

# Energizer Resources Inc. Announces Positive Results of Its Feasibility Study

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TORONTO, ONTARIO--(Marketwired - Feb 5, 2015) - [Energizer Resources Inc.](#) (TSX:EGZ)(OTCQX:ENZR)(WKN:A1CXW3) ("Energizer" or the "Company") is pleased to report the results of its positive Feasibility Study ("FS") for its 100%-owned Molo graphite deposit in southern Madagascar. The FS was prepared by DRA Projects (Pty) Ltd. ("DRA") and is based on metallurgical test work conducted by SGS (Lakefield) Canada Metallurgical Services Inc. This test work included bench, pilot and variability tests. A National Instrument 43-101 technical report relating to the FS will be filed on SEDAR within 45 days of this news release.

## FS Highlights

1.	Post-tax: NPV (10% Discount Cash Flow) <sup>(1)(2)</sup>	US\$389,797,113
2.	Post-tax: IRR <sup>(1)(2)</sup>	31.2%
3.	Payback <sup>(2)</sup>	4.84 years
4.	Capital cost ("CapEx")	US\$149.9 million
5.	Design Development Allowance	US\$13.8 million
6.	Contingency	US\$24.6 million
7.	On-site Operating Costs ("OpEx") per tonne of concentrate, Year 3 onward)	US\$353
8.	Transportation per tonne of concentrate (from Mine site to Madagascar Port Year 3 onward)	US\$182
9.	Transportation per tonne of concentrate (from Madagascar Port to European Customer Port from Year 3 onward)	US\$155
10.	Average annual production of concentrate	53,017 tonnes
11.	Life of Mine ("LOM")	26 years
12.	Graphite concentrate sale price (US\$/tonne at Start Up - 2017)	US\$1,689 per tonne
13.	Average Head Grade	7.04%
14.	Average ore mined per annum	856,701 tonnes
15.	Average stripping ratio	0.81:1
16.	Average plant recovery	87.80%

### Footnotes:

(1) Assumes project is financed with 50% debt and 50% equity.

(2) Values shown based on nominal cash flows, which include the effect of inflation. Costs are increased on an annual basis by the relevant inflation index.

"Completion of the feasibility study is a significant milestone along the development path of our Molo graphite project," stated Richard Schler, Chief Executive Officer of Energizer. "We have now confirmed that our project is economically viable with a planned mine design that we believe is both conservative and realistic. It indicates the project has attractive economics and that we have one of the lowest operating costs in the industry. Our graphite deposit is large enough to realize a very long mine life and the plant is scalable so we can quickly ramp up production if so required. The plant will be able to produce a high quality graphite concentrate, which can supply the entire spectrum of end uses for natural graphite including the foil and Electric Vehicle battery markets.

I would like to take this opportunity to thank everyone who has contributed to reaching this milestone including our shareholders who have waited patiently for the delivery of the study. The culmination of hard work and dedication over the past 4 years in some very difficult resource market conditions has enabled Energizer to validate an exceptional project that is positioned to serve an industry, which is expected to have significant demand growth over the next decade.

We believe this will be the stepping stone to help secure both off-take and project financing in the near future. We will now turn our entire focus towards delivering on these objectives over the coming months with a goal to be in production by 2017."

## FS Overview:

The FS considers a mine that will produce an average of 856,701 tonnes per annum of ore, which is processed to produce an average of approximately 53,017 tonnes of graphite concentrate per annum (production commencing in 2017) over the 26 year life of mine ("LOM"). The FS assumes that the mine is funded on a 50% debt and 50% equity basis. 'Steady State' (or "Run Rate") costs are achieved in the third operational year onwards; the difference lies in additional expatriates on site in the first two years.

### Financial results post tax\*

Average price / tonne of concentrate (at start up, 2017)	US\$1,689
Internal Rate of Return ("IRR") - Project Equity	31.2%
NPV @ 8% Discounted Cash Flow	US\$521,602,408
NPV @ 10% Discounted Cash Flow	US\$389,797,113
NPV @ 12% Discounted Cash Flow	US\$293,649,899
Project Payback Period	4.84 years

\*Assumes that the project is financed through 50% equity finance and 50% corporate debt. The debt assumptions used in the model assumes a rate of 5.75% over LIBOR, with LIBOR forecast to escalate to 3.54% by 2022. An arranging fee is also assumed.

