Lepidico

Updated economics

Development plan evolves

Metals and mining

On 30 October, Lepidico announced the updated economics of its 2020 definitive feasibility study (DFS) on its integrated lithium hydroxide mine and chemical plant to show a base case NPV_8 of US$457m post-tax, which equates to 9.4 Australian cents per share on a pre-funding basis. In our January 2019 report *Gold stars and black holes*, we calculated that companies with completed DFSs typically have an EV/NPV ratio of 30.9%, which would imply a pre-funding valuation for Lepidico of 2.9c/share, to which its shares are currently trading at a significant 69.0% discount.

Year end	Total revenues (A$m)	PBT (A$m)	Cash from operations (A$m)	Net cash/(debt)* (A$m)	Capex (A$m)
06/22	0.0	(7.9)	(5.5)	1.0	(8.6)
06/23	6.4	(3.0)	(6.8)	**3.1	(9.8)
06/24e	0.0	(3.7)	(4.3)	(34.4)	(33.2)
06/25e	0.0	(6.9)	(6.3)	(90.4)	(49.8)

Note: *Includes lease liabilities. **Subject to rounding.

Phased development leads to lower net debt forecast

In deference to its desire to generate positive free cash flow as quickly as possible, we believe that Lepidico could pivot its strategy to fast-track the mine and concentrator in Namibia, shipping a high-grade concentrate from Walvis Bay to China. One way to achieve this, as well as avoiding additional dilution, we believe, would be via a pre-payment for concentrate to fund the equity component of the development capital or, alternatively, Lepidico could partner with a strategic investor. Among other things, this would allow it to defer any subsequent 'HeadCo' equity raise to a time when the share price is higher.

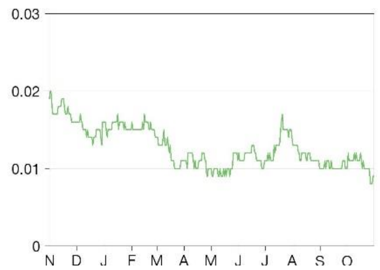
Valuation: 499% premium to the share price

Our assumptions are more conservative than both Benchmark Mineral Intelligence's (BMI's) and Lepidico's, including a long-term lithium hydroxide price that is 24.1% lower than BMI's. Given this, plus our assumption of mining revenues delayed by one year and chemical plant revenues delayed by three years, our headline valuation of Lepidico has declined from 8.61c/share at the time of our last note in February to 5.39c/share, plus a potential additional risk-adjusted 0.68–1.66c/share (fully diluted) for a conceptual 20,000tpa lithium carbonate equivalent (LCE) Phase 2 Plant to take our total aggregate conceptual valuation of the company to 6.07–7.05c/share. However, our 5.39c/share valuation nevertheless rises back to 9.84c/share in FY31 and to 10.17c/share currently if BMI's lithium hydroxide price deck is applied to our model rather than our own, rather conservative, prices.

31 October 2023

Price	**A$0.009**
Market cap	**A$69m**
	A$1.5747/US$
Net cash (A$m) at 30 June 2023 (excludes A$7.6m in lease liabilities)	10.6
Shares in issue	7,638.3m
Free float	88.8%
Code	LPD
Primary exchange	ASX
Secondary exchange	N/A

Share price performance



%	1m	3m	12m
Abs	(14.3)	(40.0)	(52.6)
Rel (local)	(10.7)	(34.3)	(52.5)
52-week high/low		A$0.02	A$0.01

Business description

Via its Karibib project in Namibia and unique IP, Lepidico is a vertically integrated lithium development business that has produced both lithium carbonate and lithium hydroxide from lithium-mica minerals using its patent protected L-Max and LOH-Max processes.

