CFA Institute

CFA Institute Research Challenge

hosted by

CFA Society of Chile

Adolfo Ibáñez University

Adolfo Ibáñez University Research

Recommendation: **BUY**
Target Price: CLP 357 (+10,8%)
Current Price: CLP 320 as of 10.30.2014
USD/CLP: $577

Utilities, Energy Generation

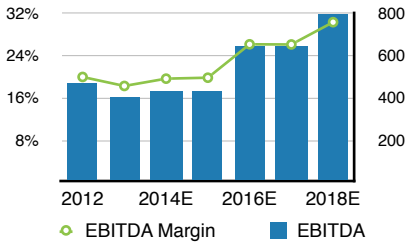
AES GENER

Stock Data	
Ticker	AESGENER
Market Cap	USD 4.35B
Outstanding	8.40B
Free Float	2.27B

Key Metrics	2Q 2014	2015
EBITDA	573 MM	453 MM
EV/SALES	3.00	3.71
EV/EBITDA	11.7	15.7
EV/EBIT	18.3	19.67
P/E	23.20	29.12
EPS	0.01	0.02
ROE	6.45%	5.88%
ROA	2.50%	2.24%
Debt/Capital	1.56	1.77

Source: Team Estimates.

EBITDA / Margin EBITDA (MM)



Source: Team Estimates.

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Highlights

We initiate coverage of AES Gener with a target price of CLP 357 per share at December 2015. Our target price implies an upside potential of 10.8% from the current price of CLP 320 and supports our BUY recommendation since the potential appreciation is above the required return for the stock given its risk profile.

AES Gener is the second largest electricity generation Company in Chile, with operations in Argentina and Colombia. Considering all the three countries, the Company has an installed capacity of MW 5,081 and totalled annual sales of USD 2.2B in the year 2013.

To get the target price for December 2015, we performed an income valuation using the discounted free cash flow methodology (DCF) using the weighted average cost of capital (WACC) as the discount rate. Given the difference between the target price and the current price, we rated the stock as BUY.

Factors that Positively Affect the Estimated Price

Diversified Portfolio

AES Gener is diversified in terms of its generation sources and markets in which it operates. This diminishes the volatility of operative cash flows, which is aligned with the business strategy of the company, focused on the increment of flows under low uncertainty.

Presence of Attractive Growth Markets

The Company is present in LATAM, which gives it the advantage of a growing demand linked to countries with higher economic growth and proximity to new investment opportunities.

Strategic Projects under Construction Lead to Substantial Increase in Terms of Installed Capacity

AES Gener is in an expansionary phase which will increase its installed capacity by 24% with key projects in three different markets. This implies a strong CAPEX for a total of USD 4B.

Accumulated Return Chart

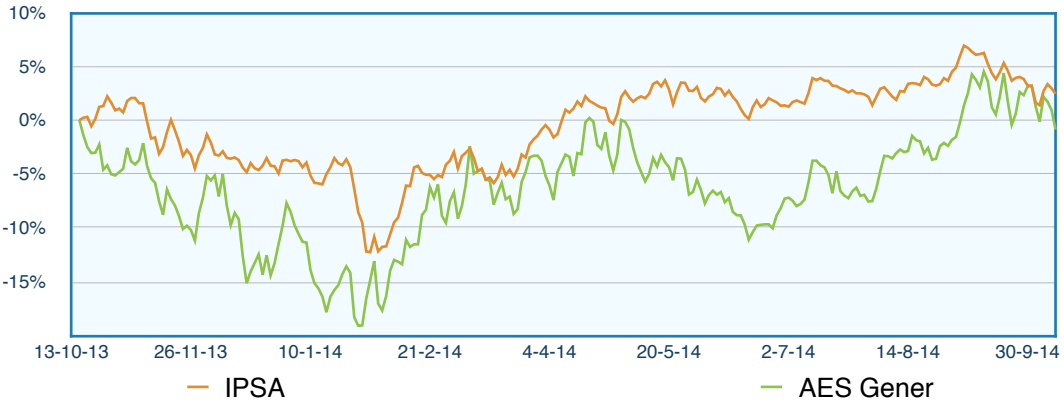
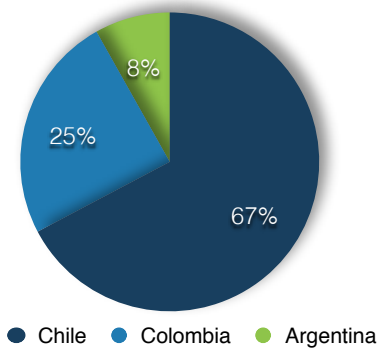


Figure 1: Revenues by Country, Full-Year 2013



Source: AES Gener Presentation for CFA

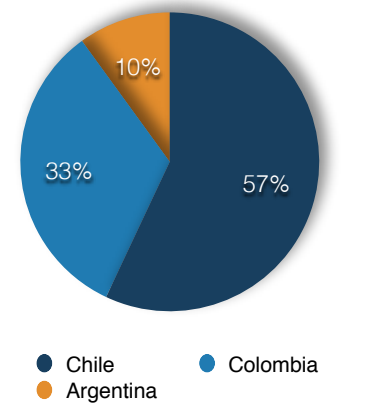
The Company

AES Gener was created in 1889 with the name of 'Chilean Electric Tramway and Light Company' as a state Company. It was fully privatized by the year 1988. Today it is the second biggest Company in the energy generation industry in Chile. Besides Chile, the Company also operates in the Colombian and Argentinian market. Its installed capacity amounts to MW 5,081 as of June 2014.

Of the total installed capacity, 75% correspond to thermal generation, while 25% correspond to hydropower. The Company is now on an expansion stage which will be in place until year 2018. This expansionary phase will lead to an increase of MW 1,235 of the installed capacity.
AES Gener has 21 generation facilities, of which 19 are located in Chile, 1 is located in Colombia, and 1 in Argentina. Currently it has 4 facilities under construction located in Chile and 1 in Colombia (Exhibit 1).

Chile is the most important market for the Company, representing 67% of its revenues and 57% of its consolidated EBITDA according to 2013 operations (Figure 1 and 2). In Chile, AES Gener is the biggest thermic generation Company.
The Company is controlled by AES Group, which is an American Company that has 70.71% of AES Gener's shares.
AES Gener is part of IPSA (Selective Stock Price Index), a stock index that groups the top 40 most traded shares in the Chilean market.

Figure 2: EBITDA by Country, Full -Year 2013



Source: AES Gener Presentation for CFA

Chilean Electricity System

Three Main Agents

The Chilean electric system consists of three businesses of operation: generation, transmission and distribution.

- **Generation:** Companies that generate energy through several sources and facilities called generation plants participate in this business. AES Gener participates in this business.
- **Transmission:** This business is composed by high voltage transmission lines that transport energy from the generation plants to different consumption centers. Transmission companies are required to allow passage of the energy produced by different generating companies and to allow the connection of any consumer.
- **Distribution:** This business consists of companies that buy energy and power from generation companies, for distribution to residential and commercial consumers.

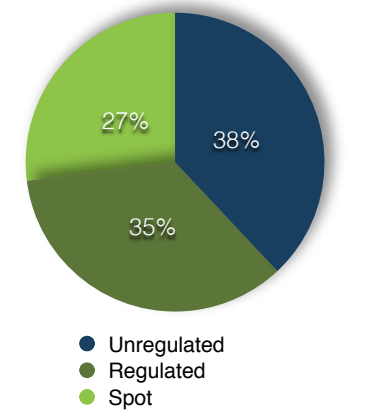
Sales through Agreements and Spot Market

There are two ways to sell energy: through agreements, and through the spot market. Most sales come through agreements which specify price, volume, and other conditions related to energy and power selling. The agreements are done with 2 types of clients.

- **Regulated clients:** They receive the energy from distribution companies, which carry out public tenders to get the contracts to distribute the energy.
- **Non-regulated clients:** They can freely enter into contracts with generators, distributors or traders to stock up energy, freely negotiating values and conditions of electricity supply.

The spot market transactions occur between generators. When a generating company does not produce enough energy to meet its contractual obligations, it has to buy energy from other generating companies that have surpluses after fulfill the obligations of their contracts.
In Chile, the Center for Economic Load Dispatch (CDEC) is responsible for coordinating the operation of the electrical systems. Its main role is to preserve security in the activities of generation, transmission and distribution. It also regulates these spot transactions, ensuring that they are made at the lowest marginal cost available at the moment.
Figure 3 shows the percentage of AES Gener's revenues coming from contracts and spot sales.

Figure 3: Consolidated Electricity Sales, 2013



Source: AES Gener's Annual Report, 2013

Interconnected Systems

In Chile there are four power transmission systems due to the geographical shape of the country. In Figure 4 we show these systems. The two main systems, due to their capacity, are named SIC and SING.

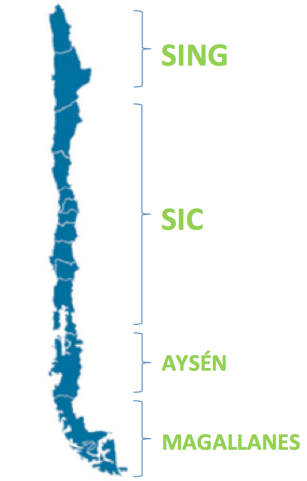
- **SING:** Total installed capacity in this system reaches MW 3,964 as of the end of 2013. Due to the scarcity of water resources in the area, most of it comes from thermic generation.
- **SIC:** Total installed capacity in this system reaches MW 14,147 as of the end of 2013.

AES Gener participates in the Chilean market in the SING and the SIC.

Regulations

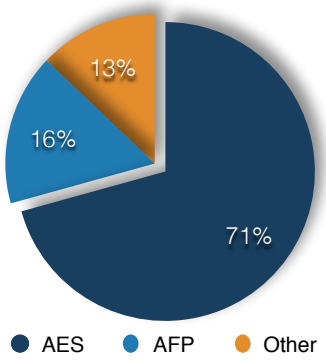
The power generation industry has several regulators, because of its relevancy to the country, to the economic activities and to the domestic consumption.

Figure 4: Chilean Interconnected Systems



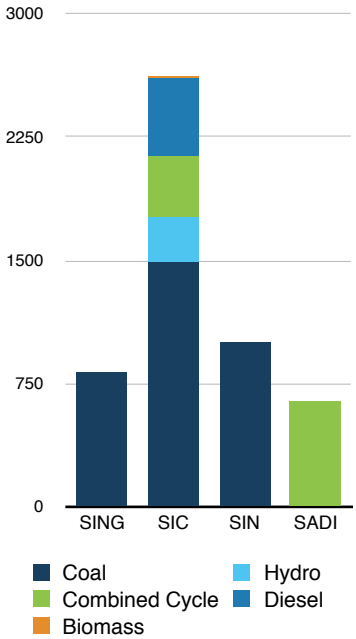
Source: Team Elaboration

Figure 5: Ownership as of june 2014



Source: Bloomberg

Figure 6: AES Gener's Installed Capacity per System (MW)



Source: Team Estimates.

- **Ministry of Energy:** The state of Chile is responsible for developing and coordinating plans, policies and standards for the proper functioning and development of the energy sector. It is also responsible for granting concessions for the provision of public services of generation, transmission and distribution of electricity.
- **National Energy Commission (CNE):** It proposes, regulates and coordinates energy policy by developing referential construction plans for generation and transmission.
- **Electricity and Fuels Superintendency (SEC):** Oversees the continuity of supply and quality.

Colombian Electricity System

The main electric system in Colombia is the National Interconnected System (SIN), whose installed capacity is MW 14,600 as of December 2013.

- **Regulations:** The main institution is the Commission on Regulation of Energy and Gas (CREG), whose function is to verify that the service is being delivered at the lowest cost to users, but with an adequate remuneration for companies, thus ensuring quality.

Argentinian Electricity System

The main system in Argentina is the Argentinian Interconnection System (SADI). AES Gener participates in this system with an installed capacity of MW 31,138 as of December 2013.

- **Regulations:** The National Regulatory Authority for Electricity (ENRE) is responsible for regulating the activities of public service in the electricity sector.

Business Description

AES Gener generates revenues selling energy at the lowest marginal cost possible, controlling its operational cash flows volatility through long term energy selling agreements and keeping the system sufficiency. A key factor is the development of efficient projects, according to the energy demand in the different systems.

Ownership Structure & Key Management

On 2000 the search for a strategic partner that would allow the Company to grow in size and importance in the industry began. "Investments Cachagua" a subsidiary of "AES Corporation", launched a public stock offering for a percentage of the Company control. Today AES Corporation is the owner of 70.71% of the company. Figure 5 and Exhibit 3 show the ownership percentages in detail. The current chairman is Andrew Gluski, and the CEO is Luis Felipe Cerón since September 2001.
Exhibit 4 shows the history of AES Gener and the rest of the board.
The finance strategy of the Company is to use more debt rather than equity to fund its assets. New projects such as Cochrane and Alto Maipo are funding on a Project Finance structure.
The capital issuances are not common because the company has cheaper ways to finance, due its good management of liabilities.

