

# Delivering power to the people

ASX RELEASE ASX:AFR

30 October 2019

# **QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2019**

### **HIGHLIGHTS:**

- Discussions continued with potential development partners who have expressed interest in participating in the funding and construction of the Sese project as 2 x 300MW stages.
- Ongoing strong interest from potential power purchasers due to the major electricity shortages in southern African region associated with reduced generation availability at Eskom and major reductions in generation in Zimbabwe and Zambia due to low rainfall and reduced water available to hydroelectric generators.
- A mining reserve statement for the SS Seam within the proposed mining area is being prepared using the updated resource estimate and information from First Quantum's in-house mining feasibility study.
- Completed an updated mineral resource estimate for the Mmamabula West Coal Project, where a 2.9 billion tonne Measured, Indicated and Inferred Resource has been defined at an average calorific value of 20.3 MJ/kg.
- At 30 September 2019, the Company had cash reserves of AU\$2.5M and held investments in listed companies valued at AU\$0.68M.

# **OUTLOOK:**

# Sese JV (33.3% AFR)

- Continue negotiations for:
  - PPA for 100MW delivered to First Quantum Minerals Ltd (FQM) in Zambia,
  - MOU and Draft PPA to sell 150MW balance of the first Stage of the project to credit worthy offtakers in the SADC region
  - Ongoing engagement with an international power industry partner regarding potential participation in development and financing of Sese Project.
  - Connection Agreement to the Botswana transmission grid
  - o Use of System Agreement related to use of Botswana and Zambia transmission grids, and
  - Wheeling Agreements (i.e. costs to transmit the power through third party countries such as Zimbabwe)
- Finalise Generation and Export Licence, which is the only outstanding major permit required
- Ongoing hydrological monitoring to provide baseline water quality information
- Complete Resettlement Action Plan (RAP)



#### Mmamabula West Project (100% AFR)

- Review the Life-of-Mine (LOM) schedule and reserve statement for the A-Seam based on the new resource statement.
- Update the mining prefeasibility study to reflect updated coal specification to meet Eskom power station requirements, a revised life-of-mine mining schedule and current capital and operating cost estimates.
- Further negotiations with potential South African partners to take a majority stake in the project.
- Finalise the Environmental and Social Impact Assessment submission for an integrated coal mine and power station of up to 600MW with the Department of Environmental Affairs.
- Finalise Land Rights approvals

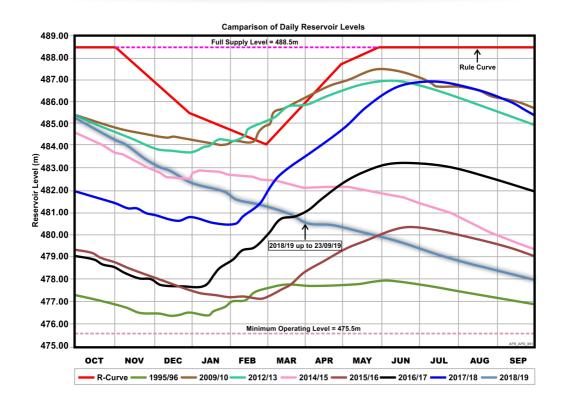
# **Mmamantswe Power Project (100% AFR)**

Review project development plan against draft update to South Africa's Integrated Resource Plan

## Opportunities provided by the Southern African Electricity Market

- The combination of supply shortfall and increasing tariffs provides a significant opportunity for African Energy's portfolio of coal projects.
- For the past 5 years Eskom has been a net exporter of electricity to southern African countries to cover their shortfall in available capacity.
- Southern Africa is now experiencing a power crisis due to:
  - ageing power station fleets
  - construction delays on new base load power generation projects and
  - regional drought which restricts hydro-electric generation availability, particularly in Zimbabwe and Zambia





- Eskom can no longer maintain exports or meet domestic demand, resulting in widespread load shedding in South Africa with a knock-on effect throughout the region.
- Recent newspaper articles from the region have highlighted these issues, which include:
  - Up to 16 hours per day with no electricity in Zimbabwe, with a shift to factory work and manufacturing during the night, which is the only time that imported power from South Africa is available
  - Between 8- and 12-hour regular blackouts in Zambia which may ultimately impact copper production and industrial output from the Copperbelt
  - Periodic load shedding in Botswana.
- Power tariffs are rising across the region in an attempt to bring financial stability to utilities for example, Zesco is currently seeking a 91% tariff increase from the Zambian regulator, and Eskom was recently awarded an effective 13.8% increase in 2019/20, an additional 12.5% increase in 2020/21 and a further 9.6% increase in 2021/22.
- These increases will result in standard tariffs of around 9-11c kWh (at current exchange rates) throughout the SAPP.