Next events

Final investment decision	Q1 CY24
Commencement of mining	Q3 CY24
Chemical plant commissioning	H2 CY26

Analyst

Lord Ashbourne +44 (0)20 3077 5700

mining@edisongroup.com

Edison profile page

Lepidico is a research client of Edison Investment Research Limited

Updated economics and development plan

In its announcement of 30 October, Lepidico updated the operating costs and economics of its 2020 DFS relating to its integrated lithium hydroxide mine and chemical plant. The main features of the announcement were as follows:

- An integrated project base case post-tax NPV_8 of US$457m (cf US$221m in the 2020 DFS), with an operating life of 19 years (now including Helikon 4 and stockpiled ore reserves) compared to 15 years previously. Note that this brings Lepidico's mine plan substantially into line with the one outlined in our last note on the company (see Everything moving all at once, published on 14 February 2023). The long-term lithium hydroxide price forecast used to generate this NPV_8 was US$30,980/t (cf US$22,840/t in September 2022), as per BMI's latest base case lithium hydroxide price analysis. Note, however, that our long-term lithium price remains (for the moment) unchanged at US$23,500/t. Variations from this price are considered in the 'Sensitivities' section, below).
- A post-tax NPV_8 for the Karibib mine operation alone of US$100m, with an internal rate of return (IRR) of 27%.
- A post-tax NPV_8 for the chemical plant alone of US$357m, with an IRR of 24%.
- An (integrated) all-in sustaining cost (AISC) of US$8,730/t LCE and C1 costs of US$5,891/t LCE, after by-product credits.

The company notes that project funding commitments continue to be sought for this quarter. However, it also states that 'Karibib concentrate is being marketed to support a potential alternative, sequential development strategy with the low capital mine-concentrator prioritised and free cash flow employed for chemical plant equity', and that, in this context, 'A beneficiated ore and concentrate tender process is in progress with promising responses already received and a review planned for November once face-to-face meetings have concluded.'

Karibib's lepidolite/mica concentrate grades are noticeably high at c 2.5–3.5% Li_2O compared to typical Chinese metals market lepidolite concentrate specifications of 1.5–2.5% and anecdotal evidence that concentrate grades at existing Chinese mica operations are now below 2.0%. In deference to its desire to generate positive free cash flow as quickly as possible therefore, we believe that management could pivot its strategy – if full funding for the integrated project is not forthcoming in the near term – to fast-track the mine and concentrator in Namibia, shipping a high-grade, beneficiated concentrate from Namibia to China. To achieve this, as well as to avoid additional dilution at the corporate level, we believe that it may enter into a pre-payment arrangement and/or pull in a strategic partner to the Karibib operation.

Project timing

Lepidico reports that public and private sector due diligence processes are continuing for both equity and debt funding into the integrated project. As is often the case in partnering with governmental and parastatal organisations, talks have proceeded at a pace that is not necessarily sensitive to equity market demands. At the time of our last note, we had hoped to have a final investment decision and a simultaneous equity raise for the integrated project in Q1 CY23, followed by the start of mining in Q3 CY23 and the commissioning of the chemical plant in late CY24 after an expedited construction period. This timetable has clearly proven to be over-optimistic however, with the added effect that Lepidico's share price has fallen, instead of risen, as development stage milestones have passed. As a result, we have pushed back our assumption regarding a final investment decision by a year, from Q1 CY23 to Q1 CY24; however, we note that Lepidico has advised that 'project funding commitments continue to be sought for this quarter'. As Lepidico's share price has declined moreover, so has the attractiveness of equity funding at 'HeadCo' and we have therefore also re-phased our assumptions regarding the development of the project (see 'Project phasing' below).

