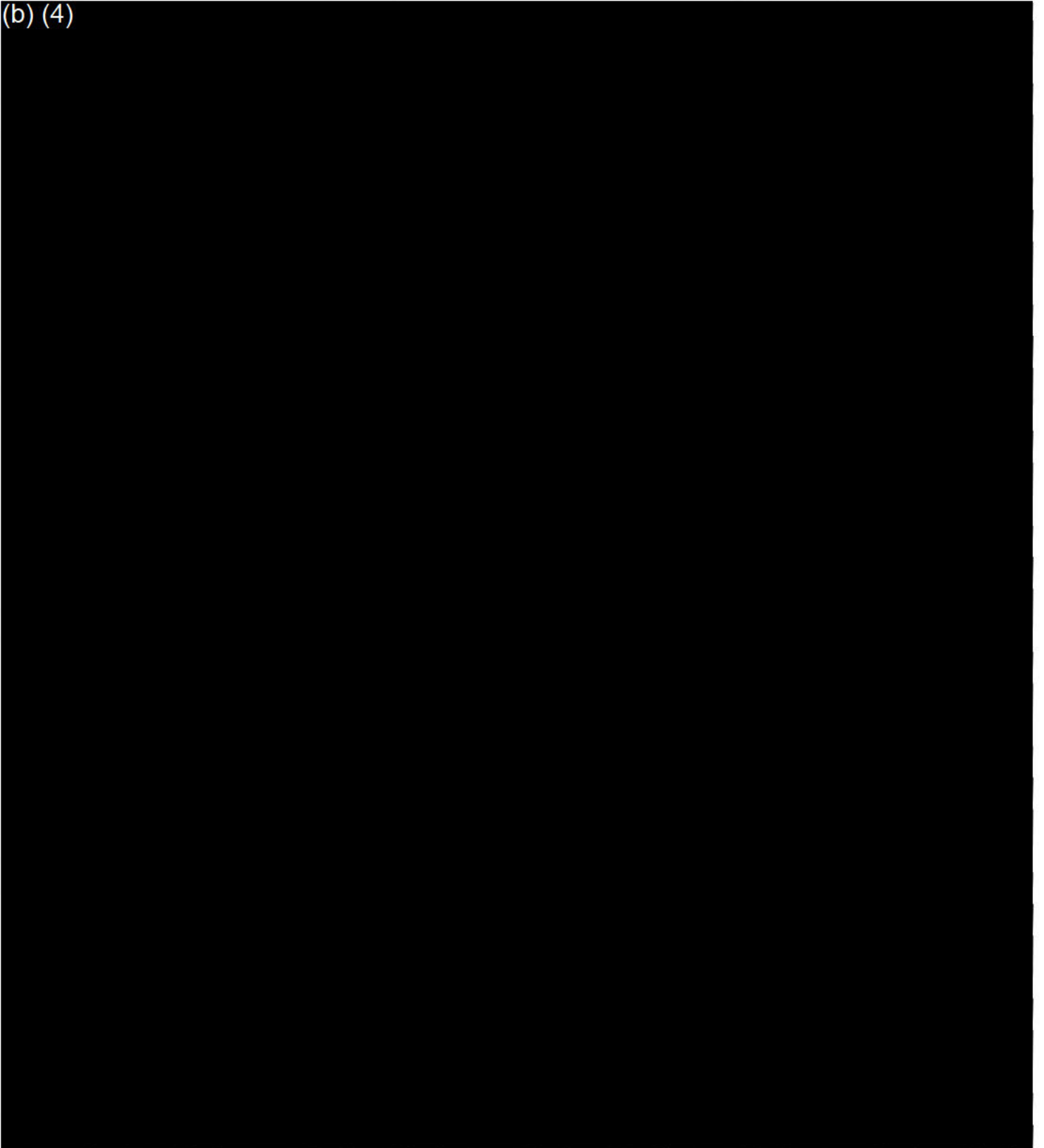
JOGMEC provides equity capital, liability guarantees, subsidies, information intelligence and technical assistance to Japanese companies in the oil and gas, coal, geothermal, and metals industries. As of March 2018, JOGMEC (b) (4) and had 5.54 billion USD in equity capital outstanding to 55 companies and 7.75 billion USD in liability guarantees to 11 companies in the oil and gas sector. JOGMEC provided equity capital for asset acquisition and liability guarantees to the Wheatstone LNG Project in Australia, which started production in 2017 and is expected to have a capacity of 8.9 mtpa once fully ramped up. Japanese company Pan Pacific Energy K.K. ("PE"), through its subsidiary PE Wheatstone Pty. Ltd. ("PEW"), acquired an 8 percent interest in the onshore LNG facility and a 10 percent stake in the gas fields supplying the facility, supported by JOGMEC's funding of 42 percent of PE's voting shares and JOGMEC's loan guarantee for 40 percent of the bank loan disbursed to PEW for the Project. JOGMEC also participated in the 7.6 mtpa Tangguh LNG Project in Indonesia through its equity stakes in KG Wiriagar Petroleum Ltd. (sold in 2017), KG Berau Petroleum Ltd., and Nippon Oil Exploration (Berau) Ltd., which collectively control 22.23 percent of the Tangguh LNG Project, as well as through a 416 USD million liability guarantee for the Project's 3.8 mtpa expansion in 2016.

<sup>25</sup> Ratings are for the Government of Japan. As a wholly state-owned entity, JOGMEC's credit is equivalent to the Government of Japan's credit.

(b) (4)



(b) (4)



Bharat Petroleum Corporation Limited

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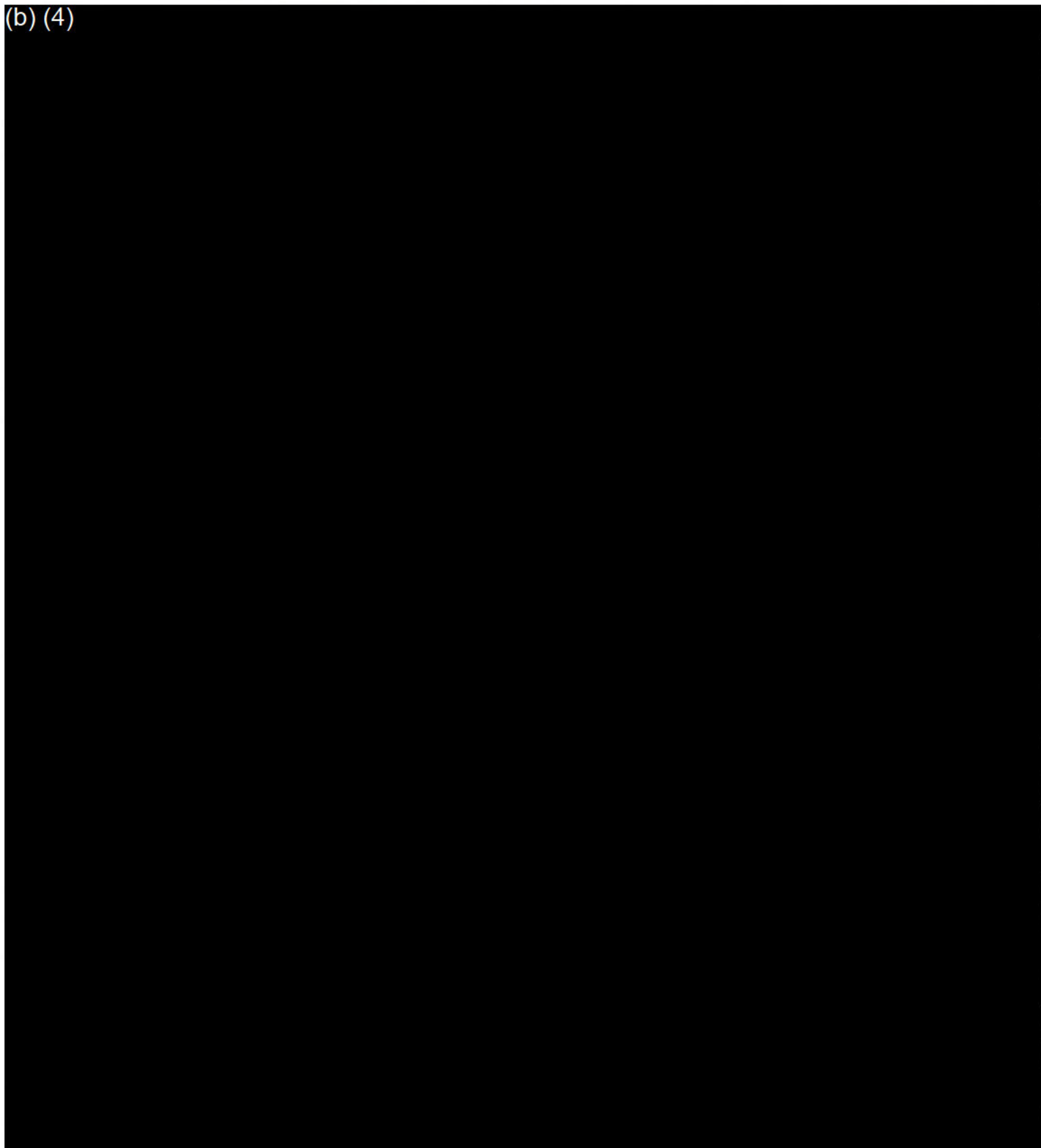
**Company Overview:** BPCL, 54.93 percent owned by the Indian government, is India's second largest downstream oil company (refining and marketing) and operates four refineries (the 240 kbpd Mumbai refinery, the 310 kbpd Kochi, the 120 kbpd BORL refinery, and the 60 kbpd Numaligarh refinery refinery. It (b) (4) on a permanent basis. BPCL is publicly traded on the National Stock Exchange of India and the Bombay Stock Exchange.