Note that all values in the above table do not account for inflation and assume that a satisfactory investment agreement is negotiated under Madagascar's LGIM (Loi Sur les Grands Investissements Miniers) tax laws covering large scale mining investments, for which this project qualifies. Also included in the above table are forecasted prices for 2017, which coincides with the year the Molo mine is expected to be in production.

### Mine & Process data

Proven reserves	14,170,000	tonnes @ 7.0% C grade
Probable reserves	8,367,000	tonnes @ 7.04% C grade
Grade (graphitic carbon)	7.04%	average plant head feed over LOM
Waste to ore ratio	0.81:1	
Processing rate	856,701	tonnes per annum
Mine life	26 years	
Recovery	87.8%	
Average annual product tonnes	53,017	

### Construction Capital Costs - CapEx

(expressed in US\$ millions):

Capital Cost	US\$149.9
Design Development Allowance	US\$13.8
Contingency	US\$24.5
Total	US\$188.2*

\*Excludes taxes, tariffs, duties and interest

### OpEx per Tonne of Feed

Category	Year 3+ (Run Rate)
Mining	US\$3.93
Processing	US\$11.02
General & Administrative	US\$6.78
Total OpEx per Tonne of Feed	US\$21.73

### OpEx per Tonne of Concentrate at Mine Site

Category	Year 3 onward (Run Rate)
Mining	US\$63.79
Processing	US\$178.92
General & Administrative	US\$109.94
Total OpEx cost per Tonne of Concentrate at Mine Site	US\$352.65

All capital and operating costs expressed above are considered to be accurate to +/- 10%, and assume a varying inflation rate of 1.6% in 2015 and escalating to 2.0% from 2017 onward. Currency inflation rates were also considered in the financial model.

## **Transport (Molo Site to European customer)**

Average transport cost: US\$337 per tonne of concentrate (from Mine site to Europe via Fort Dauphin, Madagascar, in December 2014 terms)

DRA has not included any financial or operational calculations and/or scenarios in the FS financial model with regards to downstream value-added processing of the graphite concentrate. This includes purification, spherodization coating for battery-grade graphite and thermal expansion for specialty graphite applications, such as foils.

The exchange rates used in the financial model are as follows:

- 11.31 South African Rand (ZAR) to US\$1, moving in line with purchasing power parity
- 0.833 Euro to US\$1, fixed for the modelled period
- 2,746 Malagasy Ariary (MGA) to US\$1, moving in line with purchasing power parity

The graphite prices are based on current quotes and projected estimates provided by UK-based Roskill Consulting Group Ltd ("Roskill"), who are recognized as a leader in providing independent and unbiased market research, pricing trends and demand and supply analysis for the natural flake graphite market.

The FS "2017 Start-Up" price for a tonne of Molo graphite concentrate was calculated from the weighted average price per tonne of US\$1,375 (in December 2014 terms, considered by Roskill to be the bottom of the market), which is a continuation of trends from 2005 (excluding the 2010 to 2013 unusually high graphite concentrate prices). The price shown is the weighted average price for the various flake sizes and grades of flake graphite that are expected to be produced from the Molo deposit.

A summary of certain significant differences between the FS and the Company's Molo Preliminary Economic Assessment Study ("PEA") are as follows:

- The PEA assumed 1.16 million tons ("MT") per annum of ore, resulting in 84,000 tpa of graphite concentrate.
- The PEA CapEx estimate accuracy was +/- 25%, based on order of magnitude estimates.
- There has been a reduction in head grade to the plant from 8.5% C to 7.04% C.
- The FS includes delivery costs to Europe.
- The FS has assumed 50% debt funding on an eight operational year basis, whereas the PEA assumed 57% debt on 10 years.
- The FS has a more well defined flow sheet.

## **PROJECT DESCRIPTION**

The proposed development of the Molo graphite project includes the construction of an open pit mine, a processing plant with a capacity of 862,000 tonnes of ore per annum and all supporting infrastructure including water, fuel, power, tailings, buildings and permanent accommodation.

The mine will utilize four 2 megawatt diesel generators, with three running and one standby by and water is supplied from a well field which has been defined by drilling and geo-hydrological modelling. The processing plant will consist of conventional crushing, milling and flotation circuits followed by concentrate filtering, drying and screening. The waste heat generated by the power station will be utilized for the drying of the concentrate.