Project phasing

As noted previously, in deference to its desire to generate positive free cash flow as quickly as possible, we believe there is real merit in Lepidico pivoting its strategy to fast-track the mine and concentrator in Namibia, shipping a high-grade, beneficiated concentrate from Walvis Bay to China. To achieve this, as well as avoiding additional dilution at the corporate level, we assume that Lepidico will enter into a pre-payment for concentrate as a source of equity capital. However, it may be more desirable to sell a percentage interest in its Karibib mining and concentrating operation in Namibia along with securing debt to fund the upstream project. This would also have the effect of allowing Lepidico to defer a subsequent equity raise to a time when funding negotiations with its various strategic partners have been concluded and profitable – albeit reduced scale – production from the mine and concentrator is imminent, such that it is not unreasonable to assume that this equity raising could be performed at a higher price. An analysis of such a transaction is as follows:

- Previously the subset of a larger, integrated project, we now assess Lepidico's Namibian mine and concentrator as an independent profit centre in its own right, selling concentrate to either its chemical plant in Abu Dhabi or a third party on an arm's length basis, as an interim measure. While the lithium mica concentrate market is in its relative infancy, it is possible to estimate the price at which the Karibib operation would sell its concentrate to the chemical plant with reference to the price of high-grade lithium mica concentrate on the Shanghai Metals Market. In this case, the price of lithium mica concentrate 2.0–2.5% Li_2O in China is currently US$609/t on a cost, insurance and freight (CIF) basis at a time when the price for battery grade lithium hydroxide is US$21,250/t, or a VAT adjusted US$18,806/t. Adjusting for Karibib's concentrate grade of c 3% (cf the specified 2.0–2.5%) would imply a price for Lepidico's mica concentrate of US$813/t CIF China. Adjusting it further for our long-term lithium hydroxide price of US$23,500/t (cf US$18,806/t) implies a price of US$1,015/t and netting off an estimated US$116/t in freight costs implies a long-term price of US$899/t free on board (FOB) Walvis Bay.

After a final investment decision in Q1 CY24, we assume that mining at Karibib will commence in Q3 CY24 (cf Q3 CY23 previously), but that only a small amount of ore will be mined in FY25 and that most of this will be stockpiled ahead of full production being achieved in FY26. By contrast, we do not now expect chemical plant capex to be incurred before FY26, once all other funding arrangements with partners have been concluded; however, we note that it could be sooner, depending on the outcome of concentrate offtake negotiations with both Chinese and non-Chinese groups. After construction in FY26 and FY27, we forecast that the chemical plant will start commissioning in H2 CY27 (cf late CY24 previously) and will not begin to contribute meaningfully to revenue before FY28 (cf FY25 previously).

Valuation

Project valuation

Lepidico's updated NPV_8 for the integrated Karibib mining and chemical plant operation of US$457m equates to A$720m at current forex rates, or 9.4c/share on a pre-funding basis.

In our report Gold stars and black holes, published in January 2019, we calculated a mean enterprise value for companies with completed DFSs of 30.9% of project NPV, ranging up to 133.5%. Even excluding net cash, this range would imply a minimum pre-funding valuation for Lepidico of at least 2.9c/share and a maximum pre-funding valuation of 12.5c/share.

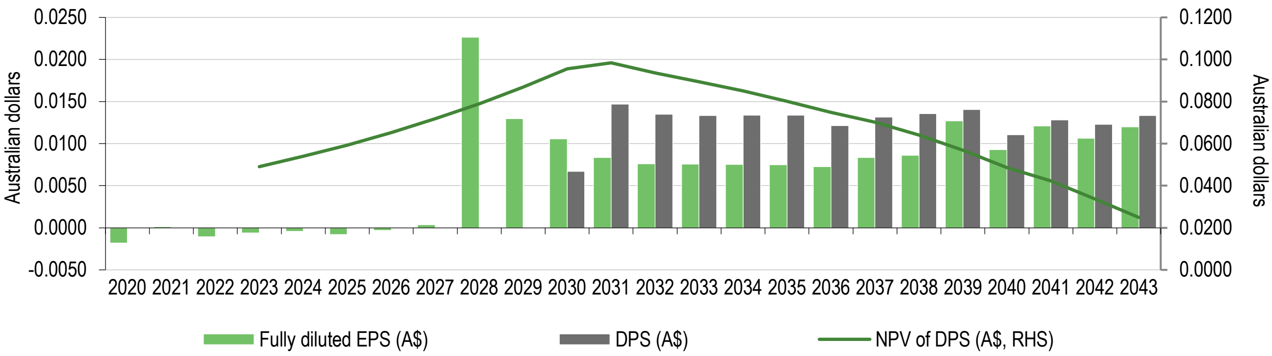
Company valuation

Our valuation of Lepidico's shares differs from Lepidico's valuation of the integrated Karibib mining and chemical plant project, among other things, on account of the following:

- Different lithium hydroxide prices. Whereas Lepidico has adopted updated BMI prices for its valuation (including a long-term price of US$30,980/t), Edison has retained its forecasts from its report earlier this year (see Lithium's adolescence, published on 1 February 2023), including a long-term price for lithium hydroxide from 2028 of US$23,500/t. Note that variations from this scenario – including one based on BMI's pricing – are provided in the 'Sensitivities' section, below.
- Whereas Lepidico valued its project on the basis of future cash flows, discounted at a rate of 8% on a pre-funding basis, our valuation of the company itself is based on the present value of future dividends potentially payable to shareholders (in Australian dollars) using a discount rate of 10%.
- Finally, our valuation of the company also now assumes the phased development of the project as set out above, with first mining revenue in FY26, but first chemical plant revenues deferred until FY30.

In our last note on the company, we calculated a value for Lepidico's shares of 8.34c, plus 0.28c for the value of an envisaged loan to the minority shareholders in the upstream Namibian operation, to give a total valuation for the company of 8.61c/share. In the wake of the changes discussed above, our discounted valuation of Lepidico's future (maximum potential) dividend stream to shareholders has reduced to 5.39c/share, rising to 9.84c/share in FY31, as shown in the chart below:

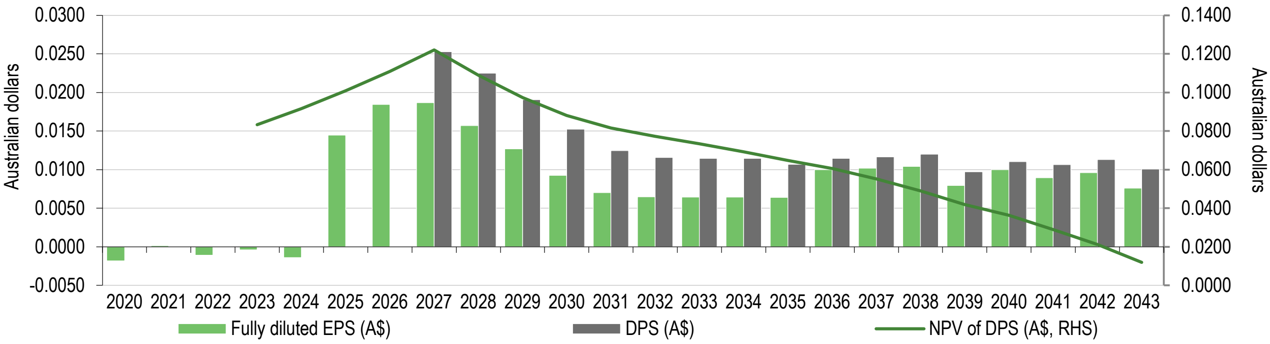
Exhibit 1: Edison's estimate of future Lepidico EPS and (maximum potential) DPS



Source: Edison Investment Research

This may be compared and contrasted with our prior estimates shown at the time of our last note (see Everything moving all at once, published on 14 February 2023), shown below.

Exhibit 2: Edison's prior estimate of future Lepidico EPS and (maximum potential) DPS



Source: Edison Investment Research. Note: See Everything moving all at once, published on 14 February 2023.

The table below shows the major components in the evolution of the valuation from 8.61c/share to 5.39c/share.