#### **PROJECTS:**

# 1 Sese JV (AFR 33.3%, FQM 66.7%)

#### 1.1 Overview

FQM spent A\$0.46M in the quarter and has now spent A\$9.02M since their initial A\$8M investment and have earned a 66.7% interest in Sese JV.

# 1.2 Sese JV (ML 2016/42ML, PL96/2005)

The global resource estimate for Sese now stands at 2,418Mt of thermal coal in Measured, Indicated and Inferred categories as follows:

Sese Project: Resource Summary (Raw coal on an air-dried basis) AFR 35% FQM 65%									
Resource Zone In-Situ Tonnes* CV (MJ/kg) CV (kcal/kg) Ash % IM% VM% FC% S %									
MEASURED (Bk-C)	325 Mt	17.6	4,200	30.1	7.9	20.6	41.5	2.1	
MEASURED (Bk-B)	304 Mt	16.0	3,820	34.8	7.4	20.3	37.6	1.6	
INDICATED	1,663 Mt	15.4	3,700	38.4	6.8	18.7	34.1	2.0	
INFERRED	126 Mt	14.2	3,400	41.4	6.4	18.8	31.2	2.2	
TOTAL	2 /110 N/I+	<u> </u>	<u> </u>						

TOTAL 2,418 Mt

Within this overall resource, the Measured Resource within the Mining Licence is for coal within the proposed mining area. The main SS Seam within this portion of the resource comprises the best combination of coal quality and strip ratio in the project, providing the lowest cost per GJ of contained energy, and thus the lowest cost fuel for use in a power station:

MEASURED BLOCK C RESOURCES - per SEAM						Raw Coal Qualities (Air Dried)				
Resource Block Name	Resource Category	Seam Name	Insitu Tonnes (Mt)	Geological Loss (%)	Discounted Tonnes (Mt)	CV (MJ/kg)	ASH (%)	IM (%)	VM (%)	TS (%)
	MEASURED	SSU	17.5	2	17.2	14.9	39.1	6.7	21.4	1.84
BLOCK C		SST	30.7	2	30.1	13.2	42.6	6.7	20.1	0.97
BLOCK C		SS	282.1	2	276.4	18.3	28.1	8.1	20.6	2.19
		SSL	1.0		1.0	9.8	57.6	4.6	16.6	0.98
TOTAL/AVERAGE (BLOCK C)	MEASURED	All Seams	331.3	2.0	324.7	17.6	30.1	7.9	20.6	2.06

<sup>\*</sup>Discounts Applied: Minimum seam thickness cut-off of < 1.0 m. Dry Ash Free Volatile (DAFV) < 26%. Prospecting Licence Boundary

<sup>\*</sup>No discounts were applied for any possible wetlands, rivers or infrastructure present within the project area

<sup>\*</sup>Weighted average total tonnes and geological losses calculated on Discounted Tonnes \*RD - Relative Density, CV - Calorific Value, VM - Volatile Matter, IM - Inherent Moisture, TS - Total Sulphur

A mining reserve statement for the SS Seam within the proposed mining area is being prepared using the updated resource estimate and information from First Quantum's in-house mining feasibility study.

Negotiations with the Botswana Energy Regulatory Authority for a Generation and Export Licence continued.



- Ongoing negotiations with Botswana Power Corporation for a Grid Connection Agreement and a separate Use of System Agreement.
- Negotiations relating to the commercial aspects of importing power into Zambia continued.
- Negotiations continued with First Quantum Minerals Ltd (FQM) for a Power Sales Agreement with the Sese JV to supply 100MW of power delivered to FQM's operations in Zambia
- Negotiations with other credit-worthy off-takers in SADC for the remaining 150MW of power available from development of the first 300MW unit at Sese continued.