From April 2017 to March 2018 (fiscal year 2018), BPCL produced 27 million metric tons and sold 41 million metric tons of petroleum products. The company processed 29 million metric tons of crude oil in the same year, 24 million tons of which was imported crude oil.

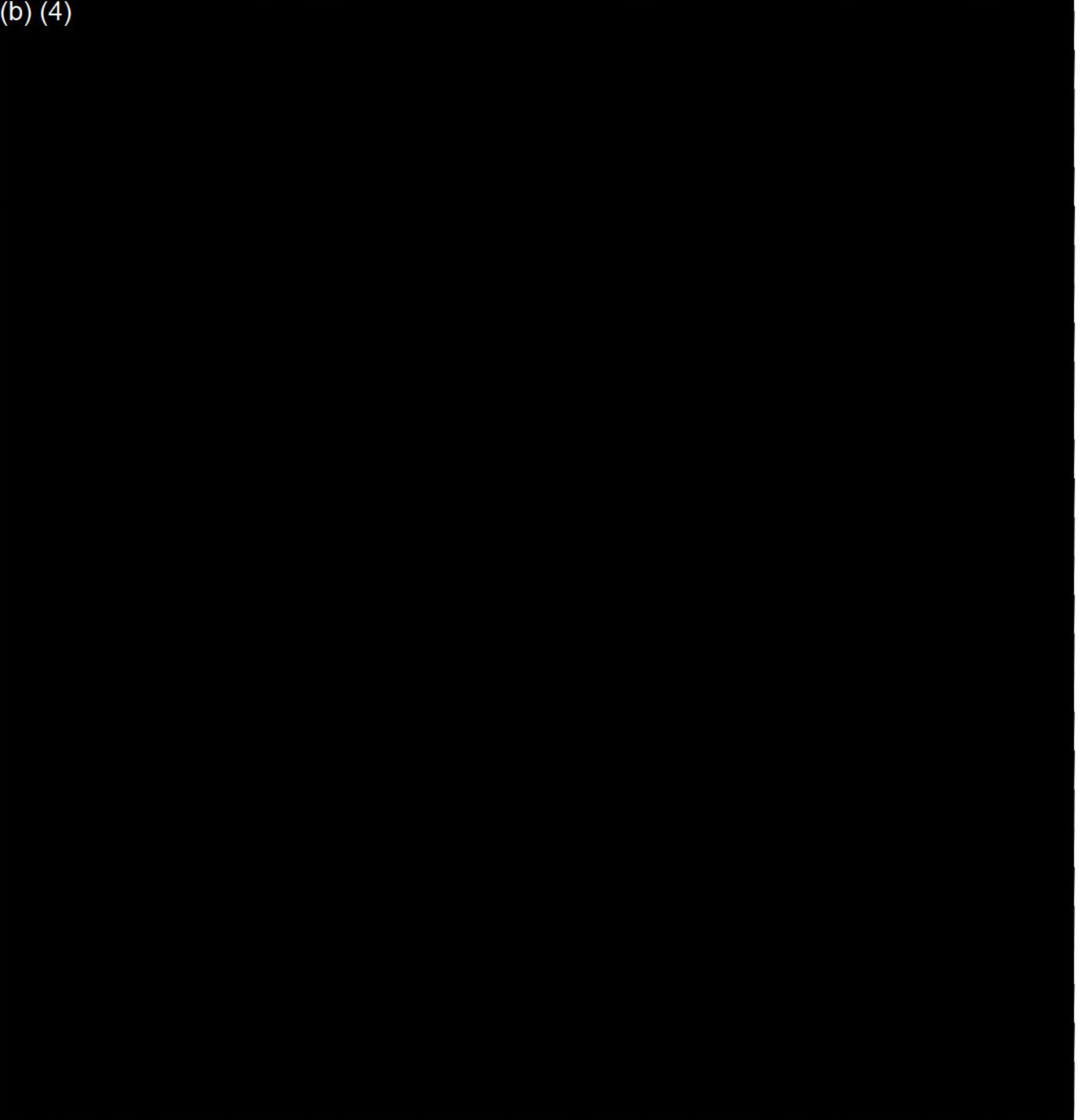
The company has made significant investments into the upstream sector with participating interests in 12 oil and gas blocks in India and 10 outside of India (including in the Mozambique Rovuma basin). Its non-Indian upstream portfolio includes oil and gas blocks in Mozambique, Russia, Brazil, Australia, East Timur, and Indonesia, in which it holds participating interests ranging between 7.9 percent and 28.0 percent.



(b) (4)



(b) (4)



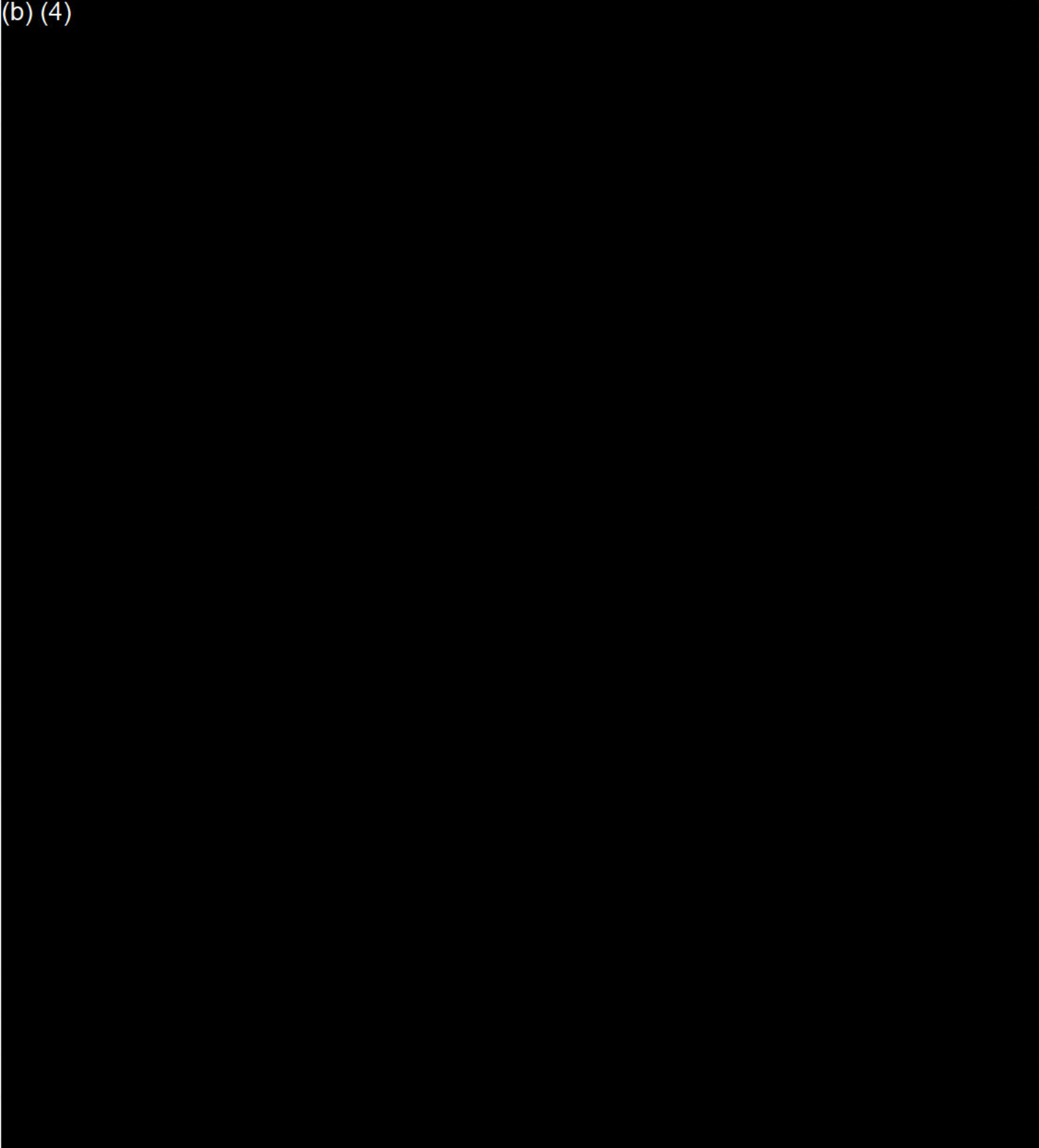
PTT Exploration and Production Public Company Limited

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**Company Overview:** PTTEP, incorporated in 1985, is the oil and gas exploration and production arm of PTT Public Company Limited ("PTT"), Thailand's largest supplier of petroleum and petrochemical products. PTT, which is 51.11 percent owned by the Ministry of Finance of Thailand, has a 65.29 percent ownership interest in PTTEP. Both companies are publicly traded on the Stock Exchange of Thailand. PTTEP (b) (4) and is active in the exploration, development and production of oil and natural gas in Thailand and around the world. Currently, it has investments in 40 exploration and production projects in 11 different countries, including Indonesia, Myanmar, Vietnam, Oman, Algeria, Australia, Canada, Mozambique, Kenya and Brazil. In 2018, 81 percent of the company's sales volume was from projects located inside of Thailand. PTTEP sells the outputs from its domestic and regional projects (crude oil, natural gas, LPG and condensate) primarily into the Thai market through PTT, the major buyer and processor of all its products. PTT then sells the processed products to the country's power, petrochemical, transportation, industrial and household sectors.