Exhibit 3: Lepidico valuation bridge, February 2023 to October 2023

	Valuation (Australian c/share)	Change in valuation (Australian c/share)	Change in valuation (%)	Comment
February 2023 valuation	8.61			See our February 2023 note
LPD share price (1.05c cf 2.80c)	6.84	(1.77)	-20.6	Future equity funding assumption now removed
Forex	7.26	0.42	6.1	11.4% decline in the value of the A$ versus the US$
Overall one-year delay	6.56	(0.70)	-9.6	10% discount rate effect
Chemical plant deferral, pre-pay and other	5.39	(1.17)	-17.8	As above, plus production pushed back into a lower price environment and the fact that the chemical plant accounts for the majority of revenues and costs

Source: Edison Investment Research

To this valuation of 5.39c/share may then be added a potential risk-adjusted 0.68–1.66c/share (fully diluted) for a conceptual 20,000tpa LCE Phase 2 Plant (see Phase 2 coming into view, published on 18 June 2021), to take our total aggregate conceptual valuation of Lepidico to 6.07–7.05c/share.

Sensitivities

As before, the principal quantitative risk to which our valuation of Lepidico is exposed is the long-term price of lithium hydroxide. The effects of the lithium hydroxide price stabilising at an alternative level to the currently assumed US$23,500/t are as follows:

Exhibit 4: Lepidico valuation sensitivity to the long-term price of lithium hydroxide (US$/t)

Long-term lithium hydroxide price (US$/t)	20,000	23,500	24,250	27,500	32,500	37,500	43,000	48,500
Lepidico valuation (Australian cents per share)	4.23	**5.39**	5.64	6.87	9.02	11.46	14.48	17.50
Change cf 'base case' (%)	-21.5	**u/c**	+4.6	+27.5	+67.3	+112.6	+168.6	+224.7

Source: Edison Investment Research

As an alternative however, if we were to adopt BMI's (real) lithium hydroxide price forecasts in their entirety over the period of Lepidico's Phase 1 project, then our valuation would rise from 5.39c/share to 10.17c/share (ie in excess of where it was at the time of our last note, namely 8.61c/share).

