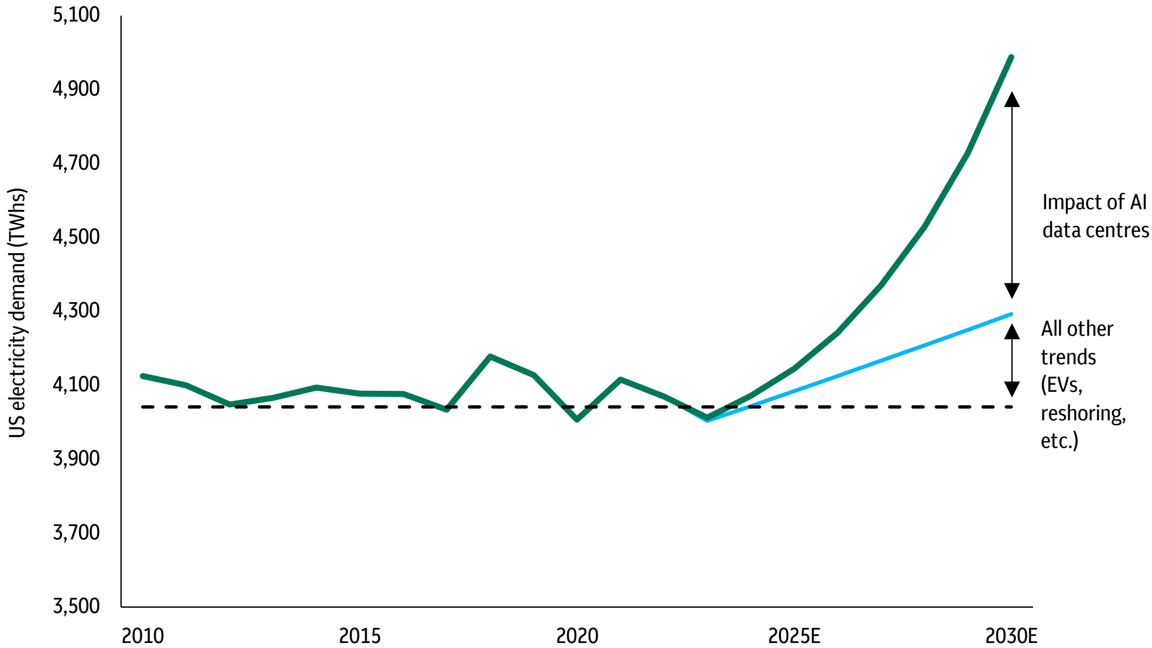
Macquarie Global Listed Infrastructure[1]

Make sure it does what it says on the tin – accessing the data centre power theme

Over the past two decades, US electricity demand has been flat, owing to innovations and the implementation of energy efficiency improvements along with the decline in domestic manufacturing. As shown in the chart below, the US Department of Energy forecasts a doubling of electricity demand by 2050, with a significant portion of the near-term demand growth driven by data centre deployment to power artificial intelligence (AI) applications.

Forecast US electricity demand



Source: Wells Fargo.