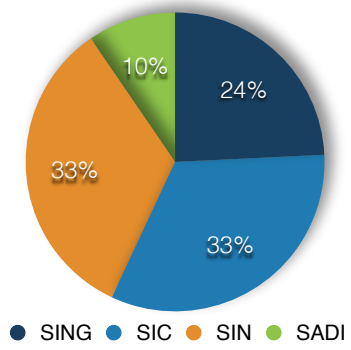
Participation and Performance in Markets

- **SING:** AES Gener has two thermic power plants with an installed capacity of MW 822, equivalent to 21% of total system capacity. In terms of gross generation, the company contributed with 33% of SING generation in the last 12 months. The sales of the Company in the system were USD 525,498K on 2013, 88% of them came from non-regulated customers, mainly mining companies that are in the north of Chile. AES Gener also has a plant under construction that will be operational in 2015.
- **SIC:** AES Gener has 17 projects, of which 61% are of thermic generation, 38% hydric and 1% other. Together they generate an installed capacity of MW 2,616, or 18% of total installed capacity of the system. Regarding the gross generation, the plants contributed with 29% of SIC in the last 12 months. Sales of the company in the system were USD 913,000K in 2013 (Exhibit 6) 58% of them came from regulated customers, 29% from non-regulated customers and 13% from sales in the spot market. In addition, the company has three projects under construction that will begin operating from 2015.
- **SIN, Colombia (Chivor Central):** Chivor is the country's third largest hydric generation facility with an installed capacity of MW 1,000, equivalent to 7% of the total installed capacity on SIN. Sales of the Company in the system were USD 522,332K in 2013. 49% of them came from regulated customers and the remaining came from sales on the spot market. Also, they are building a hydroelectric plant called Tunjita that will contribute with an installed capacity of MW 20 in 2015.
- **SADI, Argentina (Salta Central):** Thermoelectric Salta has an installed capacity of MW 642 equivalent to 2% of the total installed capacity of the SADI. Sales of the Company in the system were USD 173,481K in 2013, 57% of them came from contract sales and the rest came from spot market sales. Although this plant is connected to the SING and SADI systems, all the energy produced in Salta goes to SADI. Figure 6 shows AES Gener's installed capacity per system.

More details about EBITDA of the Company per system are shown in Figure 7.

Industry Overview and Competitive Positioning

Figure 7: EBITDA per System, 2013



Source: AES Gener's Annual Report, 2013

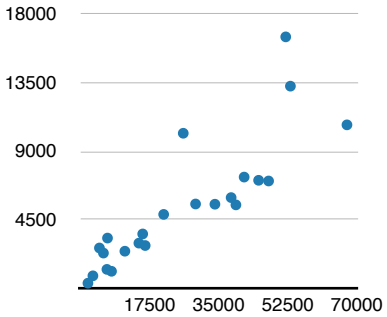
Macroeconomic Outlook

Energy consumption in the emerging economies will experience an average increase of 2.5% per year until 2030, according to the International Energy Agency. So what happens in the energy sector is critical for developing countries.

All countries where AES Gener operates have experienced an increase in GDP per capita (Exhibit 7), leading to a greater need for energy sources. Figure 8 shows the relationship between GDP and energy consumption in various countries. But there are also some particular elements in each country that affect in different ways the vision of the Company to develop in these markets.

- **Chile:** The industry has potential to grow and there has been a stable economic environment for investment, a liquid and developed capital market, and a stable regulatory framework. The credit rating of the country is AA- (S&P), Aa3 (Moody's) and A + (Fitch). This takes place in a country where GDP was USD 277.2B in 2013 corresponding to USD 15,732.31 per capita. Note that there is uncertainty about the new tax reform that would change the corporate tax and could alter certain projections.
- **Colombia:** The country has a stable environment for business development because of the steady growth of the industry along with the rapid growth of the capital market and stable regulatory framework presented in the energy industry. The credit rating of the country is BBB (S&P), Baa3 (Moody's) and BBB (Fitch). Colombia's GDP in 2013 was USD 378,1B, which corresponds to USD 7,825.68 per capita.
- **Argentina:** Currently there is no economic stability that encourages investment in this country. In fact, it is the only one of the three countries in which the Company operates, where there are currently no projects under construction. The GDP in 2013 was USD 611.8B, which corresponds to USD 14,760.20 per capita.

Figure 8: GDP / Energy Consumption



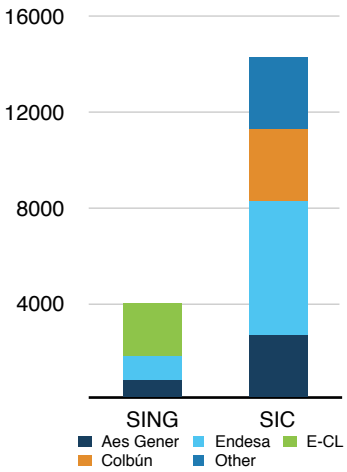
Source: Team Estimates.

Competition and Market Position

There are more than 40 companies in Chile operating in energy generation activities, although there is a high concentration. Three companies: Endesa, AES Gener and Colbún control 72% of the market. Considering both interconnected systems, AES Gener owns 19% of the total installed capacity. Particularly in SING, AES Gener is the second largest generator in terms of installed capacity, preceded by E-CL. On SIC is the third largest, preceded by Endesa and Colbún (Figure 9). In Colombia, AES Gener has the third-largest hydroelectric, and is currently building a new run of the river hydroelectric plant.

According to SWOT analysis of the Company in this industry (Exhibit 8), we can see that AES Gener has a strong position, with a diversified portfolio of customers and long term clients. The Company is present in different markets, and can take advantage of growth opportunities in Chile and Colombia. The industry has also a stable outlook and growth potential. Fortunately, the Company has long term contracts with most of their clients, so there are few threats in relation to clients. A similar case happens with the suppliers, because the inputs are commodities and have international fixed prices. In the case of new entrants, the initial investment is high, so the industry has a barrier to entry. For more details of Porter's Five Forces Model please refer to Exhibit 9.

Figure 9: Power per Company, SING and SIC



Source: AES Gener's Presentation for CFA.

Investments in Installed Capacity

In Chile, AES Gener and the competitors are expanding their installed capacity by building new generation facilities. At a horizon of 6 years, AES Gener is one that is making the biggest investment since it will expand its installed capacity by MW 1,235. Followers are E-CL with MW 243 under construction and Colbún with MW 144. Figure 10 shows details about MW added by each company from year 2015 to year 2020.

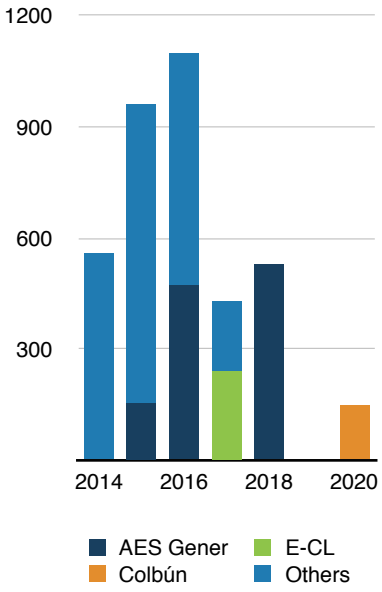
Investment Summary

Given the current scenario, AES Gener is considered to be a low risk company to invest in. The Company's potential is supported by the following relevant issues.

Opportunities for Growth in Generation Industry in the Countries in which the Company Operates

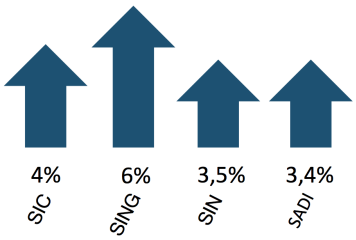
In Chile, the CNE (National Energy Commission) forecasts a compound annual growth rate for energy consumption of 4.2% in the SIC system, and 6.0% for the SING system over the next 10 years. In Colombia, the UPME (Mining and Energy Planning Unit) projects a compound annual growth rate on energy sales of 3.5% over the next 10 years (Figure 11).

Figure 10: Facilities Under Construction, National



Source: Node Price Report, October 2013.

Figure 11: Expected Growth by System (CAGR 2014-2024)



Source: AES Gener's Presentation for CFA.

Second Phase of Expansion of the Company

In its first phase of expansion, AES Gener increased its installed capacity by MW 1,700 through a total investment of USD 3B. The second phase of expansion, which is in full development, takes advantage of growth opportunities that will deliver Chile and Colombia, allowing AES Gener to become a key player in the development and construction of new projects for the generation of electricity. This phase includes an investment of USD 4B and consist of an increase of MW 1,235 in terms of installed capacity.

Good Management of Financial Obligations

AES Gener has a stable BBB credit rating according Standard & Poor's and Fitch Ratings, and stable Baa3 according Moody's. This credit rating is due to a good management that AES Gener applies on its financial obligations as a result of the Project Finance structure to fund part of its new projects. This allows the Company to isolate the debt into the respective project, so it will have no effect on the rest of their operations. In addition, the Company has a long-term debt policy (Exhibit 11).

Strategy to Hedge its Account Receivables

The Company hedges its exposure to the exchange rate from futures contracts. Doing this, it manages to cover the volatility of currencies (Chilean peso, Colombian peso and Argentinean peso) against the dollar. AES Gener aims to cover 75% of its accounts receivable using futures contracts.

Low Exposure to the Price of its Main Input - Coal Price

AES Gener has a coal (main input for energy generation) purchasing strategy, through which a portion of the input's purchases is performed at a fixed price while the rest is purchased from a variable price. This allows the Company to align its costs with revenues associated with sales of contracted energy, leaving only marginal sales to variable input cost.

Low Risk of Financial Liabilities to Interest Rate

AES Gener has only 11.4% of its corporate debt at a floating rate. Additionally, the Company has taken interest rate swaps to reduce this risk. This allows AES Gener to face a low exposition to changes in interest rates.

Approved Environmental Permits for Future Projects

There are projects under construction and other projects under development. All of them already have their environmental permits approved.

Revenue Forecast

According to our estimates, revenues for year 2018, when all the new facilities under construction will be operating, will be USD 3.1B. USD 2.4B of sales will came from old projects, USD 357K from Cochrane, USD 244K from Alto Maipo, and USD 105K by Guacolda V facility.

Thermoelectric and Hydroelectric Plants

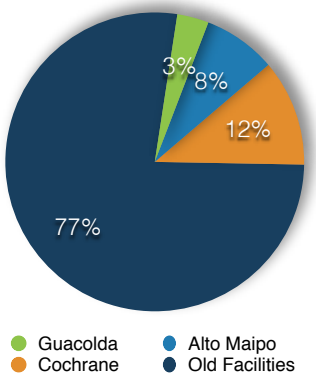
Generation projects are categorized in thermoelectric and hydroelectric. AES Gener has both type of projects under construction. Within thermoelectric projects, coal generation facilities are very important because according to the availability of the plant, are the ones that produce more energy. Moreover, hydroelectric projects are characterized by the lowest marginal cost.

Projects under Construction

- **Cochrane (Chile-SING):** This coal plant is the largest project under construction, adding MW 552 of installed capacity and USD 1.2B of value to the Company, according to our estimates. This plant has contracts for long-term sales by approximately 100% of the energy produced (GW 3,696 estimated). This project will begin operating in 2016 and was financed through project finance structure. The company in charge of this construction and AES Gener have already successfully participated in the construction of the Angamos central.
- **Alto Maipo (Chile-SIC):** This is the largest hydroelectric project under construction in the country. It has two plants (run of the river) and a total installed capacity of MW 531 equivalent to GW 2,293 (team estimates). Funding for this major project was conducted through the project finance structure, equivalent to 60% of the total investment. The rest will be financed by the company Antofagasta Minerals S.A.
- **Guacolda V (Chile-SIC):** It is a thermoelectric project, which is the fifth unit of Guacolda complex. It will have an installed capacity of MW 152 and is going to start operating in the second semester of 2015.
- **Tunjita (Colombia-SIN):** It is a hydroelectric project (run of the river) that will increase the installed capacity by 20 MW. It is going to be operational in the second half of 2014 (Exhibit 1).

These projects will modify the revenues generation by 2018, as we can see in Figure 12.

Figure 12: Projected Sales New Projects, 2018



Source: Team Estimates.

Know - How

One of the advantages of AES Gener with the construction of the new plant Cochrane is that this one is being made by the company EPC (Engineering Procurement Construction). EPC was responsible for building the Angamos plant, which is similar to Cochrane and was finished at time and within budget.

