

LatAm Utilities

Is US\$25/MWh Solar Rational?

OUR TAKE: Yesterday in Santiago, we hosted a lunch with Mr. Dylan Rudney, founder & CEO of **Verano Capital**, winner of 0.5TWh/year at US\$25/MWh in the latest **regulated auction**. During our talk, Mr. Rudney offered solid arguments to back these pricing levels, including the usual references to decreasing building costs. However, he emphasized global investors' willingness to take modest IRRs in the face of stubbornly low interest rates and lack of return opportunities elsewhere. We find this view appealing: renewables offer significant capital deployment opportunities globally and involve limited execution risk. In our view, the damage is done for incumbents and overcapacity conditions are likely to remain prevalent in Chile till the next decade. Despite the recent sell-off, we are still wary of listed Chile gencos (including Enel Chile, AES Gener, and Colbun).

KEY POINTS

Verano Capital is a LatAm energy infrastructure fund with presence in Chile, Argentina, and Colombia. So far, it has been quite successful with small-scale solar (~3 MW) in projects near Santiago. In Chile, renewables under 9MW enjoy a favourable remuneration scheme and are allowed to chose between the spot price or a "stabilized price" (currently a solid US\$63/MWh near Santiago). The CNE has hinted it could change such conditions, but in the interim this "niche" remains highly lucrative.

The trend of decreasing solar and wind building costs was a key topic during our meeting. Building costs have trended down consistently in recent years, with solar going from US\$2M/MW in 2010 to US\$0.9M/MW at the moment. Wind, usually considered a "mature technology", has also been surprising positively not only on costs but also on resource efficiency. Bidders in the latest Chile (and Mexico) auctions likely bet on a continuation of this trend (à la the **Wright learning curve model**). However, during our talk we learned that latest solar panel cost quotes might be showing signs of flattening in the manufacturer's learning curve. Overall, capex costs for solar plants could drop to US \$0.7M/MW by 2024, **according to IRENA forecasts**.

Mr. Rudney highlighted that Argentina appears to be the most attractive market at the moment. In the latest auction, **Verano Capital won 100MW with a solar project in Mendoza at US\$43/MWh**. When questioned about the pricing gap with Chile, the CEO noted that in Argentina the company bid alone, while in Chile it partnered with Fotowatio (the Spanish–Saudi "build and sell" operator), which brought a much lower cost of capital and led the bidding. Apart from this IRR consideration, country risk and project timing (2019 COD in Argentina, 2024 in Chile) help explain the difference.

Regarding Argentina, we would like to correct our **previous note**. First, guarantees requested by Cammesa at US\$250k/MW (or ~25% of planned investment for solar) are actually quite high, not low as we initially argued. Second, headline winning bids need to be upped by 6% when thinking in NPV terms, due to incentive factors built into the Cammesa PPAs (offering a +20%-10% price premium on initial years and a 10% discount on the final ones). All power auctions need detailed analysis and carry nuances, but to us this looks a bit "gimmicky": the Macri government can show lower headline US\$/MWh to the public opinion, while the "hidden" terms bolster IRRs and help attract players to the auction.

Dissemination: December 07, 2017, 10:03 ET. Production: December 07, 2017, 10:00 ET.

ANALYST TEAM

[Link to ScotiaView](#)

Ezequiel Fernández López, CFA | Analyst
56-9-9991-9152
Scotia Corredora de Bolsa Chile SA

David Galante | Associate
56-2-2692-6568
Scotia Corredora de Bolsa Chile SA

COVERAGE SUMMARY

	Rating	1-Yr. Target	Return
AESGENER-SN	SU	CLP 200.00	24.4%
COLBUN-SN	SU	CLP 140.00	11.7%
ECL-SN	SP	CLP 1,270	14.0%
ENIA-N	SO	US\$10.90	14.5%
ENIC-N	SU	US\$5.40	8.7%
EOCC-N	SP	US\$26.70	13.0%

Pertinent Data

	Price	Rating	1-Yr. Target	1-Yr. Return
AESGENER-SN	CLP 176.95	SU	CLP 200.00	24.4%
COLBUN-SN	CLP 128.04	SU	CLP 140.00	11.7%
ECL-SN	CLP 1,164	SP	CLP 1,270	14.0%
ENIA-N	US\$9.73	SO	US\$10.90	14.5%
ENIC-N	US\$5.14	SU	US\$5.40	8.7%
EOCC-N	US\$24.78	SP	US\$26.70	13.0%