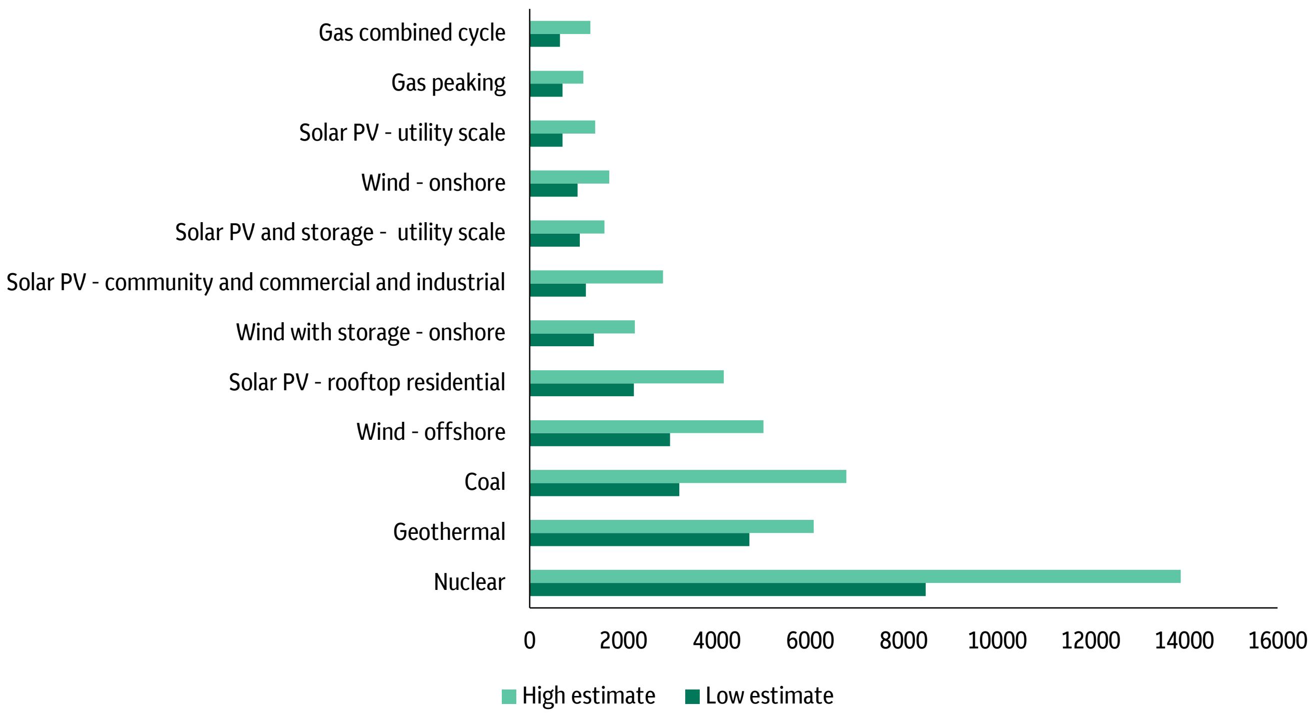
[1] Macquarie Listed Infrastructure is an equity team within Macquarie Asset Management's (MAM) Equity & Multi-Asset business.

Why has nuclear power been gaining attention?

Data centres require a consistent electricity source to power servers and cooling equipment. With the significant near-term growth in AI, the interest in nuclear power has spiked. Nuclear power's high energy density and limited greenhouse gas emissions provide a more attractive source of electricity compared with fossil fuels. Furthermore, the ability to provide consistent electricity with no dependence on weather conditions makes nuclear a more reliable power source than solar and wind.

Opinions on nuclear energy vary. In France, nuclear power plants supply about two-thirds of the country's electricity needs, while Germany has recently decided to remove nuclear energy from its electricity supply mix altogether. Challenges to introducing nuclear power include high upfront capital costs, significant permitting requirements, which lead to lengthy construction times, nuclear waste management, and safety concerns. A new vintage of reactors known as small modular reactors (SMRs) seek to mitigate these issues, though admittedly will not see commercial viability until the 2030s at the earliest.

US capital cost (USD) per kilowatt



Source: Statistica, 2023.

So, why don't we own Constellation?

With roughly 25% of the US nuclear operating capacity, Constellation Energy Corp. (CEG) is the country's largest nuclear operator.[2] CEG's capacity doesn't even include its recent announcement to restart the Crane Energy Center (previously known as Three Mile Island) in September 2024, following the signing of 20-year offtake agreement with Microsoft Corp. related to a new data centre. The implied above-market pricing of the agreement underscores the value of nuclear to data centre customers. Despite inclusion in some infrastructure indices and exposure to the attractive nuclear thematic, CEG's plants are highly exposed to power markets. While the prospect of incorporating CEG into the global listed infrastructure (GLI) portfolio to reduce tracking errors may be tempting, this is not a strong rationale for owning the stock. The risk profile for infrastructure investments requires underlying cash flows with a high degree of predictability that uncontracted power markets do not possess. As further evidence of the misaligned risks related to CEG's market power exposure, it has a beta of four times the US utility group index. A better way to gain exposure to the data centre power theme (with infrastructure risk attributes) lies in regulated or contracted electricity generation and the associated electricity grid assets.