Projects under Development

- **Los Andes:** This solar project includes the construction of a solar farm that will increase the capacity by MW 220 on SING.
- **Los Robles:** A thermoelectric project on SIC system that includes the construction of two coal-fired units that will contribute with a capacity of MW 750.
- **Water Desalination Angamos:** This is a project on SING system that involves the construction of a desalination facility in Angamos plant, allowing it to sell water to the industrial sector in the north. It began operations in late 2014.

In conclusion the Company can be considered as a really safe one to invest in, due its strong investment in countries that have optimist forecasts on their growth rate. Besides, the Company has a good management on its liabilities, and a properly hedge on its risky elements.

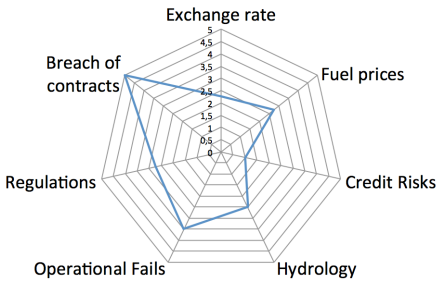
Investment Risks

AES Gener is exposed to risks that may affect the generation of cash flows and therefore the stock's price. These risks can be identified as the operational, financial or market, and regulatory risks.

Operational Risks

- **Failure to comply with the contracts:** 73% of the energy that AES Gener sells is under an agreement. If the energy generated is not enough energy to meet the agreement, the Company will be forced to buy power on the spot market to a higher price which will lead an increase in operating costs.
- **Low hydrology level:** 25% of the installed capacity of AES Gener comes from hydroelectric plants, which are mainly affected by weather conditions. A reduced availability of water will lead to difficult on energy generation.
- **Risk associated to investment projects:** Implementation of projects under development is conditioned by many factors: investment in construction equipment, costs associated to projects financing and any delays or difficulties in the process of licensing and regulatory approvals, including potential lawsuits or litigation.
- **Technological Risk:** The potential existence of new and more efficient technologies that would lead to a less efficiency on existing plants is a potential long-term risk.

Figure 13: Risks Matrix



Source: Team Estimates.

Risk for Operating in Different Markets

As AES Gener is present in three different countries, it is affected by the situation of each of these countries. Of all three countries, Argentina is the one with the worst projections. The inflation rate in 2013 was 28.38%, the second highest in LATAM. In 2012, the Argentinean government expropriated 51% of the shares of its subsidiary YPF to the company Repsol. Argentina's credit rating is Selective Default (SD), because this country did not pay the "holdouts" and the great uncertainty related to the exchange rate. This is reflected in AES Gener's investment plans; the company has no plans to make further investments in Argentina.

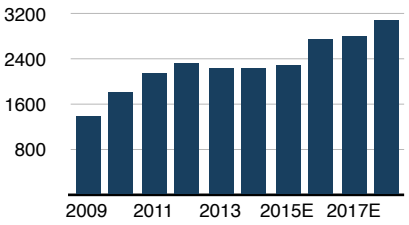
Market and Financial Risks

- **Fuel price risk:** 75% of projects are thermoelectric facilities, so that, the fuel is a significant cost factor. Coal, diesel and LNG have volatile prices. Unlike the case of coal, there is not hedging associated with purchases of diesel and LNG. For that reason, an increase in input prices could adversely affect the Company's margins.
- **Money exchange:** AES Gener is exposed to the exchange rate risk. The Company has businesses in three different markets, and for that reason this risk affects its operational results directly. The 2013 losses related to this concept were USD 38,856K.

Regulatory Risks

- **Regulatory framework:** Being present in three different countries, the regulatory framework plays a key role for AES Gener. Any change in the law may adversely affect the company.
- **Environmental regulation:** In recent years there have been problems in approvals of new energy projects. A particular case was the cancellation of the power plant Barrancones, that would have added MW 540 to the system, representing an investment of USD 1.2B. This plant was canceled by the government, due to the proximity of the plant to an ecological reserve. Another project that has had difficulties in processing is Hidroaysén, a hydroelectric plant with a MW 2,750 of installed capacity and has an estimated investment of USD 3,2B. These are not AES Gener's projects, but it is important to accentuate that these kind of problems are not unusual.

Figure 14: Sales Evolution (MM)



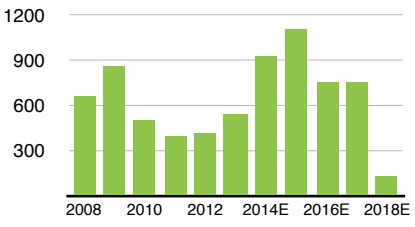
Source: Team Estimates.

Figure 15: Eficiency

Operative	
Coal	
Ventanas 01	0.42
Ventanas 02	0.40
Nueva Ventanas	0.38
Ventanas IV	0.38
Guacolda	0.36
Angamos	0.42
Norgener	0.40
Diesel	
Los Vientos	0.27
Santa Lidia	0.26
Renca	0.37
Laguna Verde	0.41
Laguna Verde TG	0.26
San Francisco TG	0.31
Combine Cycle	
Nueva Renca	0.17
Under Construction	
Cochrane	0.43
Alto Maipo	1.00
Guacolda V	0.40
Tunjitas	1.00

Source: Node Price Report and Team Estimates.

Figure 16: CAPEX Evolution (MM)



Source: Team Estimates.

Several of these problems are associated with negative externalities in the construction of power plants and social pressure, generating a scenario of uncertain to the coming investment projects.
In June 2013, Chile changed its environmental regulations, limiting the emissions of particulates and gases produced by thermic generation. To comply with these regulations, AES Gener created an investment plan of USD 361K between 2012 and 2015. Any change on this topic would adversely affect the company.
Figure 13 shows the relevance of each risk for the Company.

Valuation

We valuated AES Gener applying a discounted cash flow to the firm approach (Exhibit 13). The nominal cash flows were discounted at the weighted average cost of capital. We projected the cash flows till 2018 (Exhibit 12) and then calculated the terminal value at that stage. The reason for utilizing a four-year projection was that AES Gener will be ending its investment cycle in 2018 and we assume no further expansion. AES Gener will be completing its investment cycle with the entry into operation of Alto Maipo, so after that, capex and debt will stabilize on that terminal year. We constructed DCF models for the current operation and the new projects separately in order to better understand the value added by each of those new projects.

Based on that DCF, our 2015 target price is CLP 357, implying an increase of 10.8% from the price of CLP 320 as of October 30th of 2014. The main components of the model were the following:

Projected Revenues

Sales revenues of AES Gener has two components: energy generation and the price that the company realises for the energy sold. In order to satisfy the increase in energy demand, it should be mentions that in the last five years the increase in revenues has been due to the capacity increase rather than price increases.
In terms of generation, we estimate a constant capacity utilization for the existing power plants. For the new plants, we estimated the capacity utilization of the new projects based on the marginal cost of the generation per type plant.

Energy prices shows high volatility. To estimate the realized prices, we analysed the historic prices per system and type of contract (spot, regulated and unregulated). Then, for the projection of the price per system and type of contract we considered the average growth of the past three years, which is 0.7% annually.
More details of projected revenues calculation in Exhibit 15.

Projected Generation Costs

The cost of generation has three key components: the fuel price, operative cost, and maintenance costs. To project the cost of fuel we used the Node Price Report, published by the National Energy Commission (CNE), which provides two important factors for the determination of costs: the efficiency of the plant (measured as how many MW of energy are generated with a unit of fuel) (Figure 15) and fuel costs already dispatched by the plant. Using these two factors of CNE report and generation per plant, we obtain the total cost of fuel.
We based the operation and maintenance (O&M) costs on the Annual Energy Outlook published by the US Energy Information Administration, that shows a cost estimation by type of plant in United States. We modified those cost estimations utilizing conversion factors per type of energy plant that better reflected the actual cost structure per plant in AES Gener.
The cost analysis is vital for projecting the costs of new plants entering in operation because it let us to isolate the real value generated by each project.
More details of projected cost calculation in Exhibit 16.

Investments in Fixed Assets

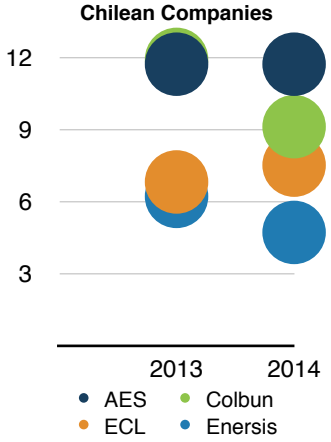
CAPEX has two components; maintenance and growth. We projected maintenance capex equal to depreciation of the current fixed assets plus the depreciation of the new projects once the investment has been incurred. The growth capex was based on the investments in the new projects entitling a total investment of USD 3.9B over the next four years. the disbursement of the investment capex was based on the projected completion of each plant by year reaching its peak in 2015 with an investment of USD 1B. Figure 16 shows the accrued of the CAPEX, where the two expansion phases can be seen.

Figure 17: WACC Estimation

USD	Arg	Chile	Col
Bu	0.38	0.38	0.38
BL	0.63	0.66	0.63
Risk Free Rate	2.36%	2.36%	2.36%
Risk Premiun	5.75%	5.75%	5.75%
Corporate Rate	5.70%	5.70%	5.70%
Sovereing Spread	9.62%	0.77%	1.45%
Cost of Debt	15.32%	6.47%	7.15%
Cost of Equiy	15.81%	7.85%	9.72%
Tax Rate	35.00%	27.00%	33.00%
WACC by Country	13.48%	6.61%	7.76%
WACC AES Gener	7.46%		

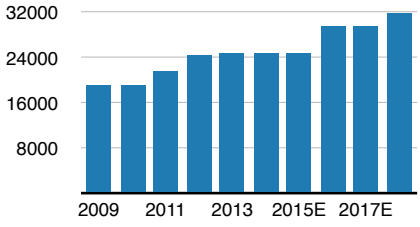
Source: Team Estimates.

Figure 18: EV/EBITDA Chilean Companies



Source: Team Estimates.

Figure 19: Sales GW (MM)



Source: Team Estimates.

Financial Debt

As a portion of the new projects will be financed with debt, the long-term debt of the company will increase. The debt will be disbursed in accordance to the amount of capex incurred leading the total debt of the company to reach its maximum of USD 5B in 2018.

Accrued Capex and Debt, New Projects

	Total	2013	2014	2015	2016	2017	2018
CAPEX	3,923,000	592,291	907,100	1,080,042	676,500	667,067	-
%		15.1%	23.1%	27.5%	17.2%	17.0%	0.0%
Maintenance Capex		18,371	18,371	20,638	80,804	80,804	139,376
Debt	2,518,500	358,878	545,300	827,341	365,100	421,881	-
%		14.2%	21.7%	32.9%	14.5%	16.8%	0.0%

Working Capital

In order to calculate the change in WK we've used current assets minus current liabilities, projecting this accounts as a percentage of revenues and costs. Due the cost is directly related with the revenues level, they move similarly.

Weighted Average Cost of Capital - WACC

We estimated the weighted average cost of capital per country where it operates. The CAPM for each country was adjusted by the tax rate and risk of each country. Then the WACC was a weighted average of the countries WACC based on the long term contribution to the consolidated NOPAT leading to a cost of capital of 7.46% in dollars. (Figure 17)
More details of projected revenues calculation in Exhibit 14.

New Projects and Minority Interests

We estimate an aggregate value for each project under construction. The one that aggregates the most value is Cochrane, with a total of USD 1.2B, because of the greater generation, the efficiency of the plant and installed capacity. Even though AES Gener consolidates all the new projects, it does not have 100% of each project leading to the increase of the "minority interests" by the portion not owed by the company.

Terminal Value

We based the terminal value of the free cash flows of 2018 as it fully incorporates the operations of all the new projects. The perpetuity growth rate utilized was 3% which equals the inflation target both for Chile and Colombia.

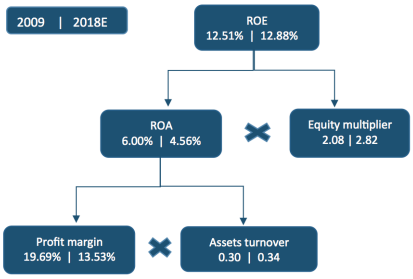
Growth/WACC	6.5%	7.0%	7.5%	8.0%	8.5%
2.4%	430	346	279	223	177
2.6%	465	373	300	241	192
2.8%	504	403	324	260	207
3.0%	548	436	357	280	224
3.2%	597	473	378	302	241
3.4%	653	514	408	326	260
3.6%	716	559	442	352	281

Relative Valuation

With the objective of made a comparison between the Company and its competitors, we realized a relative valuation with multiplies (Figure 9). We do not consider this valuation relevant to determinate a target price since we strong believe that optimal is a fundamental valuation with DCF and the ratios doesn't show the second expansion phase. More details about the relative valuation in Exhibit 20.