AES Gener (AESGENER-SN;CLP 176.95)

Valuation: SOTP DCF Model

Key Risks: Capex execution, regulatory risk, hydrology

Colbun (COLBUN-SN;CLP 128.04)

Valuation: SOTP DCF Model

Key Risks: Hydrology, commodity prices, operational issues

Enel Chile (ENIC-N;US\$5.14)

Valuation: SOTP DCF Model

Key Risks: Regulation, hydrology

Appendix A: Important Disclosures

Company	Disclosures (see legend below)*
AES Gener	M8, VS0211, VS0355
Colbun	G, M8, U
Enel Americas	M8
Enel Chile	M8
Enel Generacion Chile	M8
Engie Energia Chile	M8

I, Ezequiel Fernández López, certify that (1) the views expressed in this report in connection with securities or issuers that I analyze accurately reflect my personal views and (2) no part of my compensation was, is, or will be directly or indirectly, related to the specific recommendations or views expressed by me in this report.

This research report was prepared by employees of Scotia Capital Inc. and/or its affiliates who have the title of Analyst.

All pricing of securities in reports is based on the closing price of the securities' principal marketplace on the night before the publication date, unless otherwise explicitly stated.

All Equity Research Analysts report to the Head of Equity Research. The Head of Equity Research reports to the Managing Director and Co-Head, Global Capital Markets, who is not and does not report to the Head of the Investment Banking Department. Scotiabank, Global Banking and Markets has policies that are reasonably designed to prevent or control the sharing of material non-public information across internal information barriers, such as between Investment Banking and Research.

The compensation of the research analyst who prepared this report is based on several factors, including but not limited to, the overall profitability of Scotiabank, Global Banking and Markets, and the revenues generated from its various departments, including investment banking, trading fees and other types of transactions. Furthermore, the research analyst's compensation is charged as an expense to various Scotiabank, Global Banking and Markets departments, including investment banking. Research Analysts may not receive compensation from the companies they cover.

Non-U.S. analysts may not be associated persons of Scotia Capital (USA) Inc. and therefore may not be subject to FINRA Rule 2241 restrictions on communications with subject company, public appearances and trading securities held by the analysts.

For Scotiabank, Global Banking and Markets Research analyst standards and disclosure policies, please visit gbm.scotiabank.com/disclosures.

Scotiabank, Global Banking and Markets Research, 40 King Street West, 33rd Floor, Toronto, Ontario, M5H 1H1.

Time of dissemination: December 07, 2017, 10:03 ET. Time of production: December 07, 2017, 10:00 ET. Note: Time of dissemination is defined as the time at which the document was disseminated to clients. Time of production is defined as the time at which the Supervisory Analyst approved the document.

*Legend

- G** Scotia Capital (USA) Inc. or its affiliates has managed or co-managed a public offering in the past 12 months.
- M8** Ezequiel Fernandez Lopez, an analyst, prepared this report and is an employee of the Research Department of Scotia Corredora de Bolsa Chile S.A.
- U** Within the last 12 months, Scotia Capital Inc. and/or its affiliates have undertaken an underwriting liability with respect to equity or debt securities of, or have provided advice for a fee with respect to, this issuer.
- VS0211** Research Analyst Ezequiel Fernandez Lopez visited the Maipo Valley Facilities, a hydroelectric electricity generator site, on December 9, 2014. Partial payment was received from the issuer for the travel-related expenses incurred by the Research Analyst to visit this site.
- VS0355** Research Associate David Galante visited the Ventanas Complex, an operating power plant, on December 2, 2015. Full payment was received from the issuer for the travel-related expenses incurred by the Research Associate to visit this site.

Rating and Price Target History

AES Gener (AESGENER-SN) as of December 06, 2017 (in CLP)



*Represents the value(s) that changed.

Powered by: BlueMatrix

Ratings Legend: FS=Focus Stock; SO=Sector Outperform; SP=Sector Perform; SU=Sector Underperform; T=Tender; UR=Under Review; CS=Coverage Suspended; DC=Discontinued Coverage
Source: Scotiabank GBM estimates/Scotia Howard Weil estimates; FactSet.