Conclusion

Major thematics, such as power demand from data centres, garner significant attention in the headlines. While they may provide opportunities for investors, understanding exactly what exposure one is adding to a portfolio is key.

A good example is a merchant power plant, such as those run by Constellation. These are non-utility power plants that at the time of construction do not have guaranteed future earnings. Instead, the electricity generated by the plant is intended to be sold in the spot market. As a result, the company lacks some of the key characteristics that we look for in infrastructure assets, specifically, the high degree of predictability of underlying cash flows.

Macquarie, in addition to avoiding assets with high commodity price exposure, takes a pure approach to defining its investment universe, requiring 80% of enterprise value to come from infrastructure before being included. In taking such an approach, the team believes it has a greater probability of delivering clients the benefits of infrastructure while mitigating some of the potential risk, such as uncompensated volatility, reduced yield and limited diversification benefits.

[2] Source: Statista.

Contact us

Visit Macquarie Asset Management to find out more about our range of investments and how our solutions can help you to meet your goals.

Have a question? Please contact us and we will respond as soon as possible.

Key risks

The potential for adverse events in the global infrastructure sector to impact the performance of the investments of the Strategy. Investments in securities issued by companies which are principally engaged in the infrastructure business will subject the Strategy to risks associated with direct investment in infrastructure assets. Factors such as the availability of finance, the cost of such finance in general as well as in comparison to prior periods, the level of supply of suitable infrastructure projects and government regulations relating to infrastructure may influence the value of these investments and hence the Strategy.

The risks of investing in the infrastructure sector include those listed here.

New project risk: Where an infrastructure issuer invests in new infrastructure projects, it is likely to retain some residual risk that the project will not be completed within budget, within the agreed time frame and to the agreed specification.

Strategic asset risk: Infrastructure assets may include strategic assets, that is, assets that have a national or regional profile, and may have monopolistic characteristics. The nature of these assets may generate additional risk given the national/regional profile and/or their irreplaceable nature and may constitute a higher risk target for terrorist acts or political actions.

Documentation risk: Infrastructure assets are often governed by a complex series of legal documents and contracts. As a result, the risk of a dispute over interpretation or enforceability of the documentation may be higher than for other issuers.

Operation risk: Should an infrastructure issuer fail to maintain and operate the assets efficiently, the ability to maintain payments of dividends or interest to shareholders may be impaired. Failure by the infrastructure issuer to carry adequate insurance or to operate the asset appropriately could lead to significant losses and damages.

International investments entail risks including fluctuation in currency values, differences in accounting principles, or economic or political instability. Investing in emerging markets can be riskier than investing in established foreign markets due to increased volatility, lower trading volume, and higher risk of market closures. In many emerging markets, there is substantially less publicly available information, and the available information may be incomplete or misleading. Legal claims are generally more difficult to pursue. The Strategy may invest in preferred stock and hybrid securities, which may have special risks. Preferred and hybrid securities may include provisions that permit the issuer, at its discretion, to defer distributions for a stated period without any adverse consequences to the issuer. Some preferred and hybrid securities are non-cumulative, meaning that the dividends do not accumulate and need not ever be paid. A portion of the Strategy's assets may include investments in non-cumulative preferred or hybrid securities, under which the issuer does not have an obligation to make up any arrears to its investors. Preferred and hybrid securities may be substantially less liquid than many other securities, such as common stocks or US government securities. Generally, preferred and hybrid security holders (such as the Strategy) have no voting rights with respect to the issuing company unless preferred dividends have been in arrears for a specified number of periods, at which time the security holders generally may select a number of directors to the issuer's board. Generally, once all the arrears have been paid, the security holders no longer have voting rights. In certain varying circumstances, an issuer of preferred or hybrid securities may redeem the securities prior to a specified date. For instance, for certain types of preferred or hybrid securities, a redemption may be triggered by a change in federal income tax or securities laws. A redemption by the issuer may negatively impact the return of the security held by the Strategy.