According to PTTEP's Annual Report, transactions between PTTEP and PTT are undertaken at an arm's length basis. In 2018, PTTEP accounted for 32 percent of total petroleum production inside of Thailand. The company was the largest petroleum producer in Thailand, followed by Chevron (30%), Total (10%), and others. The company reports total proved reserves of 677 million barrels of oil equivalent.

(b) (4)



Oil India Limited

(b) (4)

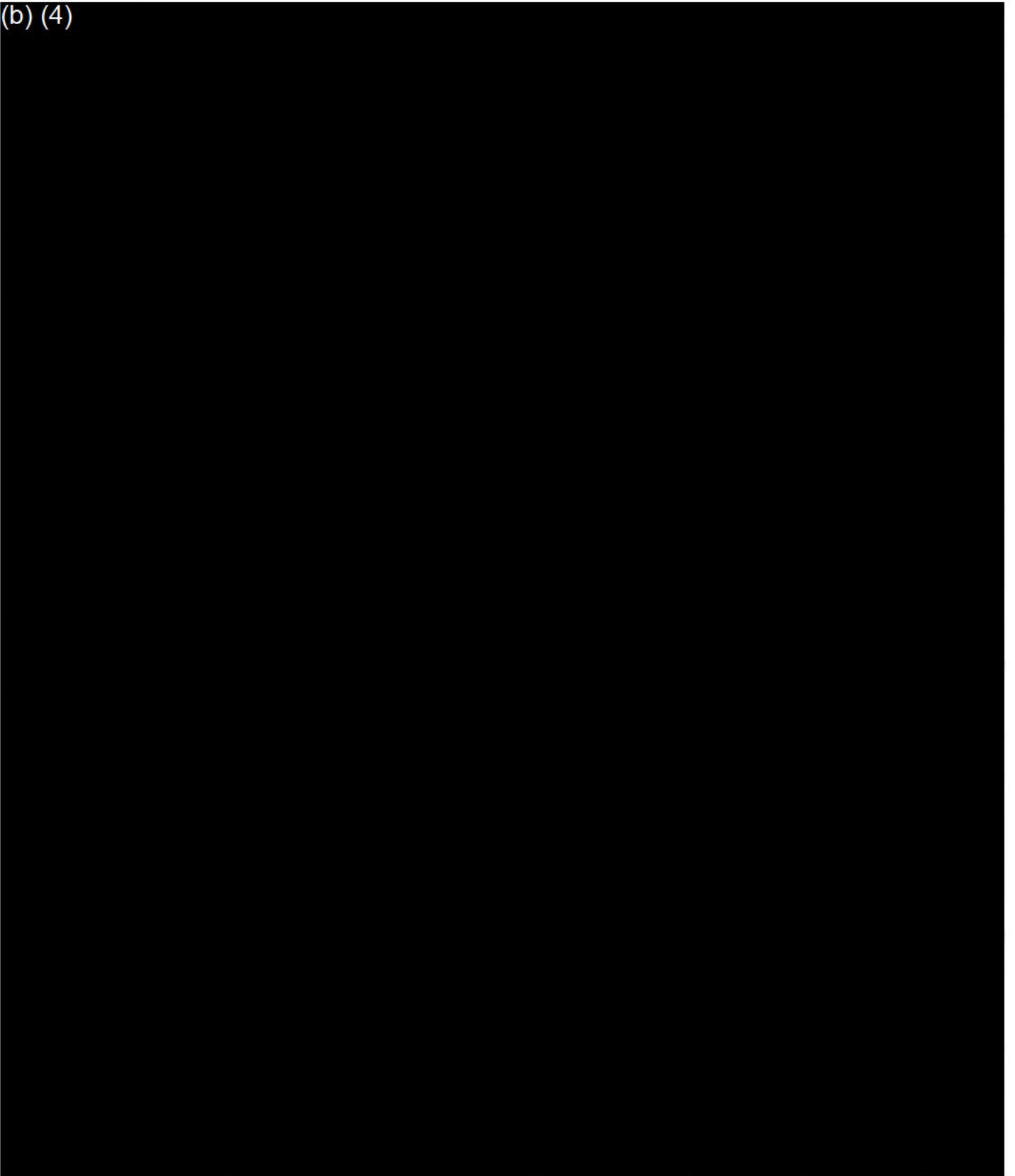
**Company Overview:** OIL is a state-owned oil and gas exploration and production ("E&P") company that was incorporated in 1959 to expand and develop the oil fields of Nahakratiya and Moran in Northeast India. OIL provides various E&P services and owns a 26 percent equity share in the Numaligarh Refinery. As of March 2018, OIL (b) (4). The Indian government owns a 66 percent share of OIL and the remainder is owned by private investors. OIL is publicly traded on the National Stock Exchange of India and the Bombay Stock Exchange.

OIL also has E&P assets in the U.S., Russia, Venezuela, Mozambique, Gabon, Libya, Bangladesh, Nigeria, Yemen and Burma. Its production is still largely concentrated in India, although its recent acquisition of Russian upstream assets has boosted its production by 30 percent and is part of the company's initiative to diversify its production and reserves base.

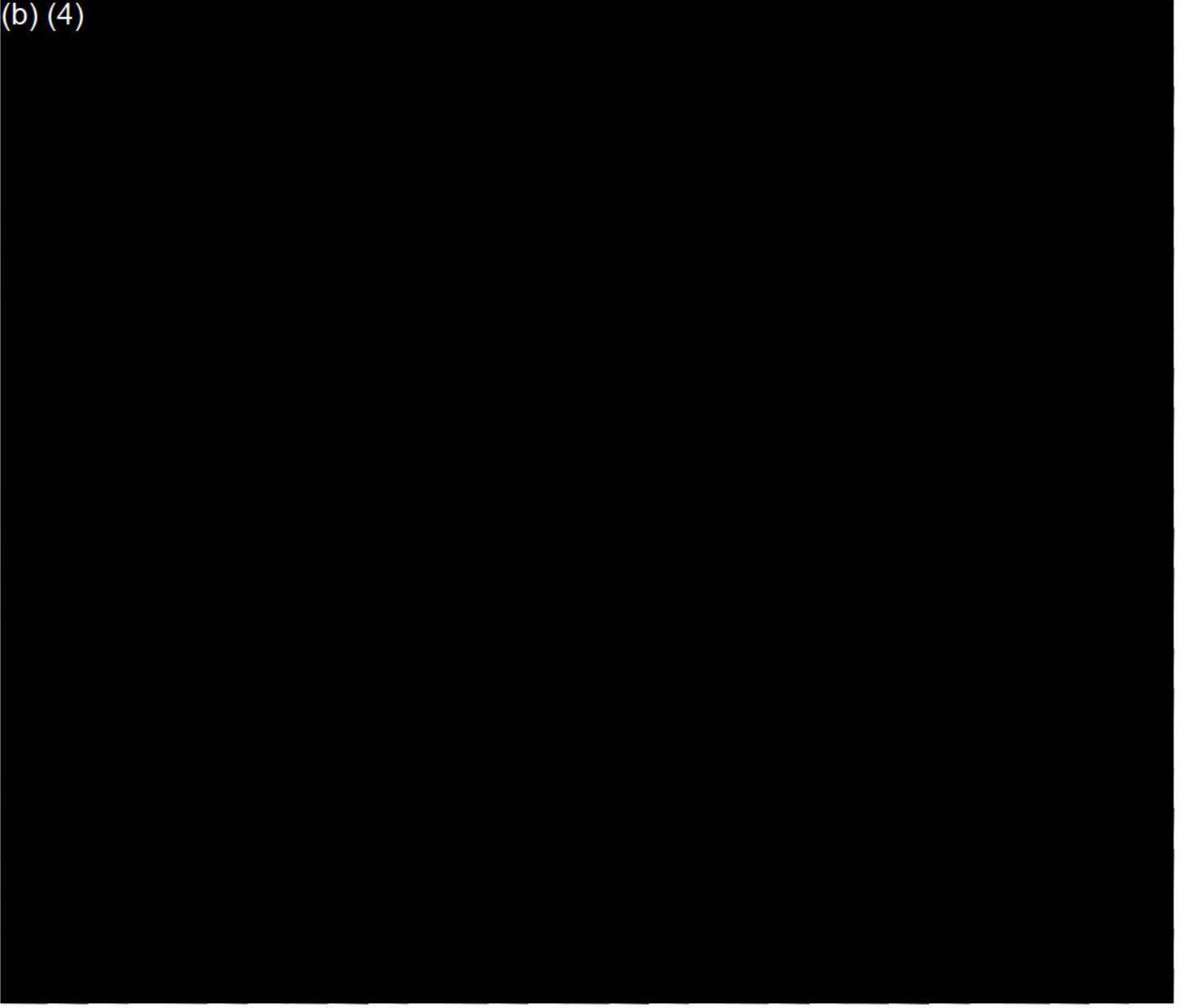
OIL contributes nine percent of India's crude oil production and seven percent of India's natural gas production. From April 2017 to March 2018 ("FY2018"), OIL produced 3.4 million metric tons of crude oil, 2.9 bcm of natural gas, and 34,100 metric tons of LPG. As of March 2018, OIL reported an estimated 44 million metric tons of proven reserves of oil and condensate (17 million of which are outside of India) and 85 bcm of proven reserves of recoverable gas (five billion of which are outside of India).