Colbun (COLBUN-SN) as of December 06, 2017 (in CLP)



*Represents the value(s) that changed.

Powered by: BlueMatrix

Ratings Legend: FS=Focus Stock; SO=Sector Outperform; SP=Sector Perform; SU=Sector Underperform; T=Tender; UR=Under Review; CS=Coverage Suspended; DC=Discontinued Coverage
Source: Scotiabank GBM estimates/Scotia Howard Weil estimates; FactSet.

Enel Chile (ENIC-N) as of December 06, 2017 (in USD)



*Represents the value(s) that changed.

Powered by: BlueMatrix

Ratings Legend: FS=Focus Stock; SO=Sector Outperform; SP=Sector Perform; SU=Sector Underperform; T=Tender; UR=Under Review; CS=Coverage Suspended; DC=Discontinued Coverage
Source: Scotiabank GBM estimates/Scotia Howard Weil estimates; FactSet.

Definition of Scotiabank, Global Banking and Markets Equity Research Ratings

We have a four-tiered rating system, with ratings of Focus Stock, Sector Outperform, Sector Perform, and Sector Underperform. Each analyst assigns a rating that is relative to his or her coverage universe or an index identified by the analyst that includes, but is not limited to, stocks covered by the analyst.

The rating assigned to each security covered in this report is based on the Scotiabank, Global Banking and Markets research analyst's 12-month view on the security. Analysts may sometimes express to traders, salespeople and certain clients their shorter-term views on these securities that differ from their 12-month view due to several factors, including but not limited to the inherent volatility of the marketplace.

Ratings

Focus Stock (FS)

The stock represents an analyst's best idea(s); stocks in this category are expected to significantly outperform the average 12-month total return of the analyst's coverage universe or an index identified by the analyst that includes, but is not limited to, stocks covered by the analyst.

Sector Outperform (SO)

The stock is expected to outperform the average 12-month total return of the analyst's coverage universe or an index identified by the analyst that includes, but is not limited to, stocks covered by the analyst.

Sector Perform (SP)

The stock is expected to perform approximately in line with the average 12-month total return of the analyst's coverage universe or an index identified by the analyst that includes, but is not limited to, stocks covered by the analyst.

Sector Underperform (SU)

The stock is expected to underperform the average 12-month total return of the analyst's coverage universe or an index identified by the analyst that includes, but is not limited to, stocks covered by the analyst.

Other Ratings

Tender – Investors are guided to tender to the terms of the takeover offer.

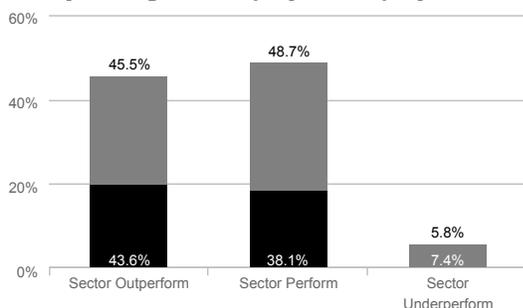
Under Review – The rating has been temporarily placed under review, until sufficient information has been received and assessed by the analyst.

Risk Ranking

As of June 22, 2015, Scotiabank, Global Banking and Markets discontinued its Low, Medium, and High risk rankings. The Speculative risk ranking reflects exceptionally high financial and/or operational risk, exceptionally low predictability of financial results, and exceptionally high stock volatility. The Director of Research and the Supervisory Analyst jointly make the final determination of the Speculative risk ranking.

Scotiabank, Global Banking and Markets Equity Research Ratings Distribution*

Distribution by Ratings and Equity and Equity-Related Financings*



* As of November 30, 2017.

Source: Scotiabank GBM.

■ Percentage of companies covered by Scotiabank, Global Banking and Markets Equity Research within each rating category.

■ Percentage of companies within each rating category for which Scotiabank, Global Banking and Markets has undertaken an underwriting liability or has provided advice for a fee within the last 12 months.

For the purposes of the ratings distribution disclosure FINRA requires members who use a ratings system with terms different than "buy," "hold/neutral" and "sell," to equate their own ratings into these categories. Our Focus Stock, Sector Outperform, Sector Perform, and Sector Underperform ratings are based on the criteria above, but for this purpose could be equated to strong buy, buy, neutral and sell ratings, respectively.