Sensitivity Analysis

Figure 20: DuPont



Source: Team Elaboration

We performed a sensitivity analysis on the four variables that we believe most significant to the valuation. The sensitivity analysis was carried by either discreet scenario analysis and by Monte Carlo simulations using Crystal Ball tool:

- **WACC:** We used a normal distribution using an average of the estimates made by our analysis, with a standard deviation of 10%.
- **Growth rate:** We use a uniform distribution of 2% - 3% by estimating that the rate should not leave such limits.
- **Coal cost:** As they are prices, we implemented a lognormal distribution, using the estimates made by our analysis as a mean, and a standard deviation calculated based on historical prices and equal to 18%.
- **Growth rate of prices:** We used a normal distribution using the resulting estimation of our analysis as the mean, and a standard deviation calculated with the historic data of the last 5 years.

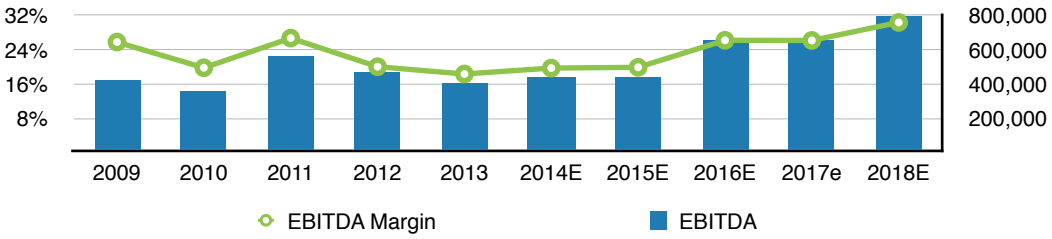
More details of Sensitivity Analysis and Bull & Bear scenarios in Exhibit 19 and 17.

Financial Analysis

AES Gener presents stability in its EBITDA, for being a company in the utilities sector and by operating under strict regulatory framework.

Analyzing its sales, we can notice an interesting growth as a result of its operation in emerging countries . There is an increase in the required energy resources to meet the various needs due to the growth of each country. The Company has taken advantage of this steady growth in the industry through investments on new projects, which, due their capacity, will bring a notorious benefit for the country and the operation of the Company.

In terms of sales margin, it reached 23% in December of 2013, although it presents certain oscillation due fluctuations in hydrological factors which have a direct effect on the generation. It is stable because much of the generation comes from thermic sources. According to our projections, we expect an increase in sales margin, due to the efficiency of the new projects that are under construction.



DuPont Analysis

The ROE has shown a sharp decline from 12.51% in 2009 to 7.53% in 2013 mainly due to the drop in ROA from 6% to 3%. The decline in ROA was caused by a decline in profit margin due to a decrease in net income. The lower net profit was due to an increase in foreign-exchange losses. We can see an important increase in operating costs from 70.49% to 77.28% of the total revenue from 2009 to 2013. The differences in the exchange rate are caused by the increase on operations of AES Gener both in the Colombian and Argentinian market. Another important factor in explaining the decline of the net income is the higher tax rate paid in 2013 compared to 2009. This was only 22.1% in 2009, whereas it was 29.9% in 2013.

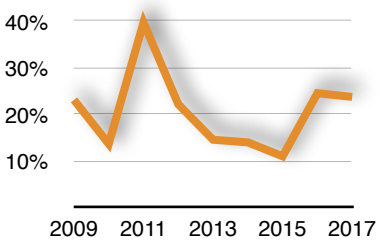
Regarding the Equity Multiplier, it increased in this period from 2.08 to 2.50, because the company has been increasing its leverage in recent years to develop new projects. It compensates the effects of the fall of ROA in the value of ROE.

In our projections, we expect an increase in ROE from 7.5% to 12.8% due to higher profit margin and equity multiplier. Moreover, the projected increase in the profit margin from 8.91% to 13.53% is explained by an improvement in the net income due to a decrease in the operating costs because the projects under construction are more efficient in terms of energy generation (Figure 20).

Liquidity Ratios

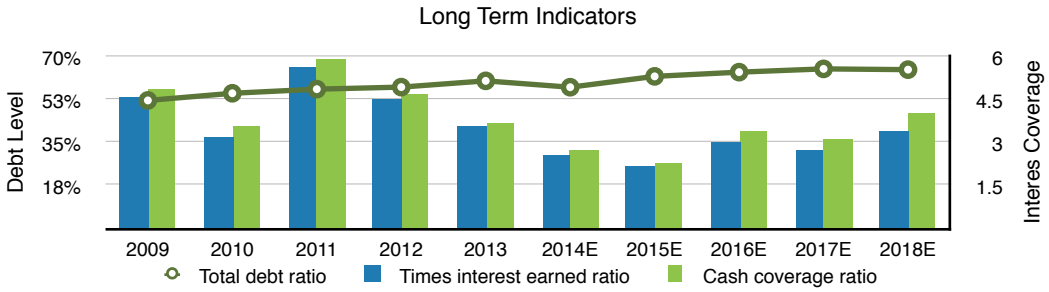
The historic current and quick ratio show a drop compared to the ratios of 2009, representing a lower coverage of current liabilities in respect of current assets. This happens because the Company greatly increased its current liabilities in 2013 primarily through its current obligations with the public. It is not very important to distinguish these 2 ratios in the case of AES Gener, since inventories are mainly purchases of coal, oil and gas to turn on the turbines.

Figure 21: ROIC Evolution



Source: Team Estimates.

The total debt ratio of the Company has grown steadily, moving from a financing structure of 52% debt to total assets in 2009 to 60% debt to assets in 2013. The rise in borrowing is explained by the choice of the Company to fund some of their projects by issuing new debt. In December 2013, AES Gener issued a subordinated bond in the international market to 60 year period in the amount of USD 450 million. The purpose of this issue was the payment of international short-term debt maturing in March 2014, and funding Alto Maipo and Cochrane projects.
Regarding to compliance with the interest generated by their obligations, the TIE ratio and cash coverage ratio indicates that the company maintains a good level of coverage.



Regarding the long-term solvency, the company is expected to increase its leverage from 57% to 65% between 2014 and 2018 due to the construction of new projects. Even though the increase of the debt, the efficiency of these projects will increase the Company's ability to pay interest. This is reflected in the TIE and cash coverage ratio, which is projected to increase from levels of 2.56 and 2.67 to 3.38 and 3.97 respectively between the years 2014 and 2018.

Asset Management

Historical ratios show a lower intensity in the use of inventory to generate revenues through a decrease in the inventory turnover ratio. AES Gener's inventory consists primarily of coal, gas and oil to turn on its turbines. Since the fluctuation presented by this ratio, it is not possible to extract any conclusion.
The receivables turnover ratio increased from 3.75 to 6.70 since 2009 to 2013, as the Company now collects its credit sales in less time. This is reflected by an increase on the weight of the cash in the balance sheet.
On the other hand, it can be seen that the total asset turnover increased compared to 2009, indicating that each dollar in the assets of the company is generating more revenues. The variation is explained by technological change that brings greater efficiency on electricity generation.
Due the investment cycle of AES Gener, we expect a drop on Capital Intensity, which is also related to more efficient use of assets that are at the same time located in markets that project major increases in energy demand.

Profitability Measures

The historical ROIC shows a drop from 23.09% in 2009 to 14.50% in 2013 due to the above-explained falling net income for the years 2009 to 2013. We estimate that this indicator will increase from 13.93% to 23.73% from 2014 to 2017, given the increase in sales and a reduction in the costs due the efficiency gains that the company will acquire. The variation in CAPEX, due to the strong investment strategy, has a direct effect on the variation on ROIC (Figure 21).
These ROIC levels can be explained by the existence of competitive advantages of the Company, such as long term agreements and approved environmental permits for new plants.the increase in sales and a reduction in the costs due the efficiency gains that will acquire the company.

Market Value Measures

The EPS has fallen as a result of a drop in net income. The Price-Earnings ratio has shown an upturn, reaching 29.47 times in 2013 given the expected growth in the Company.
The market to book ratio is above 1, indicating that the company has been effective on creating value for its investors.
Our projections don't anticipate a share issue after the last one during 2014 because AES Gener has presented a good credit rating, which is projected to remain the same because of an increase on its capability to pay interest. This allows the company to use cheaper forms of debt issuance, which according to the pecking order theory, would have priority against financing through equity issue.

Exhibits

Exhibit 1: AES Gener's Plants

Existing Power Generating Plants

Name	Type	Installed Capacity (MW)	Interconnected System
ANGAMOS	Thermoelectric	5440.8	SING
NORGENER	Thermoelectric	277.3	SING
VENTANAS 1	Thermoelectric	120	SIC
VENTANAS 2	Thermoelectric	220	SIC
LAGUNA VERDE	Thermoelectric	47	SIC
LAGUNA VERDE TG	Thermoelectric	18.8	SIC
LOS VIENTOS	Thermoelectric	132	SIC
SANTA LIDIA	Thermoelectric	139	SIC
SAN FRANCISCO DE MOSTAZAL	Thermoelectric	25	SIC
LAJA	Thermoelectric	12.7	SIC
MAITENES	Hydroelectric	30.8	SIC
QUELTEHUES	Hydroelectric	48.9	SIC
VOLCÁN	Hydroelectric	13	SIC
ALFALFAL	Hydroelectric	178	SIC
RENCA	Thermoelectric	100	SIC
NUEVA RENCA	Thermoelectric	379	SIC
NUEVA VENTANAS	Thermoelectric	272	SIC
VENTANAS IV	Thermoelectric	272	SIC
GUACOLDA	Thermoelectric	608	SIC
AES CHIVOR	Hydroelectric	1,000	SIN
SALTA	Thermoelectric	642.8	SADI

Power Generating Plants under Construction

Name	Type	Installed Capacity (MW)	Interconnected System	Operations Start
GUACOLDA V	Thermoelectric	152	SIC	2015
TUNJITA	Hydroelectric	20	SIN	2015
COCHRANE	Thermoelectric	532	SING	2016
ALTO MAIPO	Hydroelectric	531	SIC	2018

Source: AES Gener's 2013 Annual Report

Exhibit 2: Regulators in Chile, Argentina & Colombia

Chile

Energy Ministry: It is the part of the state, that is responsible for developing and coordinating plans, policies and standards for the proper functioning and development of the energy sector. It also ensures compliance, and advise the Government on all matters related to energy . It is also responsible for granting concessions for the provision of public services for the generation, transmission and distribution of electricity.

Environment Ministry: It is the part of the state, that is responsible for collaborating with the President in the design and implementation of policies, plans and programs related to the environment. It also cares about the protection and conservation of biodiversity and natural resources, promoting sustainable development, environmental integrity policy and legal regulation.

National Energy Commission (CNE): It is a public organization, and it is responsible for analyzing prices, rates and technical standards, that have to be accomplished by electricity generation firms, transmission firms and energy distribution firms. The agency is also responsible for planning the energy future, and makes one indicative work plan for investment in generation and transmission activities per semester.

Electricity and Fuel Superintendency (SEC): It is the most important public agency that is responsible for the supervision of the energy market.

Service Environmental Assessment: A government agency responsible for preventing environmental degradation. This is done through the environmental assessment of projects (prior to execution) to ensure they comply with applicable environmental regulations and that they consider the environmental impacts generated from investment.

Environmental Court: A court with jurisdiction to resolve environmental conflicts.

General Water Directorate (DGA): It is the state agency responsible for regulating and granting use rights to use water for hydroelectric generation activities.

Center for Economic Load Dispatch (CDEC): Although it is not a regulator, it is the agency responsible for identifying and coordinating the operation of all the agents of the electric system, to achieve greater economic efficiency of the system.

Colombia

Ministry of Mines and Energy: It is a public entity whose responsibility is the management of non-renewable resources of the country in order to insure its best use, guidance on the use and regulation thereof.

Mining Energy Planning Unit (UPME): An entity that is part of the Ministry of Mines and Energy, which aims to plan the mining and energy development, support the formulation of public policy, and coordinate the sector information.

Energy and Gas Regulatory Commission (CREG): It is a technical organization that aims to make services of electricity, natural gas, liquefied petroleum gas (LPG) and liquid fuels more accessible for the people, at the lowest possible cost to users and with an adequate compensation for companies.

Economic dispatch of power generation: Its purpose is to schedule daily utilization of generation resources of the National Interconnected System (SIN) to meet the demand for economy, quality, safety and reliability.

Public Utilities Superintendency: A technical body that inspects, monitors, and controls the entities providing public utilities.

Argentina

Energy Department: A state agency that is focused on studying and analyzing the behaviour of energy markets, developing strategic planning in the field of electricity.

National Electricity Regulator Entity (ENRE): It is the agency responsible for the regulation of the electrical activity.