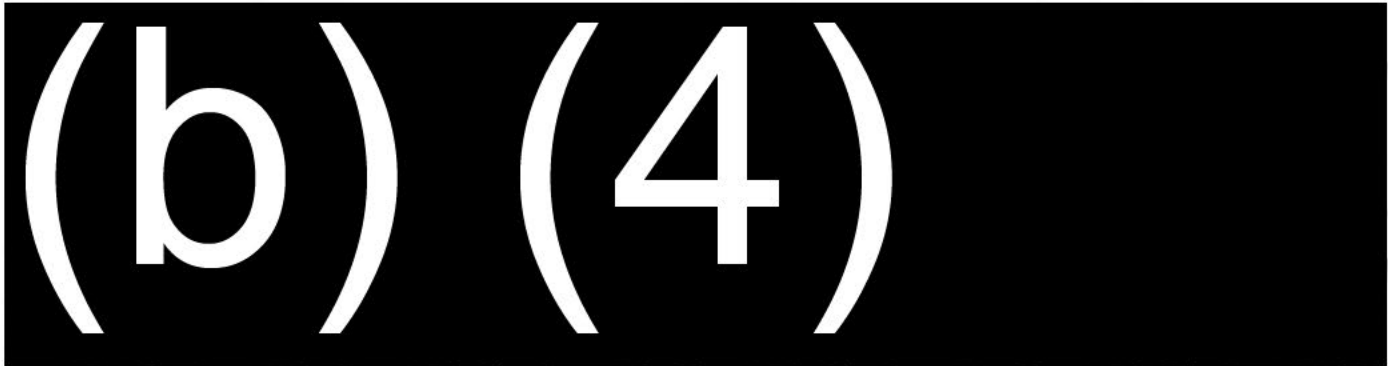
(b) (4)



(b) (4)




## Part B. EPC Contractor Company Summaries

Saipem S.p.A.

(b) (4)

**Company Overview:** Saipem provides drilling services as well as engineering, procurement, construction and installation of pipelines and complex projects, both onshore and offshore, in the oil and gas market. It currently has (b) (4) operating in 62 countries around the world. Approximately 50 percent of Saipem backlog and new contracts in 2018 were for engineering and construction, with approximately 15 percent of the company's new business being in sub-Saharan Africa. Since 1999, Saipem has engineered and constructed nine LNG liquefaction trains, each with a capacity of 2.9-4.7 million tons per year.

(b) (4)



McDermott International Inc.

(b) (4)


**Company Overview:** MDR is a global, fully vertically integrated, onshore-offshore EPC/EPCI provider with market leading technology. The company's services include offshore and subsea, LNG, downstream, and power facilities. MDR has (b) (4) operating in more than 54 countries.

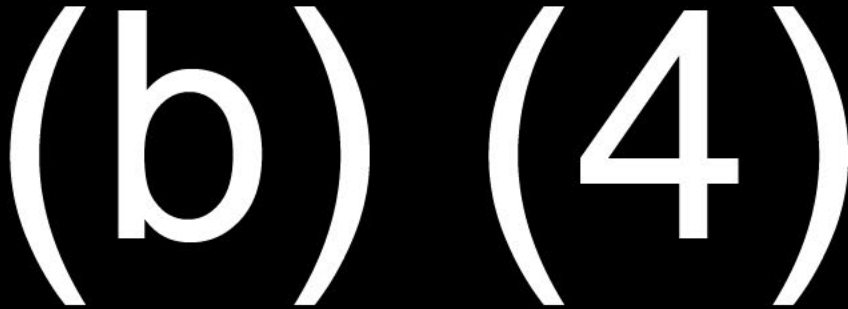
On May 10, 2018, MDR announced the completion of a merger with Chicago Bridge & Iron ("CB&I"). This merger improved geographical and sector diversification for MDR, as CB&I had a larger presence in the U.S. and provided an onshore business segment that MDR did not have before the merger. However, the merger has been financially challenging, due primarily to three troubled legacy projects from CB&I: Cameron LNG, Freeport LNG, and Calpine gas power. In total, MDR has recorded \$1 billion of reduced estimated profits in total for the three projects. MDR believes that the losses from these projects have been realized; Calpine has achieved completion, and Freeport and Cameron are each more than 90 percent complete.

MDR's – then, CB&I's – experience in LNG began in 1958. The company constructed tanks, peak shaving plants, and regasification terminals through the 20<sup>th</sup> century. Since 2002, MDR has been involved in LNG export projects as well, including design and construction of the 4.45 million ton per year Peru LNG facilities.



(b) (4)




TechnipFMC plc

(b) (4)

**Company Overview:** TechnipFMC is an energy services company with three business segments: subsea, onshore/offshore, and surface technologies. It currently has (b) (4) with products and services being delivered on every continent except Antarctica. TechnipFMC recently completed integrated design and delivery of subsea systems for the Trestakk oil field in Norway, as well as leading the EPC consortium for Yamal LNG in Russia. TechnipFMC was formed in 2017 from a merger of equals between FMC Technologies, Inc. and Technip S.A.

(b) (4)



Van Oord N.V.

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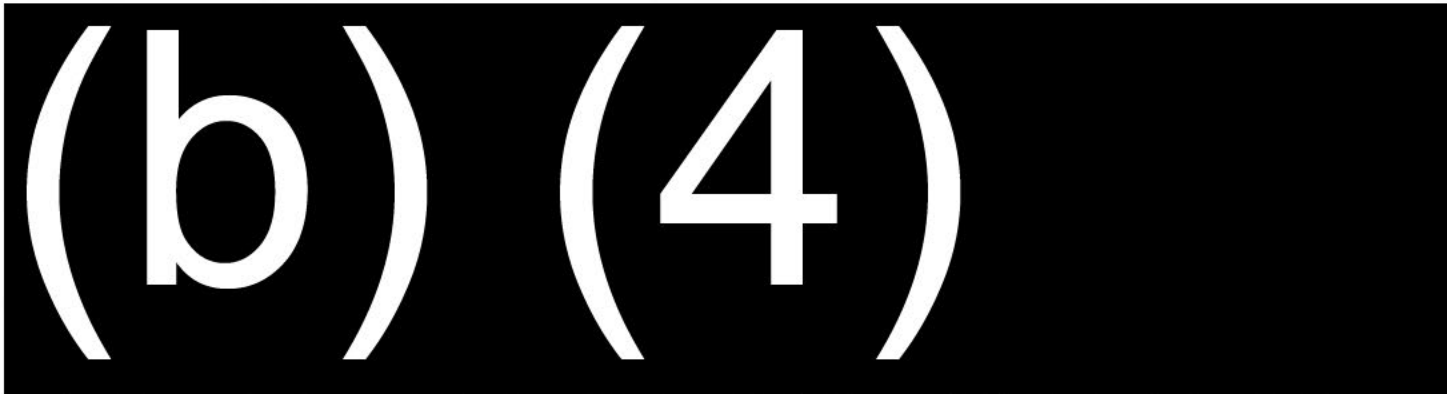
**Company Overview:** Van Oord is a family-owned, marine contractor, operating since 1868. Its primary business segments are dredging, offshore oil & gas, and offshore wind power. As of 2018, Van Oord (b) (4) on projects in approximately 42 countries. In 2016 through 2018, Van Oord provided subsea rock installation, deep dredging, and landfall construction for the West Nile Development, an expansion of gas and condensate fields located approximately 40-50 miles off the coast of Alexandria, Egypt.

(b) (4)






## Part C. LNG SPA Counterparty Company Summaries

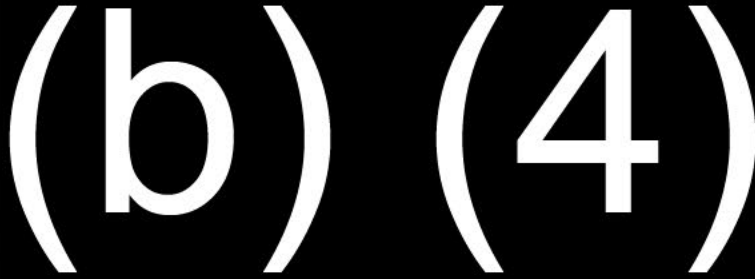


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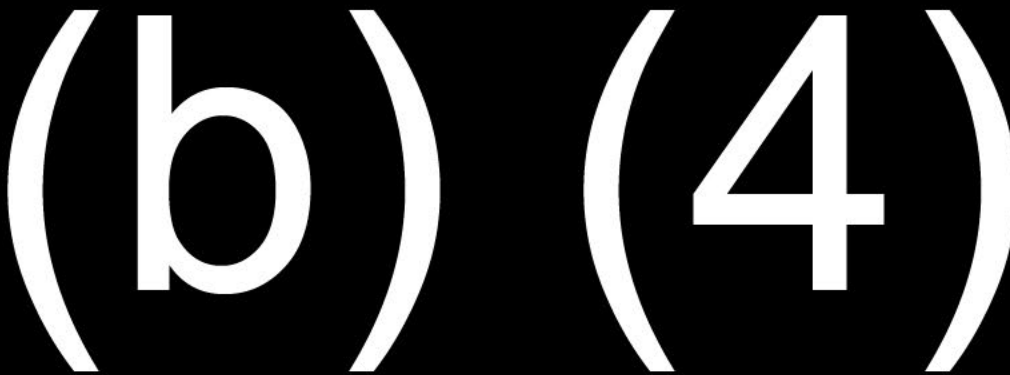
**Company Overview:** Tokyo Gas, founded in 1885, is Japan's largest gas company. The company produces, supplies and sells natural gas in Japan and supplies the Tokyo metropolitan area. The company has access to 13 mtpa of LNG from projects in Australia, Brunei, Indonesia Malaysia, Qatar, Russia, and USA and has sought to diversify LNG supply sources and develop a flexible LNG portfolio (including the co-purchaser SPA with the Project).