The tailings storage facility, in the form of a valley dam layout, is located approximately 1.5 kilometres to the west of the process plant and is designed to accommodate the run-of-mine tonnage for the 26 year life of mine.

## **RESOURCES**

The Molo project hosts the following resources:

- Measured mineral resource of 23.62 MT grading 6.32% carbon ("C").
- Indicated mineral resource of 76.75 MT grading 6.25% C.
- Inferred mineral resource of 40.91 MT at 5.78% C.

Effective date of the Mineral Resource tabulation is August 14, 2014. The Mineral Resources are classified according to the Canadian Institute of Mining definitions. A cut-off grade of 4% C was used for the "higher grade" zones and 2% C for the "lower grade" zones. Please note that while the 'high' grade resource occurs within the 'low' grade resource, each was estimated and reported separately. A relative density of 2.36 tonnes per cubic metre was assigned to the mineralized zones for the resource estimation. The resource remains open along strike and to depth. The Mineral Resources above are inclusive of the Mineral Reserves below.

## PROVEN AND PROBABLE MINERAL RESERVES

As a result of the FS, the following maiden proven and probable mineral reserves are declared.

Category	Tonnage	C Grade (%)
Proven	14,170,000	7.00
Probable	8,367,000	7.04
Proven and Probable	22,437,000	7.02

Proven reserves are reported as the Measured Resources inside the designed open pit and above the grade cut off of 4.5% C. Similarly, the Probable Reserves are reported as the Indicated Resources inside the designed open pit and above the grade cut-off of 4.5% C.

## METALLURGY

The FS is based on a full suite of metallurgical test work performed by SGS Canada Metallurgical Services Inc. in Lakefield, Ontario, Canada. These tests included lab and bench scale process development work, a bulk sample/pilot plant program, and metallurgical variability testing. The tests indicated that variability exists across the deposit but this has been mitigated by the design of the flow sheet. The overall graphitic carbon recovery into the final concentrate is 87.8% using samples from all drill holes within the five year pit design. The average composition of the combined concentrate grade is presented in the table below.

The area composites were generated by splitting the area within the five-year mine plan into five zones. All drill holes within one specific zone were then combined to form an area composite. A total of fifteen area composites were generated for metallurgical evaluation (five zones with three depth intervals per zone). All assays were completed using control quality analysis and cross checks were completed during the mass balancing process to verify that the results were within the relative error of the analytical method.

### Metallurgical Data - Flake Size Distribution and Product Grade

Product Size	% Distribution	Product Grade (% Carbon)
+48 mesh (jumbo flake)	23.6	96.9
+65 mesh (coarse flake)	14.6	97.1
+80 mesh (large flake)	8.2	97.0
+100 mesh (medium flake)	6.9	97.2
+150 mesh (medium flake)	15.5	97.3
+200 mesh (small flake)	10.1	98.1
-200 mesh (fine flake)	21.1	97.5

### Pricing Matrix - Flake Size Distribution Grouping and Product Grade

Product Size	% Distribution	Product Grade (% Carbon)
>50 mesh	23.6	96.9
-50 to +80 mesh	22.7	97.1
-80 to +100 mesh	6.9	97.2
-100 mesh	46.8	97.6

## Initial Capital Cost Summary

Cost Centres	Expressed in US \$ millions
Pre-production	37.3
Tailings Storage Facility ("TSF")	24.3
Mechanicals	20.8
Electrical, Control & Instrumentation	20.8
External services	17.9
Earthworks	11.8
Piping	7.4
Structural	5.6
Transport	5.5
Vendor packages	3.4
Civil works	2.5
Consumables and spares	2.4
Buildings, fittings	2.1
Plate work	1.9
Total Capital Costs	163.7

Future capital expenditures expected to be incurred has been allowed for in the financial model to cover the expansion of the TSF in Year 2, the replacement of the mine fleet, the replacement of the power plant, and for rehabilitation at the end of the project.

## ENVIRONMENTAL & PERMITTING

A comprehensive Environmental and Social Impact Assessment ("ESIA") was completed to local Malagasy, Equator Principles, World Bank and International Finance Corporation (IFC) standards. The process was preceded by an Environmental Legal Review and an Environmental and Social Screening Assessment; both providing crucial information to align the project development and design with international best practice on sustainable project development.