# 1.3 Permitting:

- Department of Environmental Affairs in Botswana has approved an updated Environmental Impact Assessment ("EIA") for the Sese Power Project to allow up to 500MW of power generation and the associated coal mining activities. This is subject to the standard conditions of such approvals in Botswana, including a requirement that the project be implemented within 2 years. DEA have confirmed that current activities relating to ML demarcation, relocation of cattle grazers and hydrogeological investigations constitute "implementation".
- Thirty-five asset owners were identified within the Sese Surface Rights area. Thirty-two asset owners have received their full and final compensation and have left the surface rights area. Three properties await final valuation of the resettlement package by the Land Board and will then be finalized.

# 1.4 Sese West (PL197/2007)

Documentation of an updated resource is being finalised to JORC 2012 standard. No field programs were undertaken during the quarter.

# 1.5 Foley North (PL004/2013)

 This Prospecting Licence contains deposits of metamorphosed limestone which is suitable for use as a sulphur dioxide sorbent in operating power stations. No field programs were undertaken during the quarter.



# 2 Mmamabula West Project, Botswana (AFR 100%)

An updated global mineral resource estimate for Mmamabula West has been prepared showing 2,935Mt of thermal coal in Measured, Indicated and Inferred categories as follows:

Mmamabula West	Mmamabula West Project: 2019 Coal Resource Summary: Raw coal reported on an air-dried basis								
Resource	In-Situ	CV	CV	Ash	IM	VM	FC	S	
Category	Tonnes*	(MJ/kg)	(kcal/kg)	%	%	%	%	%	
MEASURED	17 Mt	22.2	5,300	19.6	7.3	24.8	48.2	1.6	
INDICATED	1,061 Mt	20.4	4,875	24.4	6.1	26.5	43.1	1.5	
INFERRED	1,858 Mt	20.3	4,850	24.7	5.8	26.2	43.4	1.6	
TOTAL (all seams)	2,935 Mt	20.3	4,850	24.5	5.9	26.3	43.3	1.6	

Detailed breakdown of the resource as follows:

		TTIS <sup>1</sup>	GTIS <sup>2</sup> RAW	ST	CV	Ash	TS	FC	IM	VM
Seam	Category	(Mt)	Tonnes (Mt)	(m)	(MJ/kg)	%	%	%	%	%
SK	Measured	-	-							
	Indicated	524.3	582.5	5.8	20.1	26.0	1.8	39.7	5.7	28.7
	Inferred	936.7	1,102.0	6.2	19.8	27.0	1.9	39.5	5.5	28.0
	Sub-total	1,461.0	1,684.5	6.0	19.9	26.6	1.9	39.6	5.6	28.2
SA	Measured	16.6	17.5	4.0	22.2	19.7	1.7	48.2	7.3	24.8
	Indicated	536.6	596.2	4.3	20.6	22.8	1.3	46.4	6.4	24.4
	Inferred	814.0	957.7	4.3	20.3	23.3	1.2	46.8	6.0	23.9
	Sub-total	1,367.2	1,571.3	4.3	20.4	23.0	1.2	46.7	6.2	24.1
SE	Measured	-	-							
	Indicated	-	-							
	Inferred	106.9	125.8	1.2	24.2	14.8	1.7	51.7	5.8	27.7
	Sub-total	106.9	125.8	1.2	24.2	14.8	1.7	51.7	5.8	27.7
Gra	nd Total	2,935.1	3,381.6	5.0	20.3	24.5	1.6	43.3	5.9	26.3

<sup>&</sup>lt;sup>1</sup> Total Tonnes In-Situ (TTIS) have been derived by applying a further geological loss factor of 5% (Measured), 10% (Indicated) and 15% (Inferred) to the Gross Tonnes In-Situ (GTIS)

<sup>&</sup>lt;sup>2</sup> Gross Tonnes In-Situ (GTIS) have been derived by:

Applying a resource boundary limited to the minimum 4 km by 4km average drillhole spacing within the bounds of the

Removing volumes for modelled dolerite dykes and intrusions, burnt coal and weathered coal;

Applying cut-offs to:

Seam thickness (>= 1m);

o Calorific Value (>= 8 MJ/kg); and

Ash content <= 50%).</li>



- African Energy is actively seeking a South African BEE partner who is prepared to buy a majority equity stake in the project as an export option for coal into South Africa.
- The Company has set up a Data Room with all technical and permitting data for the project which is available to potential BEE partners who sign a Confidentiality Agreement.
- A revised draft of the ESIA is being finalised for submission to the DEA for review. This revision expands the project scope to include a power station of up to 600MW, along with expanded coal mining volumes necessary to fuel such a power station. If accepted by DEA, the next step will be a stakeholders meeting, following which further revisions to the ESIA may be made and then submitted for final approval.
- Washability studies of Mmamabula West coals were released in the May 2014 ASX release which reported results from the mining and coal processing prefeasibility study which assessed conventional underground mining of a portion of the A-Seam. This demonstrated that A-Seam raw coal could be washed to produce an RB3 specification export coal at theoretical yields of 74.6%.
- Further studies of large diameter cores have developed power station fuel specifications suitable for use in South African power stations and demonstrated that a single wash of the A-Seam at an RD of 1.9 produced a suitable fuel at a 90% yield.
- The prefeasibility study completed in 2014 is being updated to reflect:
  - o A revised coal product specification to match Eskom's power station fuel requirement
  - An updated Life of Mine (LOM) mining schedule to extract up to 4Mtpa to produce Eskom specification export coal with a high yield (90%)
  - Updated capital and operating costs estimates to met current levels

## 3 Mmamantswe Integrated Power Project, Botswana (AFR 100%)

- Department of Mines issued a three-year extension of the Mmamantswe Prospecting Licence PL69/2007 in March 2019. The licence is valid until 31 December 2021.
- An application for Land Rights over the project area, project access corridor and grid connection corridor has been submitted.



# 4 Global Resources for African Energy's Coal Projects in Botswana

Sese Project: Resource Summary (Raw coal on an air-dried basis) AFR 33.3% FQM 66.7%									
Resource Zone In-Situ Tonnes* CV (MJ/kg) CV (kcal/kg) Ash % IM% VM% FC% S %									
MEASURED (Bk-C)	325 Mt	17.6	4,200	30.1	7.9	20.6	41.5	2.1	
MEASURED (Bk-B)	304 Mt	16.0	3,820	34.8	7.4	20.3	37.6	1.6	
INDICATED	1,663 Mt	15.4	3,700	38.4	6.8	18.7	34.1	2.0	
INFERRED	126 Mt	14.2	3,400	41.4	6.4	18.8	31.2	2.2	
ΤΟΤΔΙ	2 418 Mt								

Sese West Project: Resource Summary (Raw coal on an air-dried basis) AFR 33.3% FQM 66.7%									
Resource Zone In-Situ Tonnes* CV (MJ/kg) CV (kcal/kg) Ash % IM% VM% FC% S %									
INFERRED	2,501 Mt	14.6	3,500	40.2	6.1	19.8	31.9	2.0	
TOTAL	2.501 Mt								

Mmamabula West Project: Resource Summary (Raw coal on an air-dried basis) AFR 100%									
Resource Zone	In-Situ Tonnes*	CV (MJ/kg)	CV (kcal/kg)	Ash %	IM%	VM%	FC%	S %	
MEASURED	17 Mt	22.2	5,300	19.6	7.3	24.8	48.2	1.6	
INDICATED	1,061 Mt	20.4	4,875	24.4	6.1	26.5	43.1	1.5	
INFERRED	1,858 Mt	20.3	4,850	24.7	5.8	26.2	43.4	1.6	
TOTAL	2.935 Mt								

Mmamantswe Project: Resource Summary (Raw coal on an air-dried basis) AFR 100%									
Resource Zone	In-Situ Tonnes*	CV (MJ/kg)	CV (kcal/kg)	Ash %	IM%	VM%	FC%	S %	
MEASURED	978 Mt	9.5	2,270	56.5	3.9	15.8	21.8	2.0	
INDICATED	265 Mt	7.9	1,890	62.3	3.3	14.2	18.1	2.1	
INFERRED	N/A								
TOTAL	1,243 Mt								

<sup>\*</sup> In-Situ tonnes have been derived by removing volumes for modelled intrusions, burnt coal and weathered coal and then applying geological loss factors to the remaining Gross In-Situ Tonnes

The Coal Resources quoted for the Mmamabula West and Mmamantswe Projects in the table above have been defined in accordance with the practices recommended by the Joint Ore Reserves Committee (2004 edition of the JORC Code). Sese and Sese West resources are reported as per the 2012 edition. There have been no material changes to any of the resources since they were last reported.