(b) (4)



Centrica LNGA large black rectangular redaction box covering the top portion of the page content.

**Company Overview:** Centrica LNG is the global LNG trading company of Centrica plc. Previously, it was part of a single company that carried out both trading and shipping activities, but a reorganization in 2016 separated out the shipping from the trading functions into separate entities, with Centrica LNG retaining the global LNG trading business. Centrica LNG's operations are fully integrated into Centrica plc's business activities. It has access to 3.8 mtpa LNG from Qatargas and Sabine Pass.

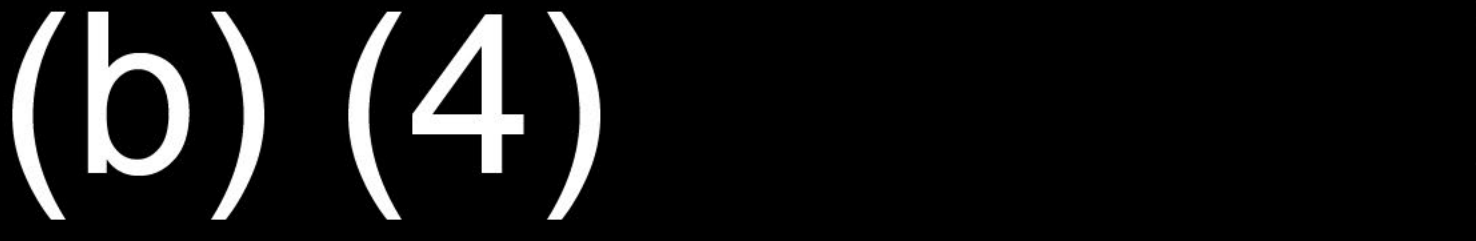
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Centrica plc

(b) (4)

**Company Overview:** Centrica is an integrated multinational energy company incorporated in 1995. It is a leading utility in the UK with a large residential and commercial customer base and is also an integrated energy company operating in Europe, the US, and Canada with business operations in upstream, midstream, and downstream markets. At the end of 2018, it reported 203 million barrels of oil equivalent in proved reserves located throughout Europe.

(b) (4)

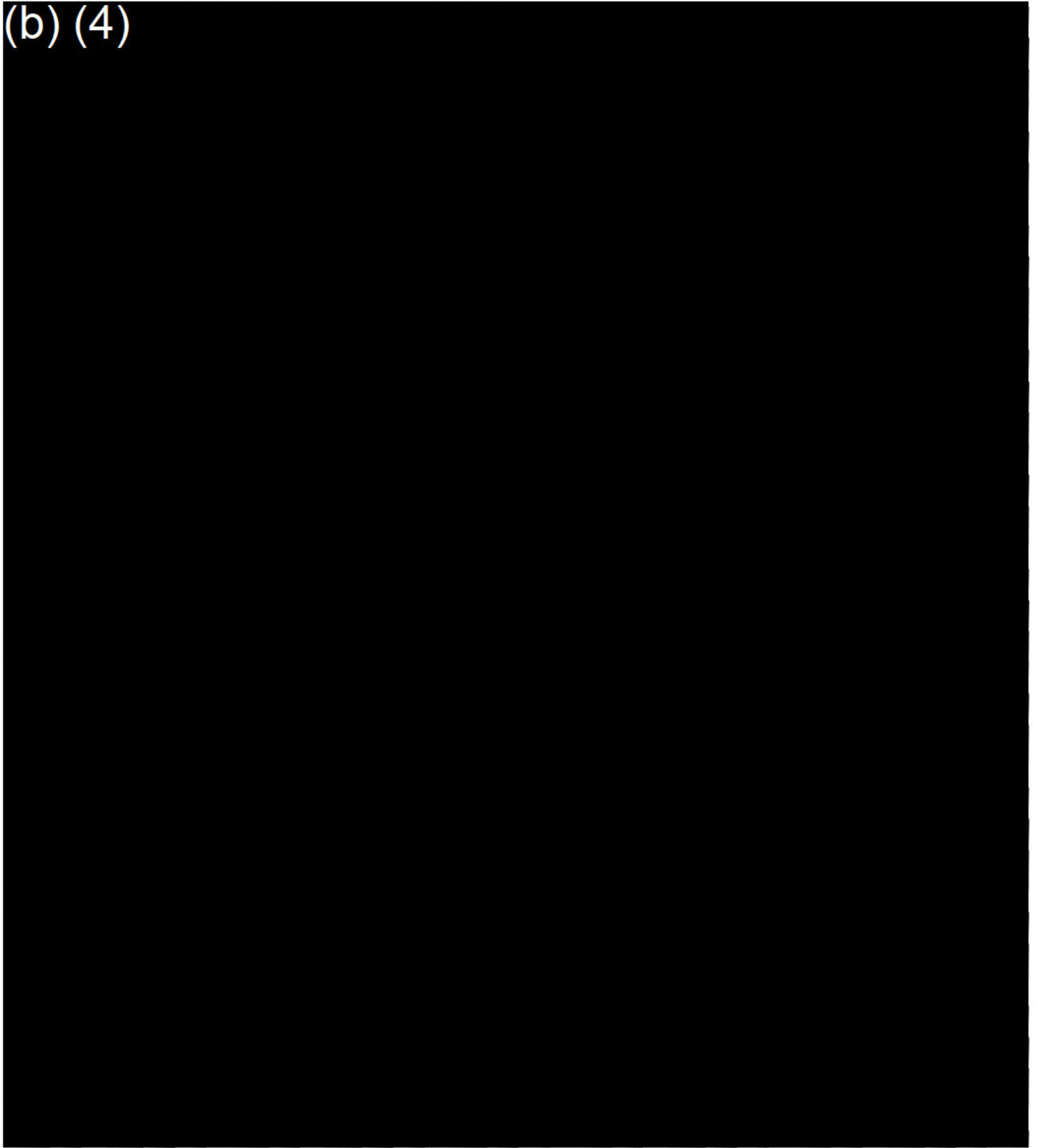
JERA Co. Inc.A large black rectangular redaction box covering the majority of the page content. The text "(b) (4)" is printed in large white font on the left side of the redacted area.


(b) (4)

**Company Overview:** JERA, founded in April 2015 and headquartered in Tokyo, is the world's largest LNG buyer. The company is one of Japan's largest power producers with a generation capacity of approximately 67 gigawatts. It was formed by a merger of Japan's largest and third largest power utilities, TEPCO and Chubu Electric. The company currently has access to approximately 35 mtpa of LNG from the company's contracts with global LNG projects and portfolio players. JERA's procurement from the Project is a part of its efforts to source competitive LNG and develop a flexible LNG portfolio.



(b) (4)