Important information

Source for all performance data unless noted: Macquarie.

For investment professional and institutional investor use only. Not for use with the public. EQ-EUROPE GLI 11/2024 4004826

This document is a marketing communication issued by Macquarie Asset Management (MAM). The information in this document is general in nature and does not constitute legal, tax or investment advice or an offer or a solicitation to engage in any investment activity. Before acting on any information, you should consider the appropriateness of it having regard to your particular objectives, financial situation and needs and seek advice. Investing involves risk, including the possible loss of principal. The distribution and the offering of funds in certain jurisdictions may be restricted by law. The views expressed represent the investment team's assessment of the Strategy and market environment as of the date indicated, and should not be considered a recommendation to buy, hold, or sell any security, and should not be relied on as research or investment advice. Holdings are as of the date indicated, and subject to change. **Past performance is no guarantee of future results (including from an environmental, social or governance ("ESG") or sustainability perspective).**

MAM is the asset management division of Macquarie Group. MAM is a full-service asset manager offering a diverse range of products across public and private markets including fixed income, equities, multi-asset solutions, private credit, infrastructure, renewables, natural assets, real estate, and asset finance. The Public Investments business is a part of MAM and includes the following investment advisers: Macquarie Investment Management Business Trust (MIMBT), Macquarie Funds Management Hong Kong Limited, Macquarie Investment Management Austria Kapitalanlage AG, Macquarie Investment Management Global Limited, Macquarie Investment Management Europe Limited, and Macquarie Investment Management Europe S.A. **In Switzerland**, the Representative in Switzerland is Carnegie Fund Services S.A., 11, rue du Général-Dufour, CH-1204 Geneva, Switzerland. The Articles, the Prospectus, the Key Investor Information Documents, and the most recent annual and semiannual reports for Switzerland can be obtained free of charge at the Swiss Representative's office. The Paying Agent in Switzerland is Banque Cantonale de Genève, 17, quai de l'Ile, CH-1204 Geneva, Switzerland. The Fund is authorised by the Swiss Financial Supervisory Authority FINMA for distribution to qualified investors and non-qualified investors in and from Switzerland. **For recipients in the European Economic Area**, this document is a financial promotion distributed by Macquarie Investment Management Europe S.A. (MIME S.A.) to Professional Clients or Eligible Counterparties defined in the Markets in Financial Instruments Directive 2014/65/EU. MIME S.A. is authorised and regulated by the Commission de Surveillance du Secteur Financier. MIME S.A. is incorporated and registered in Luxembourg (Company No. B62793). The registered office of MIME S.A. is 10A Boulevard Joseph II, L-1840 Luxembourg. **For recipients in the United Kingdom**, this document is a financial promotion distributed by Macquarie Investment Management Europe Limited (MIMEL) to Professional Clients or Eligible Counterparties defined in the Markets in Financial Instruments Directive 2014/65/EU. MIMEL is authorised and regulated by the Financial Conduct Authority. MIMEL is incorporated and registered in England and Wales (Company No. 09612439, Firm Reference No. 733534). The registered office of MIMEL is Ropemaker Place, 28 Ropemaker Street, London, EC2Y 9HD. The investment capabilities described herein are managed by MIMEL, with day-to-day management responsibilities sub-delegated to relevant affiliated managers. This document has not been prepared in accordance with 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. **For recipients in Australia**, this document is provided by Macquarie Investment Management Global Limited (ABN 90 086 159 060 Australian Financial Services Licence 237843) solely for general informational purposes. This document does not constitute a recommendation to acquire, an invitation to apply for, an offer to apply for or buy, an offer to arrange the issue or sale of, or an offer for issue or sale of, any securities in Australia. This document has been prepared, and is only intended, for 'wholesale clients' as defined in section 761G of the Corporations Act and applicable regulations only and not to any other persons. This document does not constitute or involve a recommendation to acquire, an offer or invitation for issue or sale, an offer or invitation to arrange the issue or sale, or an issue or sale, of interests to a 'retail client' (as defined in section 761G of the Corporations Act and applicable regulations) in Australia. **For recipients in Asia**, the information on this webpage is not, and should not be construed as, an advertisement, an invitation, an offer, a solicitation of an offer or a recommendation to participate in any investment strategy or take any other investment action, including to buy or sell any product or security or offer any banking or financial service or facility in any jurisdiction where it would be unlawful to do so. The content on this webpage is for informational purposes only and is intended for institutional investors and investment professionals only. **For recipients in Japan**, this document is provided to Qualified Institutional Investors and other professional investors only by Macquarie Investment Management Advisers and/or its affiliate(s), which is/are supported by Macquarie Asset Management Japan Co., Ltd. ("MAMJ"), a Financial Instruments Business Operator: Director General of the Kanto Local Finance Bureau (FIBO) No.2769 (Member of Japan Investment Advisers Association and