General Disclosures

This report has been prepared by analysts who are employed by the Research Department of Scotiabank, Global Banking and Markets. Scotiabank, Global Banking and Markets Research produces research reports under a single marketing identity referred to as “globally branded research” under U.S. rules. This research is produced on a single global research platform with one set of rules which meet the most stringent standards set by regulators in the various jurisdictions in which the research reports are produced. In addition, the analysts who produce the research reports, regardless of location, are subject to one set of policies designed to meet the most stringent rules established by regulators in the various jurisdictions where the research reports are produced.

The frequency of reports is determined by the analyst on a case-by-case basis, driven by external market factors and issuer announcements. Analysts will endeavour to review and publish such estimates and recommendations as soon as possible after the release of material information by the issuer or the occurrence of other relevant events. This will typically involve, at a minimum, a summary of quarterly earnings releases.

Scotia Capital Inc. (“SCI”), as principal, and Alberta Investment Management Corporation (“AIMCo”), on behalf of certain of its clients, have each agreed to sell 2,750,000 common shares (“Common Shares”) of TMX Group Limited (“TMX”) representing an aggregate of approximately 9.9% of the issued and outstanding Common Shares of TMX as of October 2, 2017. The Common Shares are being sold by SCI and AIMCo by way of a trade carried out under exemptive relief from certain provisions of the Universal Market Integrity Rules granted by the Investment Industry Regulatory Organization of Canada at a gross price of \$67.00 per Common Share. After giving effect to the trade, SCI and AIMCo will each hold less than 5% of the issued and outstanding Common Shares of TMX and will no longer be entitled to appoint nominees to the board of directors of TMX.

This report is provided to you for informational purposes only. This report is not, and is not to be construed as, an offer to sell or solicitation of an offer to buy any securities and/or commodity futures contracts.

The securities mentioned in this report may neither be suitable for all investors nor eligible for sale in some jurisdictions where the report is distributed.

The information and opinions contained herein have been compiled or arrived at from sources believed reliable, however, Scotiabank, Global Banking and Markets makes no representation or warranty, express or implied, as to their accuracy or completeness.

Scotiabank, Global Banking and Markets has policies designed to make best efforts to ensure that the information contained in this report is current as of the date of this report, unless otherwise specified.

Any prices that are stated in this report are for informational purposes only. Scotiabank, Global Banking and Markets makes no representation that any transaction may be or could have been effected at those prices.

Any opinions expressed herein are those of the author(s) and are subject to change without notice and may differ or be contrary from the opinions expressed by other departments of Scotiabank, Global Banking and Markets or any of its affiliates.

Neither Scotiabank, Global Banking and Markets nor its affiliates accepts any liability whatsoever for any direct or consequential loss arising from any use of this report or its contents.

Equity research reports published by Scotiabank, Global Banking and Markets are available electronically via: Bloomberg, Thomson Financial/First Call - Research Direct, Reuters, Capital IQ, and FactSet. Institutional clients with questions regarding distribution of equity research or who wish to access the proprietary model used to produce this report should contact Scotiabank at 1-800-208-7666. A list of all investment recommendations in any financial instrument or issuer that have been disseminated during the preceding 12 months is available at the following location: gbm.scotiabank.com/disclosures

This report and all the information, opinions, and conclusions contained in it are protected by copyright. This report may not be reproduced in whole or in part, or referred to in any manner whatsoever, nor may the information, opinions, and conclusions contained in it be referred to without the prior express consent of Scotiabank, Global Banking and Markets.

Additional Disclosures

Canada: This report is distributed by Scotia Capital Inc., a subsidiary of The Bank of Nova Scotia.

Chile: This report is distributed by Scotia Corredora de Bolsa Chile S.A., a subsidiary of The Bank of Nova Scotia.

Colombia: This report is distributed in Colombia by Banco Colpatria Multibanca Colpatria S.A. as authorized by the Superintendencia Financiera de Colombia to The Bank of Nova Scotia (“Scotiabank”) by Resolution 058 of 2014 and to Scotia Capital Inc. by Resolution 0226 of 2015. Said Resolutions authorize Scotiabank and Scotia Capital Inc. to promote and advertise their products and services through Banco Colpatria Multibanca Colpatria S.A. This report is prepared by analysts employed by The Bank of Nova Scotia and certain of its affiliates including Scotia Capital Inc.