Administrator of the Wholesale Electricity Market (Cammesa): It is the company responsible for the coordination of the study, the administration of the transactions in the wholesale electricity market and the calculation of spot prices. Its main objective is to ensure that the demand for electric power is supplied at minimum cost.

Federal Electricity Council: It is a council dedicated to the management of the electric sector funds. It also advises the national and provincial governments.

Source**:** AES Gener's 2013 Annual Report and Team Estimates

Exhibit 3: Major Shareholders

Name	Participation	Accumulated
Inversiones Cachagua SPA	70.71%	70.71%
Bank of Chile (third party capital)	2.30%	73.01%
Provida, pension fund C	2.12%	75.13%
Itaú Bank (investors)	2.00%	77.13%
Habitat, pension fund C	1.59%	78.72%
BTG Pactual Chile SA, Stockbroker	1.55%	80.27%
Santander Bank - JP Morgan	1.36%	81.63%
Cuprum, pension fund A	1.27%	82.90%
Capital, pension fund C	1.25%	84.15%
Provida, pension fund A	1.24%	85.39%
Cuprum, pension fund C	1.17%	86.56%
Habitat, pension fund A	1.14%	87.70%

Source: Santiago's Stock Exchange Website (www.bolsadesantiago.cl)

Exhibit 4: AES Gener's Timeline and Current Directory

- 1889: The “Chilean Electric Tramway and Light Company” was created.
- 1921: The “Chilean Electric Tramway and Light Company” was fused to the “National Electric Power Company” (“Compañía Nacional de Fuerza Eléctrica”) and the new company was called “Chilectra”.
- 1981: “Chilectra” was divided into a parent company and three subsidiaries, one of which was "Generation Chilectra SA", which was dedicated to power generation.
- 1988: The company had a 100% private capital
- 1989: The company's name was changed to "Chilgener SA" and in 1998 to "Gener" in order to separate the name from Chile, because the firm began doing businesses in other countries.
- 2000: A searching of a strategic partner was started. The owners wanted the company to grow in size and relevancy in the industry.
- 2000: “Inversiones Cachagua”, subsidiary of “AES Corporation”, launched an OPA and it was agreed with the French company "Total Fina Elf", the latter would purchase the electricity assets in Argentina Gener if the bid was successful. The auction of shares held in the Stock Market of Santiago. “Inversiones Cachagua” acquired 61,11% of the firm's equity. The next day, in the United States, the exchange of shares of AES Corporation was held by Gener ADRs, corresponding to 34.56% of the shareholding.
- 2001: “Inversiones Cachagua” launched a second OPA in Chile, acquiring an additional 2,87% of the property.
- 2001: The company's name was changed to “AES Gener S.A.”.
- 2004: After a capital increase, “Inversiones Cachagua Ltda” was the owner of 98,79% of the company.
- 2006 - 2007: “Inversiones Cachagua Ltda” sold 18,68% of their shares, so, that subsidiary owned 80,11% of the company.
- 2007: AES Gener began its first phase of expansion, which included an investment of US$ 3.000 million.
- 2008: The firm made a capital increase of US$272 millions.
- 2009: The firm made a capital increase of US$245,6 millions.
- 2012: AES Gener began its second phase of expansion, which involves an investment of US$ 4.000 million. This phase is currently (2014) being developed.
- 2013: The first phase of expansion was completed.

The company´s directory is composed of:
- Andrés Gluski (President)
- Andrew Vesey
- Arminio Borjas
- Iván Díaz-Molina
- Juan Andrés Camus
- Radovan Razmilic
- Tom O'Flynn

Key Executives are:
- Luis Felipe Cerón (CEO)
- Daniel Stadelmann (CFO)

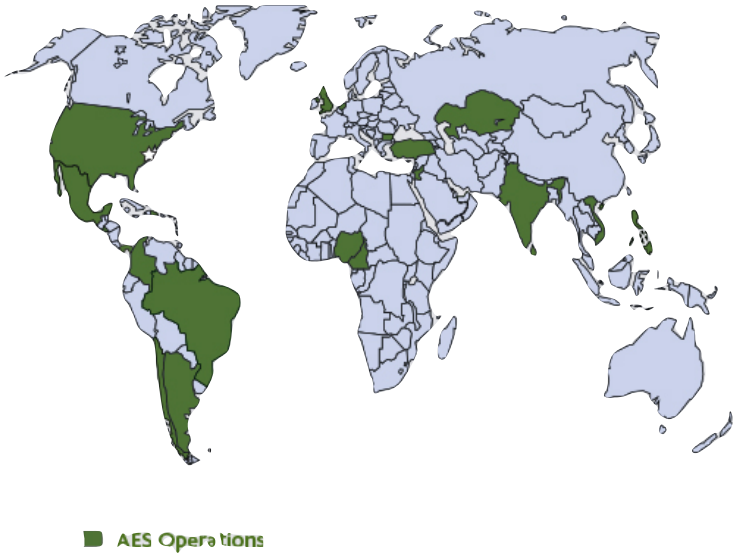
Source: AES Gener's 2013 Annual Report

Exhibit 5: About AES Corporation

AES Corporation in one of the biggest energy companies in the world. Nowadays, the company does businesses in 21 countries of the 5 continents. Those businesses are based on the generation and distribution of energy. The company's installed capacity is 37.761 MW.
AES operates in Latin America since 1993 and now the company is present in 8 countries: Colombia, Argentina, Chile, Brasil, El Salvador, México, Dominican Republic and Panamá. With an installed capacity of 13.989 MW in those countries, the company benefits 9 million clients.
The global operating area has 6 different business units focused on varied markets:

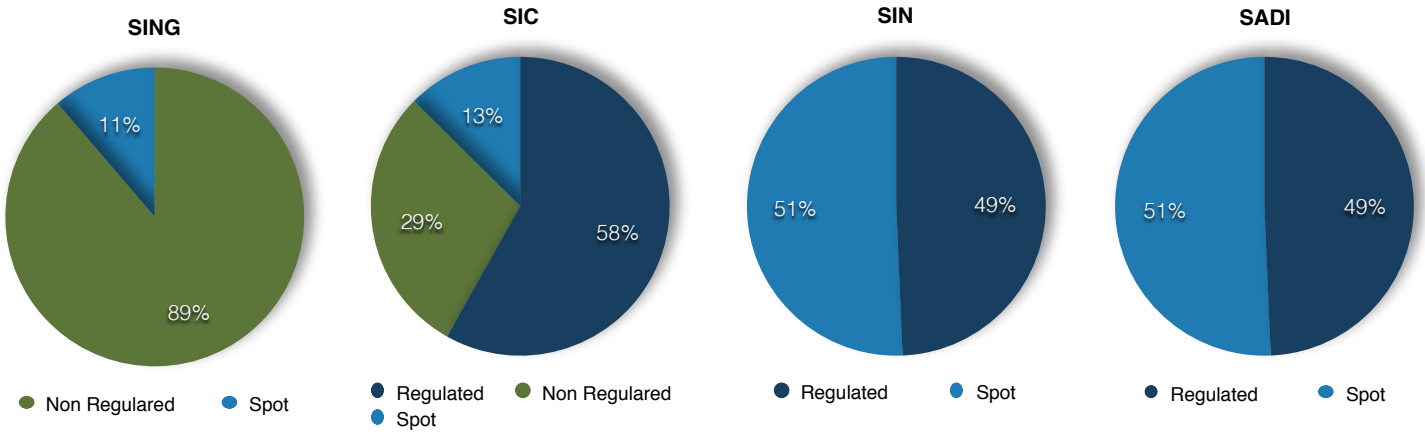
- South America: AES Corporation's businesses include Chile, Colombia and Argentina.
- Asia: The markets are China, India, Philippines, Sri Lanka and Vietnam.
- Brasil: The company participates in "AES Eletropaulo", "AES Sul", "Tiete" and "Uruguaiana".
- Central America and the Caribbean: AES Corporation's businesses include Dominican Republic, El Salvador, México, Panamá and Puerto Rico.
- Europe, Middle East and Africa: The company is present in Bulgaria, Cameroon, Hungary, Jordan, Kazakhstan, Netherlands, Nigeria, Turkey, Ukraine and United Kingdom.
- United States: The company participates in "DPL", "IPL" y "US".

Here we can see the presence of AES Group in the Globe:



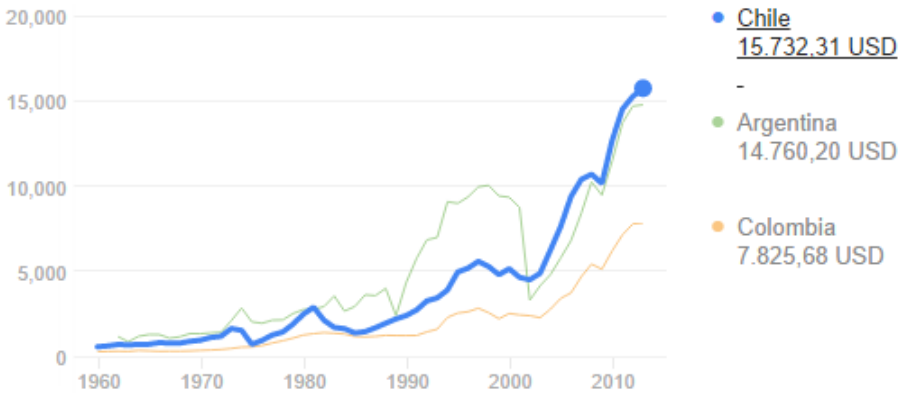
Source: AES Gener's website (www.aesgener.cl) and AES Corporation's website (www.aes.com)

Exhibit 6: Sales per Type of Contract



Source: Team Estimation.

Exhibit 7: Evolution of GDP



Source: World Bank

Exhibit 8: AES Gener's SWOT Analysis

Strengths

Strong position in the markets

In Chile and Colombia, AES Gener has a strong position, with a well diversified customer base and long term clients. That reduces the volatility of the operational cash flows.

Many projects under construction

The company has 4 projects under construction and other projects under development.

Diversification

Diversified energy matrix in markets, technology and energy sources.

Good command of their obligations

We can observe an appropriate command of the obligations, holding a long-term debt level.

Weaknesses

High exposure to fuel prices

The costs of the generation in thermoelectric plants depends on the cost of fuels like diesel and coal, and the company has a high percentage of thermoelectric projects in its plan. That implies higher risks.

Dependence on the hydrology

Little water in hydroelectric plants because of drought conditions could reduce the capacity to produce energy

Problems meeting the proposed power generation

The company depends on its capacity to produce energy. Operational fails could reduce the capacity to produce energy and AES Gener could have problems to enforce its contracts.

Threats

Changes in the regulatory and environmental framework

These changes produce uncertainty and could affect the operations of some plants of the company.

New energy projects threaten market share

The construction of plants owned by other companies could reduce AES Gener's market share once these plants are ready to operate.

Slow process to obtain environmental licenses for new projects

That is the reason why projects can not be created quickly. If the company needs to create a new generating plant quickly, the obtaining of the environmental licenses could take long time.

Opportunities

Presence in markets with growth potential

Take advantage of the opportunity to grow in emerging markets, especially Chile, that urgently needs to increase its energy matrix.

High importance of the renewable energy

Consumers and governments are increasingly interested in renewable energy. The company has the opportunity to browse cleaner energies produced by solar and wind sources, but these type of projects are not ambitious yet.

Take advantage of the know-how

The company has the ability to expand into new territories, using the knowledge and experience, and taking advantage of the economies of scale.

Source: Team Elaboration.

Exhibit 9: Porter's Analysis

Threat of New Entrants

- It is an atractive industry, because the activity of energy companies in Chile has grown rapidly in recent years, as there is a relationship between economic growth and the increase of energy consumption.
- The situation for the new companies is difficult, because the market is limited.
- There already exist 4 big companies that operate in the most relevant systems and have much of the market share.
- The companies need a big initial investment.
- There are also high fix costs.
- There is a barrier of entry, because of the difficulty in obtaining permission to create plants.

Rivalry with Existing Competitors

- There are 4 large companies that dominate the electricity generation market in Chile (SING-SIC). These companies are E-CL, Endesa, AES Gener and Colbún, and have 95% of the SING market share and 79% of the SIC market share.
- There is not a huge competition, because most of the generating companies have long-term contracts with its customers.
- According to the installed capacity.