EDISON

Exhibit 5: Financial summary

IFRS, June year end, A$'000	2022	2023	2024e	2025e	2026e	2027e	2028e
Profit and loss							
Total revenues	10	6,448	0	0	77,064	81,828	333,112
Cost of sales	0	0	0	0	(38,182)	(40,543)	(108,654)
Gross profit	10	6,448	0	0	38,882	41,286	224,458
SG&A (expenses)	(4,796)	(7,609)	(3,146)	(3,146)	(3,146)	(3,146)	(3,146)
Exceptionals and adjustments	(2,275)	(870)	0	0	0	0	0
Depreciation and amortisation	(411)	(571)	(571)	(571)	(9,952)	(10,064)	(10,175)
Reported EBIT	(7,472)	(2,602)	(3,718)	(3,718)	25,784	28,076	211,137
Finance income/(expense)	(392)	(358)	15	(3,143)	(14,079)	(9,386)	(4,693)
Reported PBT	(7,863)	(2,960)	(3,702)	(6,860)	11,705	18,690	206,444
Income tax expense (includes exceptionals)	(78)	(644)	0	0	(10,849)	(11,708)	(11,867)
Reported net income	(7,941)	(3,604)	(3,702)	(6,860)	856	6,982	194,577
Basic average number of shares, m	6,247	7,251	7,638	7,638	7,638	7,638	7,638
Basic EPS (c)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	0.0	0.0
Balance sheet							
Property, plant and equipment	8,591	17,062	49,664	98,853	212,148	363,188	407,457
Intangible assets	29,065	28,773	28,773	28,773	28,773	28,773	28,773
Other non-current assets	47,396	49,085	49,085	49,085	49,085	49,085	49,085
Total non-current assets	85,052	94,920	127,522	176,712	290,006	441,046	485,316
Cash and equivalents	8,043	10,829	28,470	0	0	0	95,941
Inventories	0	0	0	0	6,422	6,819	27,759
Trade and other receivables	2,204	703	0	0	6,334	6,726	27,379
Total current assets	10,247	11,532	28,470	0	12,756	13,545	151,079
Non-current loans and borrowings	6,744	7,137	62,251	89,830	211,886	356,539	338,168
Other non-current liabilities	9,669	3,863	3,863	3,863	3,863	3,863	3,863
Total non-current liabilities	16,413	11,000	66,114	93,694	215,749	360,402	342,031
Trade and other payables	1,986	2,131	259	259	3,397	3,591	9,189
Current loans and borrowings	280	595	595	595	595	595	595
Other current liabilities	179	268	268	268	268	268	268
Total current liabilities	2,445	2,994	1,122	1,122	4,260	4,454	10,052
Equity attributable to company	70,037	85,346	81,644	74,784	72,024	75,103	265,725
Non-controlling interest	6,404	7,112	7,112	7,112	10,728	14,631	18,587
Cashflow statement							
Profit for the year	(7,941)	(3,604)	(3,702)	(6,860)	856	6,982	194,577
Taxation expenses	78	644	0	0	10,849	11,708	11,867
Depreciation and amortisation	411	571	571	571	9,952	10,064	10,175
Share based payments	1,823	767	0	0	0	0	0
Other adjustments	837	(5,875)	0	0	0	0	0
Movements in working capital	(689)	736	(1,169)	0	(9,618)	(595)	(35,996)
Income taxes paid	0	0	0	0	(10,849)	(11,708)	(11,867)
Cash from operations (CFO)	(5,483)	(6,761)	(4,300)	(6,289)	1,191	16,451	168,756
Capex	(8,631)	(9,822)	(33,174)	(49,761)	(123,247)	(161,104)	(54,444)
Acquisitions & disposals net	0	0	0	0	0	0	0
Cash used in investing activities (CFIA)	(8,631)	(9,822)	(33,174)	(49,761)	(123,247)	(161,104)	(54,444)
Net proceeds from issue of shares	7,432	19,522	0	0	0	0	0
Movements in debt	0	162	55,115	27,579	122,056	144,653	(18,372)
Cash from financing activities (CFF)	7,432	19,684	55,115	27,579	122,056	144,653	(18,372)
Increase/(decrease) in cash and equivalents	(6,681)	3,101	17,641	(28,470)	(0)	(0)	95,941
Currency translation differences and other	(14)	(315)	0	0	0	0	0
Cash and equivalents at end of period	8,043	10,829	28,470	0	0	0	95,941
Net (debt) cash	1,019	3,097	(34,376)	(90,426)	(212,481)	(357,134)	(242,822)
Movement in net (debt) cash over period	(13,719)	2,078	(37,473)	(56,049)	(122,056)	(144,653)	114,312

Source: Company accounts, Edison Investment Research

General disclaimer and copyright

This report has been commissioned by Lepidico and prepared and issued by Edison, in consideration of a fee payable by Lepidico. Edison Investment Research standard fees are £60,000 pa for the production and broad dissemination of a detailed note (Outlook) following by regular (typically quarterly) update notes. Fees are paid upfront in cash without recourse. Edison may seek additional fees for the provision of roadshows and related IR services for the client but does not get remunerated for any investment banking services. We never take payment in stock, options or warrants for any of our services.

Accuracy of content: All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable, however we do not guarantee the accuracy or completeness of this report and have not sought for this information to be independently verified. Opinions contained in this report represent those of the research department of Edison at the time of publication. Forward-looking information or statements in this report contain information that is based on assumptions, forecasts of future results, estimates of amounts not yet determinable, and therefore involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of their subject matter to be materially different from current expectations.

Exclusion of Liability: To the fullest extent allowed by law, Edison shall not be liable for any direct, indirect or consequential losses, loss of profits, damages, costs or expenses incurred or suffered by you arising out or in connection with the access to, use of or reliance on any information contained on this note.