The ESIA submission is subject to approval of the investment amount by Madagascar's Ministry of Mines, which is anticipated in February 2015. The application was submitted on January 30, 2015. Energizer will receive a Global Environmental Permit upon approval of the ESIA, a process which is expected to take six months from date of submission.

A comprehensive permitting register is in place and additional sectorial permit applications will form part of the early execution phase. Approval of the sectorial applications is expected within the same six month period as the ESIA review.

No material issues were identified in relation to Environmental, Social and Permitting processes and through the stakeholder engagement process the local and regional community has expressed a desire for the project to move forward.

## QUALIFIED PERSONS

The FS was prepared in accordance with National Instrument 43-101 standards by DRA Mineral Projects Pty Ltd. The qualified persons named below verified the data, as appropriate including the sampling, analytical and test data underlying the information contained herein using industry acceptable standards.

The following Qualified Persons contributed to the FS and will sign off on the relevant sections in the 43-101 report to be filed on SEDAR.

Dr. John Hancox	Pri.Sc.Nat	Geology (including the Mineral Resource estimates)
Mr. Desmond Subramani	Pri.Sc.Nat	Geology (including the Mineral Resource estimates)
Mr. Dave Thompson	Pr.Cert.Eng	Mining (including the Mineral Reserve estimates)
Mr. Oliver Peters	Pr.Eng	Process Test Work
Mr. Doug Heher	Pr.Eng	Process Design, CapEx, OpEx, Infrastructure, ESIA
Mr. John Stanbury	Pr.Eng	Marketing and Economic Analysis

Mr. Doug Heher, PR.Eng, is a consultant with DRA Mineral Projects Pty Ltd. and is independent of the

Company. Mr. Heher is the qualified person who reviewed and approved the technical information provided in this press release.

## **ABOUT ENERGIZER RESOURCES**

Energizer Resources is a mineral exploration and mine development company based in Toronto, Canada, that is developing its 100%-owned, flagship Molo Graphite Project in southern Madagascar.

*Safe Harbour: This press release contains statements that may constitute "forward-looking statements" within the meaning of applicable Canadian and United States securities legislation. Readers are cautioned not to place undue reliance on such forward-looking statements. Forward-looking statements are based on current expectations, estimates and assumptions that involve a number of risks, which could cause actual results to vary and in some instances to differ materially from those anticipated by the Company and described in the forward-looking statements contained in this press release. No assurance can be given that any of the events anticipated by the forward-looking statements will transpire or occur or, if any of them do so, what benefits the Company will derive there from. The forward-looking statements contained in this news release are made as at the date of this news release and the Company does not undertake any obligation to update publicly or to revise any of the forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by applicable securities laws.*

*The disclosure in this press release uses mineral resource classification terms that comply with reporting standards in Canada and are made in accordance with Canadian National Instrument 43-101-Standards of Disclosure for Mineral Projects ("NI 43-101"). NI 43-101 establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. These standards differ significantly from the mineral reserve disclosure requirements of the SEC set forth in Industry Guide 7. Consequently, information regarding mineralization contained in this press release is not comparable to similar information that would generally be disclosed by U.S. companies in accordance with the rules of the SEC. Under SEC standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. Among other things, all necessary permits would be required to be in hand or issuance imminent in order to classify mineralized material as reserves under the SEC standards. This press release uses the terms "measured mineral resources," "indicated mineral resources" and "inferred mineral resources" to comply with the reporting standards in Canada. The SEC does not recognize mineral resources and U.S. companies are generally not permitted to disclose mineral resources of any category in documents they file with the SEC. Investors are specifically cautioned not to assume that any part or all of the mineral deposits in these categories will ever be converted into mineral reserves as defined in NI 43-101 or Industry Guide 7. Further, "inferred mineral resources" have a great amount of uncertainty as to their existence and as to whether they can be mined legally or economically. Therefore, investors are also cautioned not to assume that all or any part of an inferred resource exists. It cannot be assumed that all or any part of "measured mineral resources," "indicated mineral resources," or "inferred mineral resources" will ever be upgraded to a higher category. Investors are cautioned not to assume that any part of the reported "measured mineral resources," "indicated mineral resources," or "inferred mineral resources" in this press release are economically or legally mineable. For the above reasons, information contained in this press release containing descriptions of our mineral resource estimates are not comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements of the SEC.*

*Investors are advised that Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate and in keeping with "best practice principles".*

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