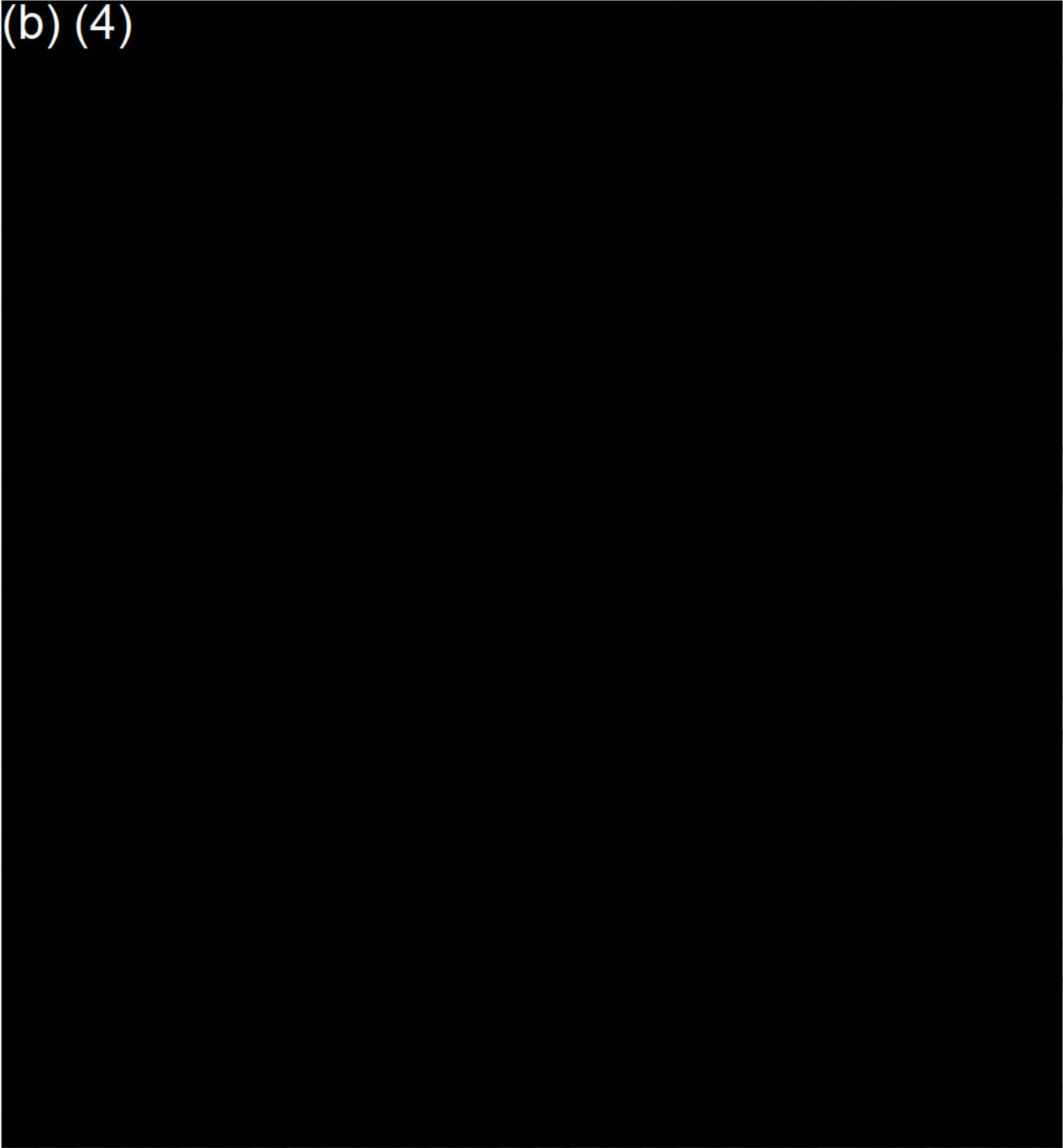


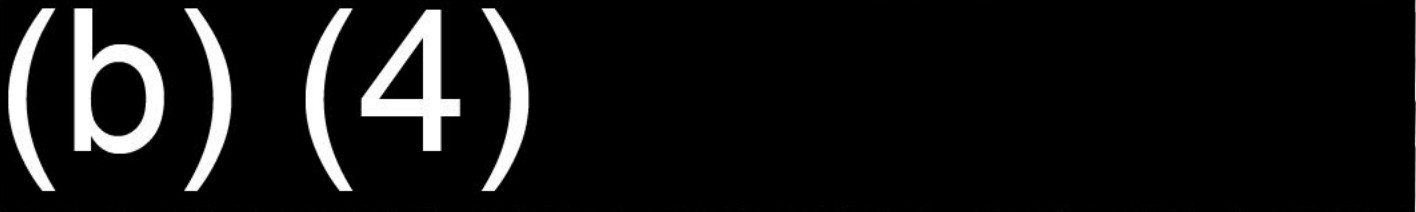
CPC Corporation, Taiwan

(b) (4)

**Company Overview:** CPC, founded in 1946, is Taiwan's national oil company (NOC) and currently the sole importer and supplier of natural gas. The company currently has access to 10 mtpa of LNG from Indonesia, Qatar, Malaysia, PNG and Australia, and will take U.S. volumes starting in 2019. It is responsible for supplying sufficient energy to the domestic market through its business areas, which include oil & gas exploration and production, refining, petrochemicals, lubricants, solvents and chemicals. In 2017 its crude imports amounted to 141 million barrels: imports from the Middle East accounted for 56 percent, Africa 21 percent, Southeast Asia 3 percent; the remaining 20 percent from other locations. CPC's two operating oil refineries at Taoyuan and Dalin currently have a combined daily refining capacity of 500,000 barrels. In 2017, domestic sales of petroleum products were 20.7 million kiloliters, comprising 52 percent gasoline, 24 percent diesel fuel, 17 percent fuel oil, and eight percent aviation fuel. Its offtake from the Project is aligned with the company's efforts to diversify LNG supply sources.

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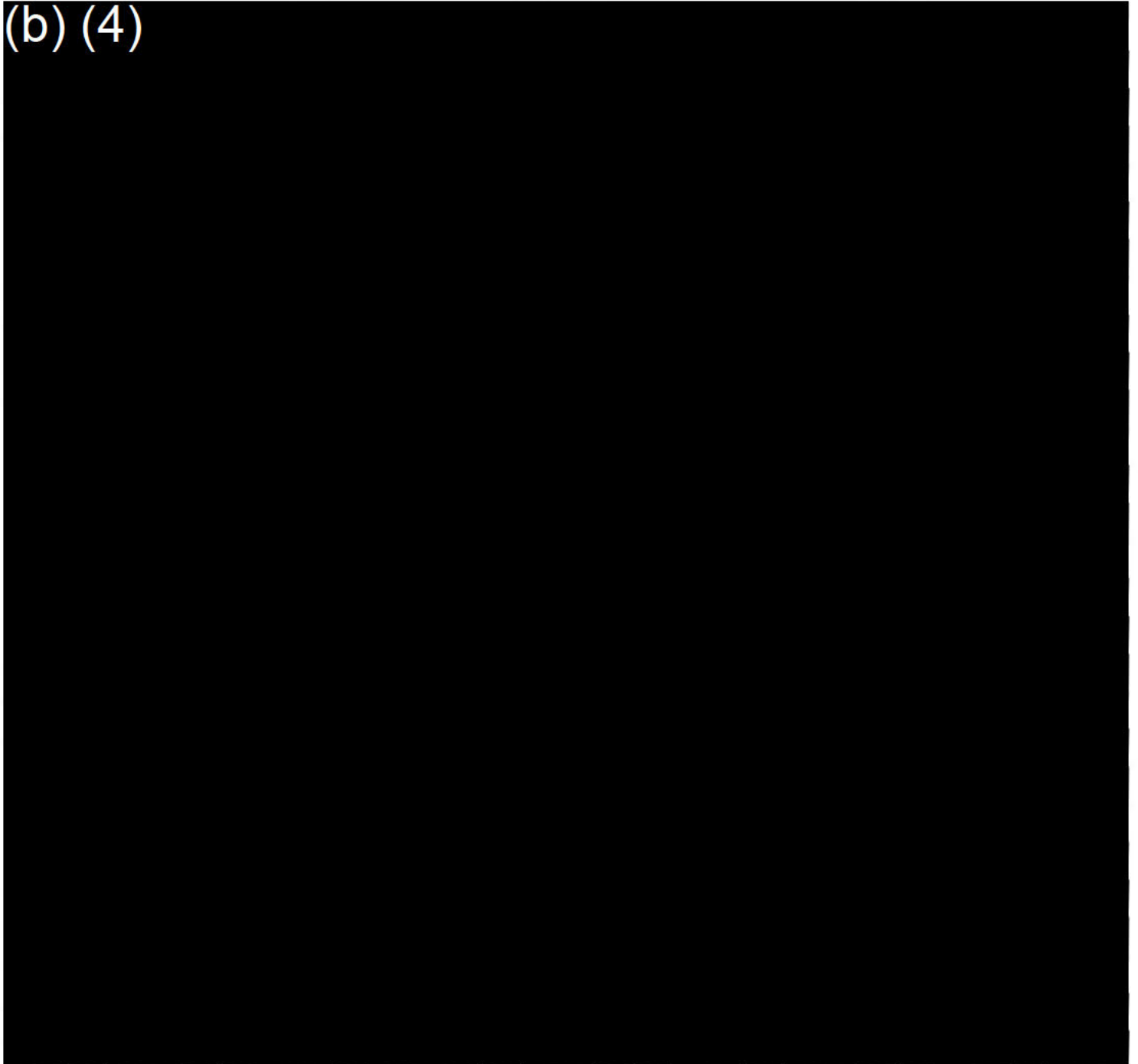


Électricité de France SAA large black rectangular redaction box covering the top portion of the page content. The text "(b) (4)" is printed in white, bold, sans-serif font across the center of the redacted area.

(b) (4)

**Company Overview:** EDF, founded in 1946 and headquartered in Paris, France is an integrated energy company engaged in the generation, transmission, distribution, supply and trading of power and energy services in France, and internationally. The French Government owns an 84 percent stake in the company. EDF is one of the largest integrated utilities in the world. It is the dominant player in French energy generation, distribution and supply; and has a leading position in the U.K. and Italian power generation markets. The company also has operations in Belgium, the U.S., Brazil, China, Vietnam and Laos. Nuclear and hydro operations account for about 80 percent of EDF's annual output.

(b) (4)



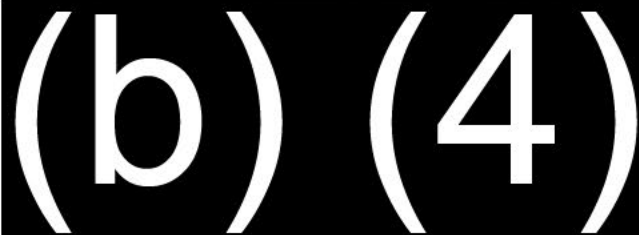


**Bharat Gas Resources Limited**

(b) (4)

**Company Overview:** Bharat Gas Resources Limited was incorporated on 7 June 2018. It is a wholly-owned subsidiary of BPCL.