No personalised advice: The information that we provide should not be construed in any manner whatsoever as, personalised advice. Also, the information provided by us should not be construed by any subscriber or prospective subscriber as Edison's solicitation to effect, or attempt to effect, any transaction in a security. The securities described in the report may not be eligible for sale in all jurisdictions or to certain categories of investors.

Investment in securities mentioned: Edison has a restrictive policy relating to personal dealing and conflicts of interest. Edison Group does not conduct any investment business and, accordingly, does not itself hold any positions in the securities mentioned in this report. However, the respective directors, officers, employees and contractors of Edison may have a position in any or related securities mentioned in this report, subject to Edison's policies on personal dealing and conflicts of interest.

Australia

Edison Investment Research Pty Ltd (Edison AU) is the Australian subsidiary of Edison. Edison AU is a Corporate Authorised Representative (1252501) of Crown Wealth Group Pty Ltd who holds an Australian Financial Services Licence (Number: 494274). This research is issued in Australia by Edison AU and any access to it, is intended only for "wholesale clients" within the meaning of the Corporations Act 2001 of Australia. Any advice given by Edison AU is general advice only and does not take into account your personal circumstances, needs or objectives. You should, before acting on this advice, consider the appropriateness of the advice, having regard to your objectives, financial situation and needs. If our advice relates to the acquisition, or possible acquisition, of a particular financial product you should read any relevant Product Disclosure Statement or like instrument.

New Zealand

The research in this document is intended for New Zealand resident professional financial advisers or brokers (for use in their roles as financial advisers or brokers) and habitual investors who are "wholesale clients" for the purpose of the Financial Advisers Act 2008 (FAA) (as described in sections 5(c) (1)(a), (b) and (c) of the FAA). This is not a solicitation or inducement to buy, sell, subscribe, or underwrite any securities mentioned or in the topic of this document. For the purpose of the FAA, the content of this report is of a general nature, is intended as a source of general information only and is not intended to constitute a recommendation or opinion in relation to acquiring or disposing (including refraining from acquiring or disposing) of securities. The distribution of this document is not a "personalised service" and, to the extent that it contains any financial advice, is intended only as a "class service" provided by Edison within the meaning of the FAA (i.e. without taking into account the particular financial situation or goals of any person). As such, it should not be relied upon in making an investment decision.

United Kingdom

This document is prepared and provided by Edison for information purposes only and should not be construed as an offer or solicitation for investment in any securities mentioned or in the topic of this document. A marketing communication under FCA Rules, this document has not been prepared in accordance with the legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research.

This Communication is being distributed in the United Kingdom and is directed only at (i) persons having professional experience in matters relating to investments, i.e. investment professionals within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "FPO") (ii) high net-worth companies, unincorporated associations or other bodies within the meaning of Article 49 of the FPO and (iii) persons to whom it is otherwise lawful to distribute it. The investment or investment activity to which this document relates is available only to such persons. It is not intended that this document be distributed or passed on, directly or indirectly, to any other class of persons and in any event and under no circumstances should persons of any other description rely on or act upon the contents of this document.

This Communication is being supplied to you solely for your information and may not be reproduced by, further distributed to or published in whole or in part by, any other person.

United States

Edison relies upon the "publishers' exclusion" from the definition of investment adviser under Section 202(a)(11) of the Investment Advisers Act of 1940 and corresponding state securities laws. This report is a bona fide publication of general and regular circulation offering impersonal investment-related advice, not tailored to a specific investment portfolio or the needs of current and/or prospective subscribers. As such, Edison does not offer or provide personal advice and the research provided is for informational purposes only. No mention of a particular security in this report constitutes a recommendation to buy, sell or hold that or any security, or that any particular security, portfolio of securities, transaction or investment strategy is suitable for any specific person.

London | New York | Frankfurt
20 Red Lion Street
London, WC1R 4PS
United Kingdom