Possible Substitutes and its Threats

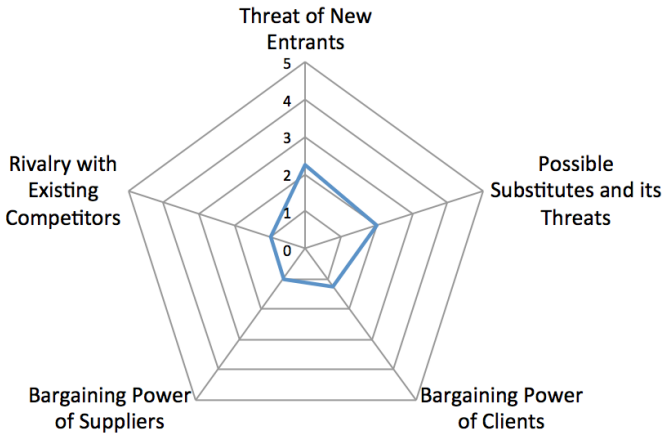
- There is a potential technological risk, associated to the existence of new technologies that could improve the efficiency. That is a threat for the existent plants.
- The renewable energy can also give a twist to the power generation industry, but this source of generation is very unstable, so the support of conventional generation sources is still needed.

Bargaining Power of Suppliers

- The companies that generate energy have vendors who supply the inputs that are neccesary for the operation, mainly fuel such as coal, diesel and LNG. These inputs are commodities, so their prices are international fixed prices.

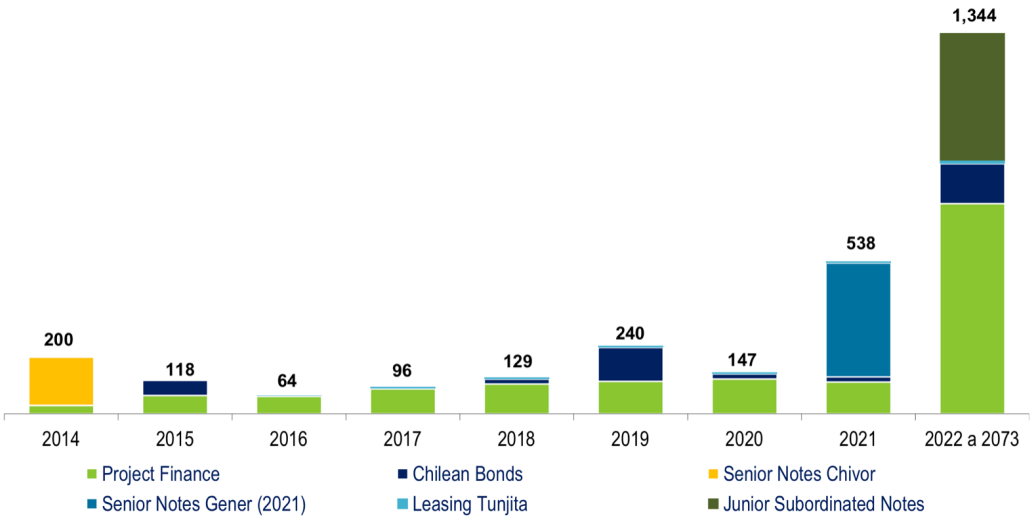
Bargaining Power of Clients

- The matrix of clients is diversified, because of the existence of regulated contracts, unregulated contracts, and spot sales.
- As the energy is a basic need, most contracts are long-term contracts to ensure the energetic needs of the users.



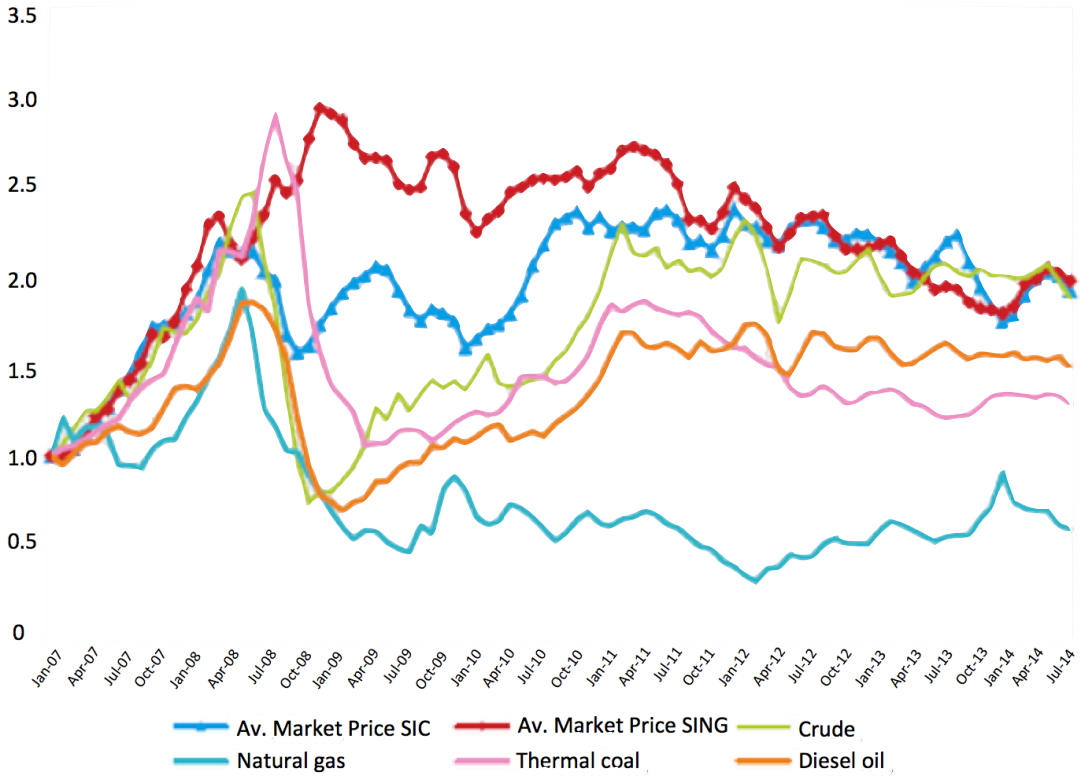
Source: Team Elaboration

Exhibit 10: Debt Maturity



Source: AES Gener's CFA Presentation

Exhibit 11: Fuel Price



Source: www.generadoras.cl

Exhibit 12 : Projected Financial Statements

Income Statement

	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
Revenues	1,653,420	1,802,049	2,130,286	2,327,721	2,244,790	2,271,452	2,294,697	2,782,524	2,802,002	3,102,197
Cost of Revenues	(1,165,487)	(1,368,878)	(1,443,214)	(1,737,828)	(1,734,711)	(1,718,301)	(1,731,603)	(1,924,357)	(1,938,482)	(2,015,676)
Gross Profit	**487,933**	**433,171**	**687,072**	**589,893**	**510,079**	**553,151**	**563,093**	**858,167**	**863,520**	**1,086,521**
Depreciation And Amortization	(24,671)	(36,979)	(27,420)	(18,371)	(11,781)	**(18,371)**	**(20,638)**	**(80,804)**	**(80,804)**	**(139,376)**
General & Admin Expenses	(63,617)	(79,088)	(120,800)	(126,749)	(101,585)	(108,473)	(109,583)	(132,880)	(133,810)	(148,146)
Operating Income	**399,645**	**317,104**	**538,852**	**444,773**	**396,713**	**426,307**	**432,872**	**644,483**	**648,906**	**799,000**
Other Non-Operating Gain/Loss	(1,597)	(102,031)	(22,850)	6,424	1,603	1,603	1,603	1,603	1,603	1,603
Interest Income	21,866	22,452	9,303	8,407	8,962	16,100	12,331	9,480	7,442	10,812
Interest Expenses	(90,222)	(99,313)	(107,148)	(115,452)	(123,906)	(166,621)	(202,338)	(218,100)	(236,313)	(236,313)
Currency Exchange Gains/Loss	60,115	16,451	(13,348)	(3,633)	(38,856)	-	-	-	-	-
Gain/Loss Before Tax	**389,807**	**154,663**	**404,809**	**340,519**	**244,516**	**277,389**	**244,468**	**437,466**	**421,638**	**575,102**
Tax	(92,262)	(31,169)	(109,810)	(146,778)	(84,525)	(74,895)	(66,006)	(118,116)	(113,842)	(155,277)
Net Income	**297,545**	**123,494**	**294,999**	**193,741**	**159,991**	**202,494**	**178,462**	**319,351**	**307,796**	**419,824**

Balance Sheet

	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
ASSETS										
Cash and Other Current Assets	491,857	594,761	549,553	407,312	732,978	609,853	467,091	359,087	281,876	409,533
Accounts Receivable	440,604	434,977	405,003	321,381	335,101	447,623	452,203	548,337	552,175	611,333
Inventory	52,100	42,078	105,946	90,703	109,760	90,835	91,539	101,728	102,475	106,556
Fixed Assets	3,962,339	4,179,193	4,375,469	4,599,363	4,871,754	5,760,483	6,819,887	7,415,583	8,001,846	7,862,470
Associated Investments	224,978	252,051	273,375	276,153	321,769	321,769	321,769	321,769	321,769	321,769
Goodwill and Intangible	17,448	19,991	41,125	47,127	56,074	56,074	56,074	56,074	56,074	56,074
Other Non-Current Assets	205,408	92,815	33,658	38,211	125,393	148,268	175,536	190,868	205,958	202,370
Other Non Operational Assets	29,339	41,287	45,144	51,156	39,083	39,083	39,083	39,083	39,083	39,083
Total Assets	**5,424,073**	**5,657,153**	**5,829,273**	**5,831,406**	**6,591,912**	**6,864,135**	**7,956,091**	**8,673,442**	**9,279,379**	**9,199,655**
LIABILITIES										
Short Term Debt	84,565	97,946	94,654	124,281	444,135	-	-	-	-	-
Long Term Debt	1,770,600	2,100,472	2,298,096	2,272,486	2,425,982	3,415,417	4,242,758	4,607,858	5,029,739	5,029,739
Accounts Payable	428,741	393,761	388,983	307,208	494,736	476,663	480,353	533,823	537,741	559,155
Other Operational Liabilities	487,768	480,745	468,521	560,697	521,567	590,288	594,858	661,075	665,927	692,445
Other Non Operational Liabilities	49,901	35,279	50,240	85,713	68,516	68,516	68,516	68,516	68,516	68,516
Total Liabilities	**2,821,575**	**3,108,203**	**3,300,494**	**3,350,385**	**3,954,936**	**4,550,884**	**5,386,485**	**5,871,272**	**6,301,923**	**6,349,856**
Equity	1,946,995	2,037,625	1,886,004	1,931,237	2,005,538	2,099,148	2,099,148	2,099,148	2,099,148	2,099,148
Minority	8,732	87	109	3,354	93,610	247,170	360,763	485,323	583,397	583,397
Accumulated Gain/Loss	645,781	511,238	642,666	546,430	537,818	576,787	576,787	576,787	576,787	576,787
Total Equity & Liabilities	**5,423,083**	**5,657,153**	**5,829,273**	**5,831,406**	**6,591,902**	**7,473,988**	**8,423,182**	**9,032,529**	**9,561,255**	**9,609,187**

Source: Team Estimation.

Exhibit 13 : Discounted Cash Flows

Aggregate discounted cash flow

Valuation	2014E	2015E	2016E	2017E	2018E
EBIT	426,307	432,872	644,483	648,906	799,000
NOPAT	311,204	315,997	470,473	473,701	583,270
Depreciation & Amort.	18,371	20,638	80,804	80,804	139,376
Gross Cash Flow	329,575	336,634	551,277	554,506	722,646
Changes in Working Capital	-42,949	2,976	13,364	4,186	-15,306
Capex	-925,471	-1,100,680	-757,304	-747,871	-139,376
FCCF	-552,947	-767,021	-219,391	-197,551	598,576

Long Term Growth	3%		**Perpetuity**	**PV Perpetuity**	
wacc	7.46%		13,836,412	10,377,741	
Discounted Cash Flow	11,580,428		13,836,412	11,151,492	
Net Debt	-3,775,667				
Debt New Projects	-786,981				
Equity	6,924,171				
Minority	1827679				
To the controling	5,190,102				
Outstanding	8,400,000				
Price USD	0.62				
USD/CLP	577				
Value per Share	357				

Cochrane Discounted Cash Flow

	2016	2017	2018
Revenue	352,137	354,602	357,084
Cost	124,289	125,618	125,937
Gross Margin	**227,848**	**228,984**	**231,148**
GAV	-26,777	-26,894	-33,431
EBIT	201,071	202,090	197,716
NOPAT	**146,782**	**147,526**	**144,333**
Dep & Amort	45,000	45,000	45,000
Changes in WK			
Capex	-45,000	-45,000	-45,000
FCCF	**146,782**	**147,526**	**144,333**

Discounted Cash Flow	**3,069,614**	**PV Perpetuity**	
Debt	**1000000**	**2,688,927**	
Equity	**2,069,614**		
To te Controling	**1,241,768**		

Alto Maipo Discounted Cash Flow

		2018
Revenue		244,750
Cost		37,251
Gross Margin		207,500
GAV		-20,737
EBIT		186,762
NOPAT		136,337
Dep & Amort		58,571
Changes in WK		
Capex		-58,571
FCCF	-	136,337
Discounted Cash Flow	2,649,835	**PV Perpetuity**
Debt	1217000	**2,539,955**
Equity	1,432,835	
To te Controling	859,701	

Guacolda V Discounted Cash Flow

	2016	2017	2018
Revenue	104,351	105,081	105,817
Cost	44,758	45,236	45,351
Gross Margin	59,593	59,845	60,466
GAV	-7,181	-7,212	-8,966
EBIT	52,412	52,633	51,500
NOPAT	38,261	38,422	37,595
Dep & Amort	15,167	15,167	15,167
Changes in WK			
Capex	-15,167	-15,167	-15,167
FCCF	38,261	38,422	37,595
Discounted Cash Flow	924,721	984,311	**Perpetuity**
Debt	318000		**885,130**
Equity	606,721	666,311	
To te Controling	303,421	333,222	

Tunjita Discounted Cash Flow

	2015	2016	2017	2018
Revenue	7,344	7,396	7,448	7,500
Cost	1,274	1,313	1,352	1,392
Gross Margin	6,070	6,083	6,096	6,107
GAV	-450	-621	-624	-775
EBIT	5,620	5,462	5,472	5,332
NOPAT	4,103	3,988	3,995	3,892
Dep & Amort	2,267	2,267	2,267	2,267
Changes in WK				
Capex	-2,267	-2,267	-2,267	-2,267
FCCF	4,103	3,988	3,995	3,892
Discounted Cash Flow	75,750	77,584	**Perpetuity**	
Debt	63000		**67,276**	
Equity	12,750	14,584		
To te Controling	12,750	14,584		

Source: Team Estimation.