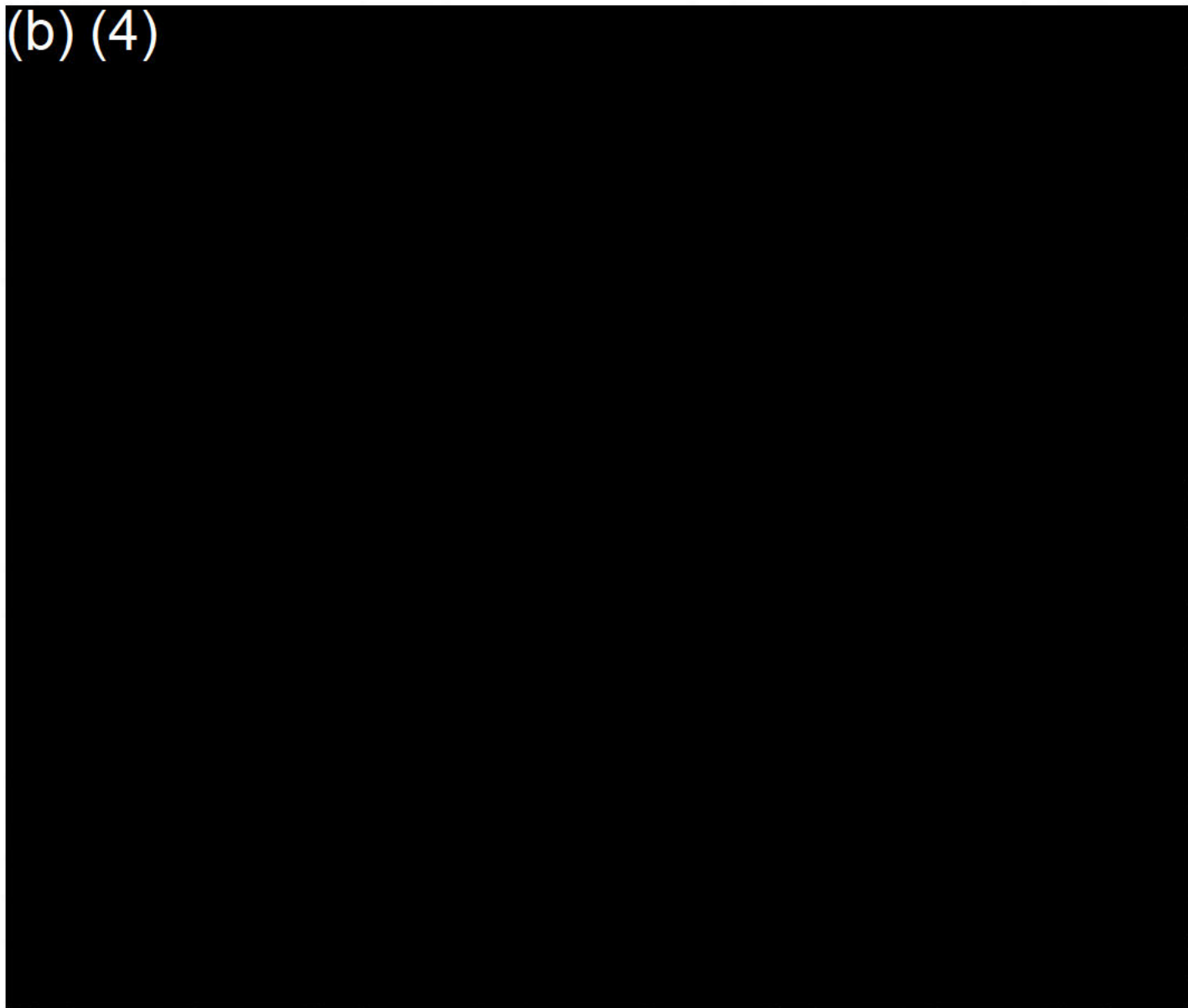
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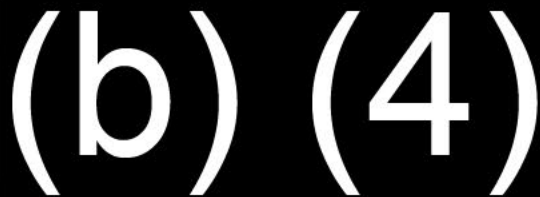
Bharat Petroleum Corporation LimitedA large black rectangular redaction box covering the top portion of the page. Inside the box, the text "(b) (4)" is written in large, white, sans-serif font.

**Company Overview:** BPCL, 54.93 percent owned by the Indian government, is India's second largest downstream oil company (refining and marketing) and operates four refineries (the 240 kbpd Mumbai refinery, the 310 kbpd Kochi refinery, the 120 kbpd BORL refinery, and the 60 kbpd Numaligarh refinery). It employs over (b) (4) people on a permanent basis. BPCL is publicly traded on the National Stock Exchange of India and the Bombay Stock Exchange.

From April 2017 to March 2018 (fiscal year 2018), BPCL produced 27 million metric tons and sold 41 million metric tons of petroleum products. The company processed 29 million metric tons of crude oil in the same year, 24 million tons of which was imported crude oil. The company has made significant investments into the upstream sector with participating interests in 12 oil and gas blocks in India and 10 outside of India (including in the Mozambique Rovuma basin). Its non-Indian upstream portfolio includes oil and gas blocks in Mozambique, Russia, Brazil, Australia, East Timur, and Indonesia, in which it holds participating interests ranging between 7.9 percent and 28.0 percent.

(b) (4)




PT Pertamina (Persero)

(b) (4)

**Company Overview:** Pertamina is an Indonesian state-owned company. It is an established player in the LNG business with its role in marketing volumes from Indonesian export projects and importing volumes into regassification facilities. The company currently has access to domestic gas LNG contracts within Indonesia, with international projects, such as Corpus Christi in the U.S., and with portfolio players (Woodside, Total), which will commence in 2019. The company reported oil production of more than 363,000 barrels per day in 2018 (a 15 percent increase from the year before) and natural gas production of 3,059 million standard cubic feet per day (a 50 percent increase from the year before).

Contracting competitive LNG for the benefit of the national economy. Expected delivered cost of volumes from the Project should help to make gas more marketable within Indonesia

(b) (4)





Shell International Trading Middle East Ltd.


(b) (4)

**Company Overview:** SITME is an entity within the Royal Dutch Shell Group's Global Products and LNG Trading organizations. It was incorporated in 1999 and registered under the laws of Bermuda. SITME is 100 percent owned by Shell Eastern Petroleum (Pte) Ltd based in Singapore. The ultimate parent company and controlling party is Royal Dutch Shell Plc ("**Shell**"), which is incorporated in the UK. Shell holds equity in Sakhalin, Oman, Egypt, North West Shelf, Queensland (Curtis Island), Malaysia, Brunei, Nigeria, Gorgon, Atlantic, Peru and Qatar. Shell's LNG marketing and trading organization is a global trading business which operates through established trading hubs in Dubai, Singapore, Houston, and The Hague. It purchases LNG from supply projects (both Shell equity and third party), has shipping assets under its control, and supplies to all the major LNG markets across Asia, Europe, Middle East and North/South America. Shell reports liquefaction capacity of more than 40 million tons per annum through its global portfolio.

The principal activity of SITME is oil products and LNG trading. Specifically, it is involved in trading and supply of refined oil products and LNG undertaken through the Dubai branch of the company located in the Jebel Ali Free Zone. The company manages LNG relationships with suppliers and customers registered in the Middle East, Indian subcontinent, Africa, Europe and the Americas. To perform these services SITME obtains local employment, technical, commercial and management services from other Shell entities. As a 100% owned Shell subsidiary, SITME follows the Shell Group governance and control framework, including the Group Treasury policy of Shell, which requires that companies are adequately capitalized for the business they undertake.

SITME has a short-term credit facility of \$400 million from a Shell treasury company. This facility is used for working capital management and SITME does not currently borrow from external sources.

(b) (4)



CNOOC Gas and Power Singapore Trading and Marketing Pte. Ltd.

(b) (4)

**Company Overview:** CNOOC Singapore Trading was incorporated on 3 September 2018. It is a wholly-owned subsidiary of CNOOC.