Type II Financial Instruments Firms Association). MAMJ may distribute this document to nonprofessional investors by providing appropriate disclosure and taking any other action required to comply with the Financial Instruments and Exchange Act of Japan and with any other applicable laws and regulations of Japan. **For recipients in PRC**, Macquarie is not an authorized securities firm or bank in mainland China and does not conduct securities or banking business in mainland China. **For recipients in Hong Kong,** this document is provided by Macquarie Funds Management Hong Kong Ltd (CE No. AGZ772) ("**MFMHK**"), a company licensed by the Securities and Futures Commission ("**SFC**"), to "professional investors" (within the meaning of the Securities and Futures Ordinance ("**SFO**") and the rules made thereunder) only for the purpose of giving general information. The information contained in this document has not been approved or reviewed by any regulatory authority in Hong Kong and is provided on a strictly confidential basis for your benefit only and must not be disclosed to any other party without MFMHK's prior written consent. If you are not the intended recipient you are not authorised to use this information in any way. Units in any funds mentioned herein may not be offered or sold in Hong Kong by means of this document or any other document other than to persons who are "professional investors" as defined in the SFO and rules made thereunder or in circumstances which do not constitute an offer to the public for the purposes of the SFO or any other applicable legislation in Hong Kong. **For recipients in Korea**, any information contained in this document is NEITHER (i) an offer to sell or a solicitation of an offer to subscribe or purchase or a recommendation of any securities or interests referred to the funds listed herein (if any) NOR (ii) is purported to be providing any information in regards to such. No representation is made with respect to the eligibility of any recipients of this document to acquire securities under the laws of Korea, including, without limitation, the Foreign Exchange Transaction Law and regulations thereunder. The securities have not been registered with the Financial Services Commission of Korea for public offering under the Financial Investment Services and Capital Markets Act of Korea, and the securities may not be offered, sold or delivered, or offered or sold to any person for reoffering or resale, directly or indirectly, in Korea or to any resident of Korea except pursuant to applicable laws and regulations of Korea. Furthermore, the securities may not be resold to Korean residents unless the purchaser of the securities complies with all applicable regulatory requirements (including, without limitation, governmental approval requirements under the Foreign Exchange Transaction Law and its subordinate decrees and regulations) in connection with the purchase of the securities. By the purchase of any securities, the relevant holder or owner thereof will be deemed to represent and warrant that if it is in Korea or is a resident of Korea, it purchased the securities pursuant to the applicable laws and regulations of Korea. **For recipients in Malaysia, Taiwan, The Philippines, Indonesia**, this document does not and is not intended to constitute an invitation or an offer for purchase or subscription of securities, units of collective investments schemes or commodities, or any interests in any index thereof. The information in this document is prepared and only intended for professional investors. **For recipients in Thailand, this document is provided to Institutional Investors only for the purpose of** giving general information. The information contained is provided on a strictly confidential basis for the intended recipient's benefit only. If you are not the intended recipient, you are not authorised to use this information in any way. The contents of this information have not been reviewed by any regulatory authority. The transmission or distribution of this document by the intended recipient is unauthorised and may contravene local securities legislation. **For recipients in Singapore**, the Strategies which are the subject of this document do not relate to a collective investment scheme which is authorised under section 286 of the Securities and Futures Act, Chapter 289 of Singapore ("**SFA**") or recognised under section 287 of the SFA. The Strategies are not authorised or recognised by the Monetary Authority of Singapore and shares are not allowed to be offered to the retail public. This document may not be distributed, either directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 304 of the SFA, (ii) to a relevant person pursuant to Section 305(1), or any person pursuant to Section 305(2), and in accordance with the conditions specified in Section 305 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA. Each of this document and any other document or material issued in connection with the document is not a prospectus as defined in the SFA. Accordingly, statutory liability under the SFA in relation to the content of prospectuses would not apply. **For recipients in Brunei,** no prospectus relating to the strategies described in this document been delivered to, licensed or permitted by the Autoriti Monetari Brunei Darussalam as designated under the Brunei Darussalam Mutual Funds Order 2001, nor has it been registered with the Registrar of Companies. This document must not be distributed or redistributed to and may not be relied upon or used by any person in Brunei other than the person to whom it is directly communicated, (i) in accordance with the conditions of section 21(3) of the International Business Companies Order 2000, or (ii) whose business or part of whose business is in the buying and selling of shares within the meaning of section 308(4) of the Companies Act cap 39.