Exhibit 14 : WACC Estimation

WACC Estimation

To estimate the WACC rate, we've used USD rates, and we added risk premiums by country and by size.

Ke

To calculate Ke, we used an unleverage beta, calculated with comparable US companies, and leveraged it with the tax rate of each country. The Rf used is the 10 year rate, the PR is 5.75% and the premium for size is 1.2%. The country risk is 2.59, 1.15 and 1.51 for Argentina, Chile and Colombia respectively.

$$Ke = \left(Rf + Bl * (\mathrm{RP})\right) * Country\ Risk + Size\ Premium$$

	Argentina	Chile	Colombia
Bu	0.38	0.38	0.38
Tax Rate	35%	27%	33%
BL	0.63	0.66	0.63
Rf	2.36%	2.36%	2.36%
Risk Premium	5.75%	5.75%	5.75%
Country Risk	2.59	1.15	1.51
Size Premium	1.12%	1.12%	1.12%
Ke	15.81%	7.85%	9.72%

Kd

For the calculation of Kd, we used the corporate rate of comparable US companies and we added a sovereign spread.

$$Kd = USA\ Corporative\ Rate + Sovereign\ Spread$$

	Argentina	Chile	Colombia
USA Corporative Rate	5.7%	5.7%	5.7%
10 Years USD Rate	11.68%	2.83%	3.51%
10 Years USA Rate	2.06%	2.06%	2.06%
Spread	9.62%	0.77%	1.45%
Kd	15.32%	6.47%	7.15%

WACC

We weighted the WACC considering the NOPAT per country.

	Argentina	Chile	Colombia
Ke	15.81%	7.85%	9.72%
E/A	60.3%	60.3%	60.3%
Kd	15.32%	6.47%	7.15%
Tax Rate	35%	27%	33%
D/A	39.7%	39.7%	39.7%
WACC	13.48%	6.61%	7.76%
NOPAT	8.18%	67.21%	24.61%
WACC Enterprise	7.46%		

Source: Team Estimation.

Exhibit 15 : Revenues Forecast

Production Estimation
To estimate the production, we kept current GW sales constant, and added new plant's sales, as they come into operation.

Projected Production Aggregate (GW)

	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
SIC	7,465	8,491	7,756	8,496	8,859	8,859	8,859	9,850	9,850	12,143
SING	3,135	3,003	4,064	5,150	5,497	5,497	5,497	9,193	9,193	9,193
SIN	6,167	5,542	7,130	6,811	6,179	6,179	6,265	6,265	6,265	6,265
SADI	2,267	2,396	2,543	4,138	4,186	4,186	4,186	4,186	4,186	4,186
Total	19,034	19,432	21,493	24,595	24,721	24,721	24,807	29,494	29,494	31,786

The new plant's production were calculated with the production average per type of plant, taking into account the plant's availability. Thus we have divided what actually occurred by the production that could be reached during this year. This was calculated for each plant owned by AES Gener from 2009 to 2013, and then calculated an average per type of plant.

$$Production = \frac{Real\ Production\ Year_t}{(Power\ Capacity * \%\ Availability_t) * 24 * 365}$$

Production by facility type

	2009	2010	2011	2012	2013	Average
Hidro	45%	45%	63%	59%	46%	51.9%
Carbón	83%	85%	75%	86%	88%	83.5%
Gas Natural/Diesel	70%	65%	69%	71%	68%	68.4%
Diesel	8%	76%	6%	3%	4%	19.5%
Biomasa	22%	19%	41%	35%	38%	31.0%

Availability by facility type

	2009	2010	2011	2012	2013	Average
Hydro	95.4%	95.3%	95.3%	91.2%	94.3%	94.3%
Coal	90.8%	89.1%	89.7%	88.8%	87.5%	89.2%
LNGl/Diesel	78.4%	89%	87.2%	93.0%	75.7%	84.6%
Diesel	85.3%	78%	94.4%	99.6%	99.7%	91.4%
Biomass	94.7%	96.2%	97.3%	95.4%	90.5%	94.8%

Once we have this data, we can calculate the estimated production per year, for each plant. For that purpose we used the following formula:

$$Estimated\ Production\ GW = \frac{Power * \%\ Production * \%\ Availability * 365 * 24}{1.000}$$

For Cochrane we used a more efficient production percentage. The estimation of the plant energy generation that is under construction was the following:

Estimated Production New Facilities (GW)

	2015	2016	2017	2018
Cochrane		3,696	3,696	3,696
Alto Maipo				2,293
Guacolda V		991	991	991
Tunjitas	86	86	86	86
Total	86	4,773	4,773	7,065

Price Estimation

In order to forecast the prices we used an average price per system, calculated as the sales in USD divided by the sales in MW, for each system (data available in the Company's Annual Report, 2013). Considering this prices, we forecasted a yearly increase of 0.7% (based on the last three year average). We used a conservative estimation in the price growth.

Projected Prices per System

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
SIC	128.6	103.8	132.6	120.3	103.1	103.8	104.5	105.3	106	106.8
SING	77.3	105.5	117.6	102.6	93.3	94	94.6	95.3	95.9	96.6
SIN	56.3	70.8	51.1	66.5	84.5	85.1	85.7	86.3	86.9	87.5
SADI	77.4	33.7	40.9	40.5	41.4	41.7	42	42.3	42.6	42.9

Revenues

Once we have the annual production and the annual prices per system, we can forecast the revenues.

Estimated Revenues

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
SIC		881,770	1,028,832	1,022,160	913,360	919,754	926,192	1,037,026	1,044,285	1,296,346
SING		316,705	478,046	528,628	512,890	516,480	520,096	875,873	882,005	888,179
SIN		392,391	364,687	453,039	522,219	525,875	536,900	540,658	544,443	548,254
SADI		80,686	104,134	167,660	173,481	174,695	175,918	177,150	178,390	179,638
Otros		130,496	154,586	156,233	122,839	134,648	135,591	151,817	152,879	189,780
Total	1,411,115	1,802,048	2,130,285	2,327,720	2,244,789	2,271,452	2,294,697	2,782,524	2,802,002	3,102,197

Source: Team Estimation.

Exhibit 16 :Costs Estimation

The cost can be discomposed in two key elements, one is maintenance and operative cost (M&O) and the other is the fuel cost: both depend on the plant's generation level. The estimation procedure for the first element was a study done by the Annual Energy Outlook published by the US Energy Information Administration, adjusted to the Chilean industry through a multiplicative factor. For this we have used a comparison of the Company's total cost, isolated by plant type. The results of the forecast are as follow:

Cost of Operation and Maintenance US mills/KWH

	2012	2013	2014	2015	2016	2017	2018
Fossil Steam	46.32	47.71	49.14	50.62	52.13	53.70	55.31
Hydro-Electric	13.61	14.02	14.44	14.87	15.32	15.78	16.25
Gas Turbine	32.52	33.50	34.50	35.54	36.60	37.70	38.83

For the cost calculation we used the study provided by the CNE. The procedure was the following.

$$Fuel\ Cost\ (USD) = SC\left(\frac{Unit}{MWh}\right) xFP\left(\frac{USD}{Unit}\right) xQ'(MWh)$$

Where:
SC = Specific Consumption; is the plant's efficiency, this is calculated as the necessary units to produce 1 MW of energy.
FP = Fuel Price; measured as the price of each unit of fuel including the logistics cost.
Q = Amount of energy generated by the plant

This data can be obtained from the report mentioned above, thus obtaining the exact fuel cost. Its important to note that the SC is available for the new plants under construction, which allows us to estimate a realistic value generated by each plant.

Specific Consumption

Operative	
Ventanas 01	0.415
Ventanas 02	0.397
Laguna Verde	0.412
Laguna Verde TG	0.264
Los Vientos	0.267
Santa Lidia	0.264
San Francisco TG	0.309
Renca	0.365
Nueva Renca	0.171
Nueva Ventanas	0.38
Ventanas IV	0.38
Guacolda	0.36
Angamos	0.418986
Norgener	0.4008
Under Construction	
Cochrane	0.425
Alto Maipo	1
Guacolda V	0.404
Tunjitas	1

To estimate the fuel cost we use data from the same report, which has projections of the coal price. To get the price shipped from the plant we identify coal facilities near Cochrane and Guacolda V and forecast the price of coal at 2013 considering variations on it.

Fuel Price

	2013	2014	2015	2016	2017	2018
Ventanas 01	109.81					
Ventanas 02	109.81					
Laguna Verde	1083.97					
Laguna Verde TG	1083.97					
Los Vientos	1082.04					
Santa Lidia	1095.72					
San Francisco TG	1105.91					
Renca	1083.84					
Nueva Renca	1083.84					
Nueva Ventanas	103.66					
Ventanas IV	103.66					
Guacolda	109.90	110.46	110.46	111.77	112.97	113.25
Angamos	93.59					
Norgener	77.80	78.20	78.20	79.13	79.97	80.17
Under Construction						
Cochrane	77.80	78.20	78.20	79.13	79.97	80.17
Guacolda V	109.90	110.46	110.46	111.77	112.97	113.25

The above analysis leads to the final cost estimation the plants under construction, detailed below.

	2015	2016	2017	2018
Cochrane		124,289	125,618	125,937
Alto Maipo				37,251
Guacolda V		44,758	45,236	45,351
Tunjita	1,274	1,313	1,352	1,392

Source: Team Estimation.

Exhibit 17 : Bull & Bear Analysis

Base Case	357									
Price	0.7%									
Facilities Efficiency	-									
	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
Revenues	1,653,420	1,802,049	2,130,286	2,327,721	2,244,790	2,271,452	2,294,697	2,782,524	2,802,002	3,102,197
EBITDA	424,316	354,083	566,272	463,144	408,494	444,678	453,510	725,288	729,710	938,376
Net Income	297,545	123,494	294,999	193,741	159,991	202,494	178,462	319,351	307,796	419,824
Bull Case	385									
Price	1%									
Facilities Efficiency	5%									
	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
Revenues	1,653,420	1,802,049	2,130,286	2,327,721	2,244,790	2,278,219	2,308,760	2,831,504	2,859,819	3,187,475
EBITDA	424,316	354,083	566,272	463,144	408,494	446,003	456,512	747,156	754,477	980,100
Net Income	297,545	123,494	294,999	193,741	159,991	203,491	180,714	335,400	325,987	450,392
Bear Case	294									
Price	-0.5%									
Facilities Efficiency	-5%									
	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
Revenues	1,653,420	1,802,049	2,130,286	2,327,721	2,244,790	2,244,384	2,239,973	2,661,249	2,647,943	2,885,716
EBITDA	424,316	354,083	566,272	463,144	408,494	439,379	442,457	680,788	674,820	849,570
Net Income	297,545	123,494	294,999	193,741	159,991	198,504	170,152	286,549	267,305	354,534

Source: Team Estimation.

Case Case.

The prices will increase 0.7% and the new facilities efficiency will remain as estimated.

Bull Case

The prices will increase 1% and the efficiency of the new facilities will be 5% higher than estimated.

Bear Case

The prices will decrease 0.5% and the efficiency of the new facilities will be 5% lower than estimated.