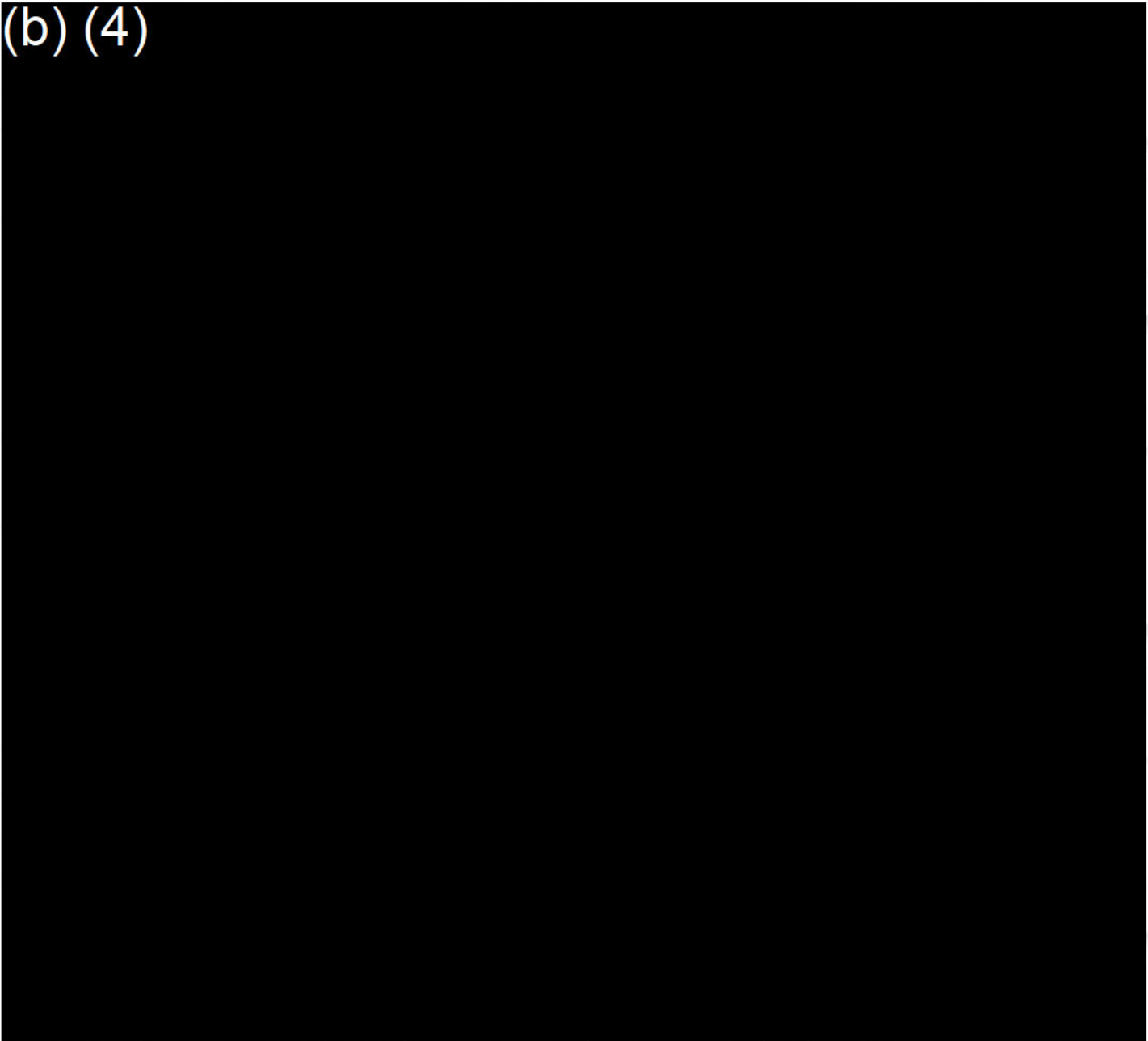
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China National Offshore Oil Corporation

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**Company Overview:** Headquartered in Beijing and founded in 1982, CNOOC is China's third largest oil company and has been responsible for a large share of the overseas oil and gas resource acquisitions by China's national oil companies. The company is 100 percent owned by the Chinese government and has played an increasingly important role in China's diversifying energy supply portfolio over the past two decades as the country increasingly looks to offshore oil and imported LNG to supplement stagnant domestic onshore production. It's largest subsidiary, CNOOC Ltd. is listed in Hong Kong.

(b) (4)





## Appendix P.

## Glossary of Terms

AfDB	the African Development Bank
ADGM	a financial free trade zone within Abu Dhabi, an Emirate of the United Arab Emirates
AMS	Anadarko Management System
APC	Anadarko Petroleum Corporation
APCI	Air Products & Chemicals, Inc
Area 1 EPCC	Area 1 Exploration, Production, Concession Contract
ASW	Ahlu Sunnah Wa-Jamo, an Islamist insurgency
Atradius	Atradius of the Netherlands
BA	Biological Assessment
bbbl	barrel
bcm	billion cubic meters
BCQ	base committed quantity
boe	barrel of oil equivalent
BTU	British Thermal Unit, a measure of the heat content of a substance
Borrower	Mozambique LNG1 Financing Company, a company organized under the laws of the ADGM, and owned by HoldCo
BPCL	Bharat Petroleum Corporation Limited
Brent	Brent Oil, an international oil benchmark
Cash Calls	Equity Funding Obligations under the JOA
CFADS	cash flow available for debt service
CHA	Critical Habitat Assessment

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China Ex-Im Bank	China Export-Import Bank
CHMP	Cultural Heritage Management Plan
CIRR	Commercial Interest Reference Rate
CLS	Country Limitation Schedule
cfm	cubic feet per day
Concessionaires	subsidiaries of the Sponsors, which are counterparties to the Area 1 EPCC and other project agreements, and shareholders in HoldCo and the Shared Facilities Companies
DES	delivered ex-ship (delivered at the buyer's offloading facilities)
DSRA	Debt Service Reserve Account
DSCR	debt service coverage ratio
DSU	debt service undertaking, to be provided by each Sponsor
ECA	Export Credit Agency
ECIC	Export Credit Insurance Corporation of South Africa
E&E	Environmental and Engineering Division
ENH	Empresa Nacional de Hidrocarbonetos EP
ENH Carry Obligation	Each Sponsor has agreed to cover a share of ENH's equity funding obligation under the JOA in proportion to its Participating Interest
EPC	engineering, procurement and construction
ESAP	enforceable E&S Action Plan
EXIM	Export-Import Bank of the United States
Financial Advisor	Greengate LLC
FID	Financial Investment Decision
FOB	free on board (delivered at the vessel loading point)

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FoE	Friends of the Earth
G-A	Golfinho-Atum the name of the gas reserves
GBP	United Kingdom Pound
GDP	gross domestic product
GoM	Government of Mozambique
HGSF	Host Government Security Forces
HH	Henery Hub, a location on the gas pipeline network in Louisiana U.S.A., where natural gas is purchased and sold
HoldCo	Moz LNG1 Holding Company Ltd., a company organized under the laws of the ADGM, and owned by the Concessionaires
IBRD	International Bank for Reconstruction and Development
IESC	Independent E&S Consultant
IRR	internal rate of return
JOA	Joint Operating Agreement
JOGMEC	Japan Oil, Gas, and Metals Corporation
JTF	Joint Task Force
Limited Recourse	The Senior Lenders will have recourse to the Sponsors for repayment of the Senior Debt until Completion is achieved; thereafter, the Senior Lenders will only have recourse to the Project for repayment of the Senior Debt.
Market Consultant	Wood MacKenzie Limited
Reserves Consultant	DeGolyer & MacNaughton
Technical Consultant	Lummus Consultants International LLC
JBIC	Japan Bank for International Cooperation
JOA	Joint Operating Agreement

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LLCR	loan life coverage ratio
LNG	liquefied natural gas
LNG SPAs	liquefied natural gas sales and purchase agreements
mmBtu	millions of BTUs
Mitsui	Mitsui & Co. Ltd.
mtpa	million metric tonnes per annum
MOZ LNG	the Project
MoU	Memorandum of Understanding with the Ministries of Defense and Interior was established jointly with AMA1
MRV	Mozambique Rovuma Venture S.p.A
NEXI	Nippon Export and Investment Insurance
NOAA-NMFS	National Oceanic and Atmospheric Administration
OECD	Organization for Economic Co-operation and Development
OECD Arrangement	Arrangement on Officially Supported Export Credits
OIL	Oil India Limited
ONGC	Oil & Natural Gas Corporation
Operator	AMA1, a wholly owned subsidiary of Anadarko Petroleum Corporation
OXY	Occidental Petroleum Corporation
Participating Interest	the undivided interest in the Project owned by each Concessionaire
PTTEP	PTT Exploration and Production Public Company Limited
1P	proved reserves
2P	1P (proved reserves) + probable reserves, hence "proved AND probable"



P50	a reserves estimate in which there is an equal likelihood that the actual reserves will either be greater or less than the estimate
PEG	a location on the gas pipeline network in France, where natural gas is purchased and sold
PS	Performance Standard
Project Field	the Golfinho-Atum gas field within Area 1
proved reserves	a reserves estimate in which there is high degree of likelihood (e.g., 90%) that the actual reserves will exceed the proved reserves estimate
RV	Resettlement Village
SACE	Servizi Assicurativi del Commercio Estero S.p.A. of Italy
Seller	Mozambique LNG1 Company Pte. Ltd., a limited liability company incorporated under the laws of the Republic of Singapore and owned by HoldCo, which will conduct LNG sales and marketing activities for the Project pursuant to the terms of the LNG SPAs and LNG carrier charter party agreements.
Senior Debt	(b) (4) identified for the project
Senior Lenders	ECA Direct Loans alongside a syndicate of approximately 15-20 commercial banks providing Senior Debt financing both 'covered' loans (insured or guaranteed by certain of the ECAs) and 'uncovered' loans
Shared Facilities	the marine terminal and materials offloading facility, which are intended to be shared by the Project and the Area 4 LNG project
Shared Facilities Companies	Mozambique LNG Marine Terminal Company S.A., owner of the marine terminal facilities, and Mozambique MOF Company S.A., owner of the materials offloading facility
SPAs	sales and purchase agreements
Sponsors	the ultimate owners of the Project, introduced under the heading "Borrower Profile and Sponsors" in the Executive Summary to this memorandum



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Sponsor Recourse	this transaction is a "limited-recourse" project financing where repayment is ensured by the Sponsors during the construction period until the Project is completed
Springing Reserve Account	an account to become operative to the extent the Pre-Approved Upstream Capital Expenditures profile is materially different than what was assumed in the Project's base case.
tcf	trillion cubic feet
Thai EXIM	Export-Import Bank of Thailand
Total	Total, SA
TTF	Title Transfer Facility, a location on the gas pipeline network in The Netherlands, where natural gas is purchased and sold
TVO	TechnipFMC / Van Oord
UJV	unicorporated joint venture
UKEF	UK Export Finance of the United Kingdom
World Bank Negative Pledge	Under the IBRD lending program, the assets owned or controlled by a country borrowing from the IBRD are not permitted to be pledged as security for repayment of debt to third party creditors unless such assets are provided as security, on a pro rata basis, to the World Bank
\$	United States dollar