Other than Macquarie Bank Limited ABN 46 008 583 542 ("Macquarie Bank"), any Macquarie Group entity noted in this document is not an authorized deposit-taking institution for the purposes of the Banking Act 1959 (Commonwealth of Australia). The obligations of these other Macquarie Group entities do not represent deposits or other liabilities of Macquarie Bank. Macquarie Bank does not guarantee or otherwise provide assurance in respect of the obligations of these other Macquarie Group entities. In addition, if this document relates to an investment, (a) the investor is subject to investment risk including possible delays in repayment and loss of income and principal

invested and (b) none of Macquarie Bank or any other Macquarie Group entity guarantees any particular rate of return on or the performance of the investment, nor do they guarantee repayment of capital in respect of the investment.

Use of data

In preparing this document, MAM has used a variety of data sources, including data it has gathered itself directly from investee companies and/or publicly available sources, and data provided by third party data providers. Any data source used may not be comprehensive, may use estimations or may involve a qualitative assessment, for example by a third party data provider. Further, there may be discrepancies between data sources, as well as data gaps, lags or limitations in the methodology for a particular data source. Divergent ESG-related views, approaches, methodologies and disclosure standards exist in the market, including among data providers, with respect to the identification, assessment, disclosure or determination of "ESG" factors, indicators or principal adverse impacts associated with an investment, product or asset, and different persons may consider or treat the same investment, product, asset, targets, actions or the like, differently from a sustainability perspective. Data provided by a third party may also be subject to change. MAM has taken reasonable steps to mitigate the risks associated with any data limitations but does not make any representation or warranty as to the completeness or accuracy of any third-party data (whether actual or estimated), or of any other data that is disclosed in this document.

The Global Industry Classification Standard ("GICS") was developed by and is the exclusive property of Morgan Stanley Capital International Inc. ("MSCI") and Standard and Poor's, a division of the McGraw-Hill Companies, Inc, ("S&P) and is licensed for use by Macquarie Group. Neither MSCI, S&P nor any third party involved in the making or compiling of the GICS or any CICS classifications makes any express or implied warranties with respect to such standard or classification (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim any warranties of originality, accuracy, completeness, merchantability and fitness for a particular purpose with respect to any of such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P, any of their affiliates or any third party involved in making or compiling the GICS or any GICS classifications have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.