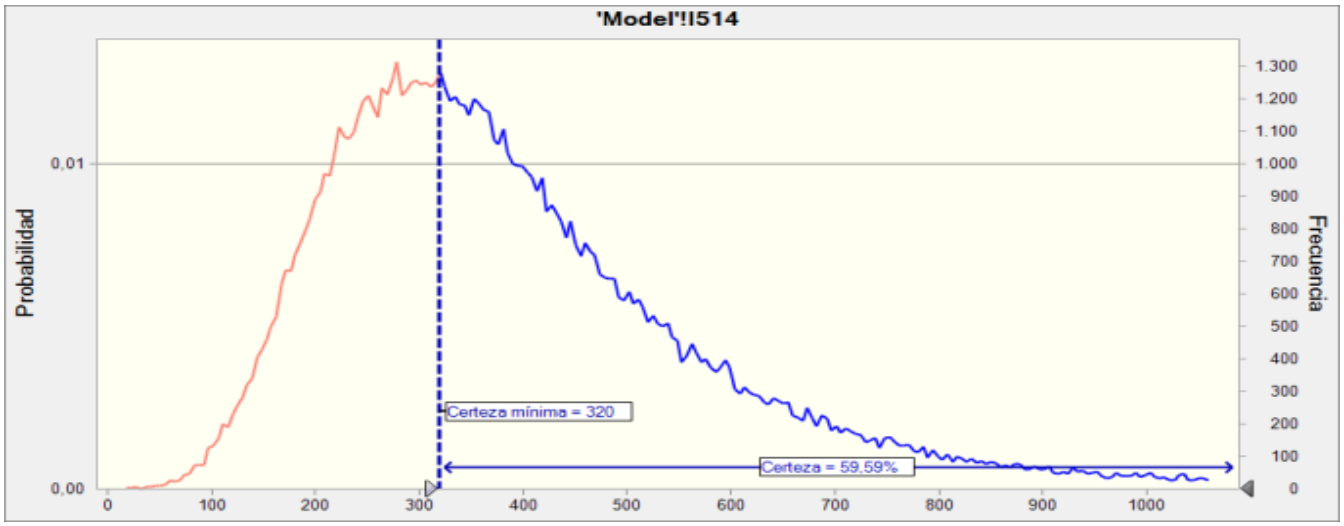
Exhibit 18 : Price Chart

Source: Team Bloomberg.

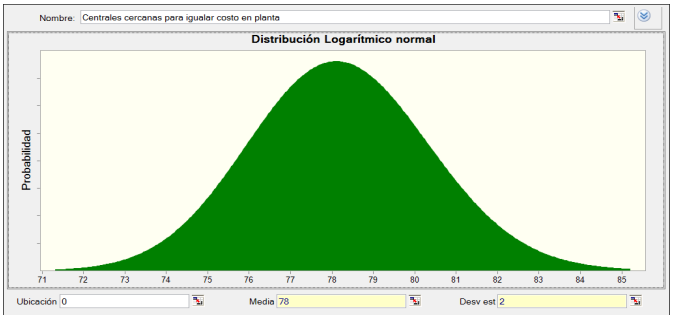
Exhibit 19 : Sensitivity Analysis

The results of the Monte Carlo Simulation were as follows:

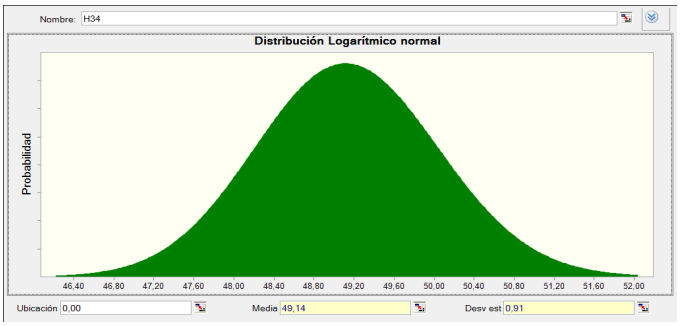
Resulting Price Per Share Distribution:



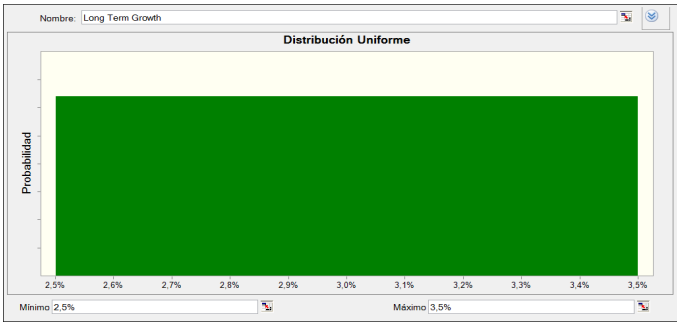
Fuel Cost distribution



Cost of Operation and Maintenance



Growth Rate distribution



Source: Team Estimation.

Exhibit 20 : Relative Valuation

We have calculated the price of the shares by relative valuation because we want to know AES Gener's position compared to related companies. We didn't use this valuation in the target price because we think the estimation by DCF is more efficient, on the other hand the valuation by relative companies is affected by the investment cycle of the Company and does not reflect the real potential of the EBITDA growth.

2015	Ratio		Data	
Companies	**EV/EBITDA (LTM)**	**EV/REVENUES (LTM)**	Revenues	2,294,697
Colbun	11.9	3.7	EBITDA	542,456
NextEra Energy Inc	11.3	4.5	NET DEBT	3,775,667
Isagen SA ESP	11.2	4.8		
Duke Energy Corp	11.1	3.8		
PPL Corp	10.2	3.8		
Average	11.14	4.12		
EV	2,267,290	5,678,483		
Price USD	0.270	0.676		
Price CLP	155.741	390.058		

Target Price	CLP272.90

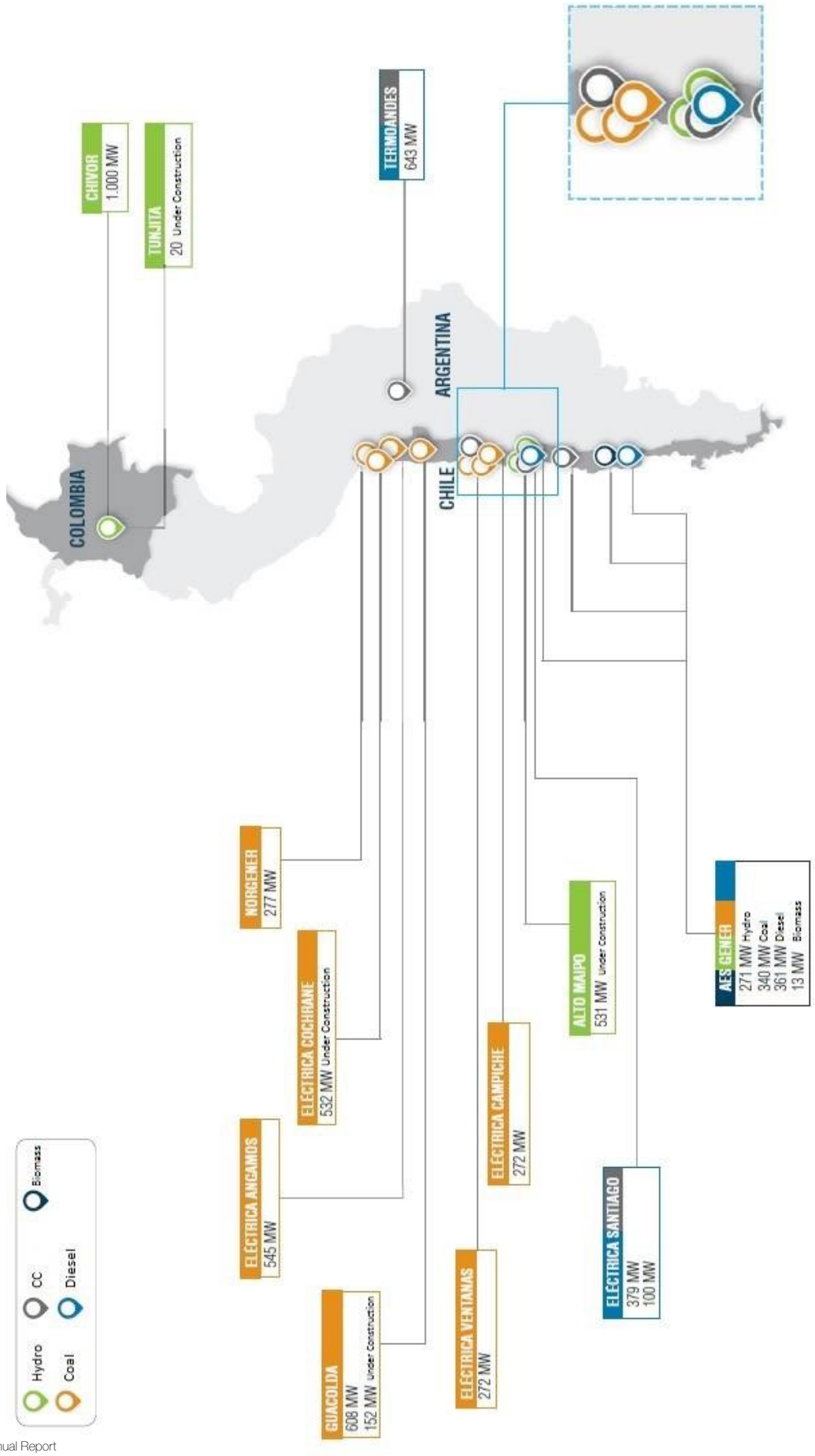
Source: Team Estimation.

Exhibit 21 : Financial Ratios

	2009	2010	2011	2012	2013	2014E	2015E	2016E	2017E	2018E
Solvency measures										
Short term										
Current ratio	1.80	2.17	2.11	1.74	1.36	-	-	-	-	-
Quick ratio	1.71	2.09	1.91	1.56	1.24	-	-	-	-	-
Cash ratio	0.29	0.59	0.80	0.81	0.79	-	-	-	-	-
Long term										
Total debt ratio	0.52	0.55	0.57	0.57	0.60	0.57	0.62	0.64	0.65	0.65
Times interest earned ratio	4.54	3.14	5.56	4.49	3.56	2.56	2.14	2.95	2.75	3.38
Cash coverage ratio	4.82	3.51	5.84	4.68	3.66	2.67	2.24	3.33	3.09	3.97
Asset management										
Inventory turnover	22.37	32.53	13.62	19.16	15.80	18.92	18.92	18.92	18.92	18.92
Day's sales in inventory	16.32	11.22	26.79	19.05	23.09	19.30	19.30	19.30	19.30	19.30
Receivables turnover	3.75	4.14	5.26	7.24	6.70	5.07	5.07	5.07	5.07	5.07
Day's sales in receivables	97.27	88.10	69.39	50.39	54.49	71.93	71.93	71.93	71.93	71.93
Total assets turnover	0.30	0.32	0.37	0.40	0.34	0.33	0.29	0.32	0.30	0.34
Capital intensity	3.28	3.14	2.74	2.51	2.94	3.02	3.47	3.12	3.31	2.97
Profitability measures										
Profit margin	19.69%	9.20%	15.31%	8.72%	8.84%	8.91%	7.78%	11.48%	10.98%	13.53%
EBITDA margin	25.66%	19.65%	26.58%	19.90%	18.20%	19.58%	19.76%	26.07%	26.04%	30.25%
Return on assets (ROA)	6.00%	2.93%	5.59%	3.48%	3.01%	2.95%	2.24%	3.68%	3.32%	4.56%
Return on equity (ROE)	12.51%	6.51%	12.90%	8.18%	7.53%	6.93%	5.88%	10.10%	9.44%	12.88%
Return on invested capital (ROIC)	23.09%	13.60%	39.76%	22.14%	14.50%	13.93%	10.93%	24.53%	23.73%	62.37%
Market value measures										
Earnings per share (EPS)	0.04	0.02	0.04	0.02	0.02	0.02	0.02	0.04	0.04	0.05
Price-earnins ratio (P/E)	11.04	32.67	15.57	26.16	29.47	-	-	-	-	-
Market to book ratio	1.26	1.58	1.82	2.04	1.79	-	-	-	-	-
DuPont analysis										
Profit margin	19.69%	9.20%	15.31%	8.72%	8.84%	8.91%	7.78%	11.48%	10.98%	13.53%
Total asset turnover	0.30	0.32	0.37	0.40	0.34	0.33	0.29	0.32	0.30	0.34
Equity multiplier	2.08	2.22	2.31	2.35	2.50	2.35	2.62	2.74	2.85	2.82
ROE	12.51%	6.51%	12.90%	8.18%	7.53%	6.93%	5.88%	10.10%	9.44%	12.88%

Source: Team Estimation.

Exhibit 22



Source: AES Gener's Annual Report

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