Hong Kong: This report is distributed by The Bank of Nova Scotia Hong Kong Branch, which is authorized by the Securities and Future Commission to conduct Type 1, Type 4 and Type 6 regulated activities and regulated by the Hong Kong Monetary Authority.

Japan: This report is provided simply as advice and investment decisions shall be made at each investor's own risk. Scotia Securities Asia Limited and any of its affiliates shall not provide compensation for any loss incurred by the reader.

Mexico: The information contained in this report is for informational purposes only and is not intended to influence the decision of the addressee in any way whatsoever with respect to an investment in a certain type of security, financial instrument, commodity, futures contract, issuer, or market, and is not to be construed as an offer to sell or a solicitation of an offer to buy any securities or commodities futures contracts. Scotiabank Inverlat Casa de Bolsa, S.A. de C.V. is not responsible for the outcome of any investment performed based on the contents of this research report.

Peru: This report is distributed by Scotia Sociedad Agente de Bolsa S.A., a subsidiary of The Bank of Nova Scotia.

Singapore: For investors in the Republic of Singapore, this document is provided via an arrangement with BNS Asia Limited pursuant to Regulation 32C of the Financial Advisers Regulations. The material contained in this document is intended solely for accredited, expert or institutional investors, as defined under the Securities and Futures Act (Chapter 289 of Singapore). If there are any matters arising from, or in connection with this material, please contact BNS Asia, located at 1 Raffles Quay, #20-01 North Tower, One Raffles Quay, Singapore 048583, telephone: +65 6305 8388. This document is intended for general circulation only and any recommendation that may be contained in this document concerning an investment product does not take into account the specific investment objectives, financial situation, or particular needs of any particular person, and advice should be sought from a financial adviser based in Singapore regarding the suitability of the investment product, taking into account the specific investment objectives, financial situation, or particular needs of any person in receipt of the recommendation, before the person makes a commitment to purchase the investment product.

United Kingdom and the rest of the European Economic Area: Except as otherwise specified herein, this report is distributed by Scotiabank Europe plc, a subsidiary of The Bank of Nova Scotia. Scotiabank Europe plc complies with all requirements under the EU Market Abuse Regulation concerning investment recommendations.

United States: This report is distributed by Scotia Capital (USA) Inc., a subsidiary of Scotia Capital Inc., and a registered U.S. broker-dealer. All transactions by a U.S. investor of securities mentioned in this report must be effected through Scotia Capital (USA) Inc.

Non-U.S. investors wishing to effect a transaction in the securities discussed in this report should contact a Scotiabank, Global Banking and Markets entity in their local jurisdiction unless governing law permits otherwise.

TM Trademark of The Bank of Nova Scotia. Used under license, where applicable. Scotiabank, together with "Global Banking and Markets," is a marketing name for the global corporate and investment banking and capital markets businesses of The Bank of Nova Scotia and certain of its affiliates in the countries where they operate, including Scotia Capital Inc., Scotia Capital (USA) Inc., Scotiabanc Inc., Citadel Hill Advisors L.L.C., The Bank of Nova Scotia Trust Company of New York, Scotiabank Europe plc, Scotiabank (Ireland) Designated Activity Company, Scotiabank Inverlat S.A., Institución de Banca Múltiple, Scotia Inverlat Casa de Bolsa S.A. de C.V., Scotia Inverlat Derivados S.A. de C.V. – all members of the Scotiabank Group and authorized users of the mark. The Bank of Nova Scotia is incorporated in Canada with limited liability. Scotia Capital Inc. is a member of the Canadian Investor Protection Fund and regulated by the Investment Industry Regulatory Organization of Canada. Scotia Capital (USA) Inc. is a broker-dealer registered with the SEC and is a member of FINRA, NYSE, NFA and SIPC. Scotiabank Europe plc is authorized by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. Scotiabank Inverlat, S.A., Scotia Inverlat Casa de Bolsa, S.A. de C.V., and Scotia Derivados, S.A. de C.V., are each authorized and regulated by the Mexican financial authorities.