# 5 Mining tenements held at the end of the quarter and their location

	Interest at beginning of quarter	Interest at end of quarter	Location	Commodity
ML2016/42L (Sese ML)	35%	33%	Botswana	Coal, U
PL096/2005 (Sese PL)	35%	33%	Botswana	Coal, U
PL197/2007 (Sese West)	35%	33%	Botswana	Coal, U
PL004/2013 (Foley North)	35%	33%	Botswana	Industrial
PL069/2007 (Mmamantswe)	100%	100%	Botswana	Coal
PL056/2005 (Mmamabula West)*	100%	100%	Botswana	Coal

<sup>\*</sup> PL56/2005 was valid until 30 September 2019 and a two-year extension application was submitted on 10 September 2019. The license is yet to be renewed.

#### **Dr. Frazer Tabeart**

**CEO** and Executive Director

Full details for all projects including location maps, tenement schedules and technical descriptions may be found on the African Energy Resources website at: www.africanenergyresources.com

The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the 'JORC Code') sets out minimum standards, recommendations and quidelines for Public Reporting in Australasia of Exploration Results, Mineral Resources and Ore Reserves. The information contained in this announcement was prepared under the JORC Code 2012. References to "Measured, Indicated and Inferred Resources" are to those terms as defined in the JORC Code (2012 edition).

Information in this report relating to Exploration results, Mineral Resources or Ore Reserves is based on information compiled by Dr Frazer Tabeart (an employee and the Managing Director of African Energy Resources Limited) who is a member of The Australian Institute of Geoscientists. Dr Tabeart has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person under the 2012 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Tabeart consents to the inclusion of the data in the form and context in which it appears.

For any queries please contact the Company Secretary, Mr Daniel Davis on +61 8 6465 5500



# **Appendix 5B** Mining exploration entity quarterly report

# Name of entity

African Energy Resources Limited	
ABN	Quarter ended ("current quarter")
45 123 316 781	30 September 2019

Cons	solidated statement of cash flows	Current quarter (3 months) \$US'000	Year to date (3 months) \$US'000
1.	Cash flows from operating activities		
1.1	Receipts from customers		
1.2	Payments for		
	(a) exploration & evaluation	(58)	(58)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(97)	(97)
	(e) administration and corporate costs	(58)	(58)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	9	9
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Research and development refunds	-	-
1.8	Other (provide details if material)	-	-
1.9	Net cash from / (used in) operating activities	(205)	(205)

2.	Cash flows from investing activities		
2.1	Payments to acquire:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	-	-



Consolidated statement of cash flows		Current quarter (3 months) \$US'000	Year to date (3 months) \$US'000
3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	-	-
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or		
	options	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (Payments for Share buyback)		
3.10	Net cash from / (used in) financing activities	-	-

4.	Net increase / (decrease) in cash and cash equivalents for		
	the period		
4.1	Cash and cash equivalents at beginning of period	1,942	1,942
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(205)	(205)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-
4.5	Effect of movement in exchange rates on cash held	(64)	(64)
4.6	Cash and cash equivalents at end of period	1,673	1,673

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$US'000	Previous quarter \$US'000
5.1	Bank balances	466	480
5.2	Call deposits	1,207	1,462
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal	1.673	1.942
	item 4.6 above)	1,073	1,342



#### 6. Payments to directors of the entity and their associates **Current quarter** \$US'000 6.1 Aggregate amount of payments to these parties included in item 1.2 71 6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3

6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

Payment of director fees

#### 7. Payments to related entities of the entity and their associates **Current quarter** \$US'000 7.1 Aggregate amount of payments to these parties included in item 1.2 37 7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3

7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

Payments to Mitchell River Group for administration and technical staff and provision of a serviced office

8.	Financing facilities available	Total facility amount	Amount drawn at
	Add notes as necessary for an understanding of the position	at quarter end	quarter end
		\$US'000	\$US'000
8.1	Loan facilities	-	-
8.2	Credit standby arrangements	-	-
8.3	Other (please specify)	-	-

8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.

9.	Estimated cash outflows for next quarter	\$US'000
9.1	Exploration and evaluation	45
9.2	Development	-
9.3	Production	-
9.4	Staff costs	72
9.5	Administration and corporate costs	46
9.6	Other (provide details if material)	-
9.7	Total estimated cash outflows	163



10.	Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	-			
10.2	Interests in mining tenements and petroleum tenements acquired or increased	-			

# **Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

# **Daniel Davis**

Mars

**Company Secretary** Date: 30 October 2019

#### Notes

- 1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
- 2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
- 3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.