# Castilla Thermal Power Station, Chile

EJOLT Fact sheet

#### Mining

#### **Keywords**

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- > Chile
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# Introduction

Copiapo, in the Atacama Region, northern Chile, has approximately 150,000 habitants and a diverse economy where the main economic activity comes from the mining industry, particularly for copper. The second leading activity is grape, olive, tomato, avocado and other citrus fruit production for export. In the industrial sector, there are also thermal power stations for energy production.

In addition, Copiapo has a variety of touristic attractions, one of the most important of which is the famous "flowering desert" ("*desierto florido*" in Spanish). This phenomenon occurs in the Atacama Desert, the driest desert of the world, in years where rain levels are unusually high and more than 200 species of flowers, most of them endemic, appear between September and November.

The coastal area is surrounded by beautiful and unexploited beaches, among them Punta Cachos and Hacienda Castilla. Marine fauna includes green turtle, sea lions, marine otters, some species of whales and cetaceans, Humboldt penguins, and other marine birds. Algal species and benthic fauna are also important for the coastal communities. In addition, two marine protected areas, located about 40km north and 150km south of Punta Cachos respectively, highlight the importance of this northern area for marine productivity along Humboldt Current that maintain a rich biodiversity.

In December 2008, the company CGX Castilla Generación S.A. submitted an Environmental Impact Assessment (EIA) to the Chilean Environment Ministry in order to get environmental permits to install a diesel and coal thermal power station in Hacienda Castilla. The project would contribute 2.354 MW to the Chilean energy system to supply mostly mining activities. In July 2009, an associated port infrastructure to support the thermal power plant was submitted independently to the EIA process by the company OMX Operaciones Maritimas



Flowering desert and the northern Chile coast **Source:** www.olca.cl

Ltda., a partner company owned by the same holding group of the Castilla thermal power plant.

Opposition from local communities, fishermen, agricultural peasant and environmental justice organizations (EJOs) started immediately after the EIA was submitted. The uniqueness of this case lies in the actions taken by civil society, the unconditional support given by the administration of President Pinera in favor of the thermal power station, and in this being the first time for the Justice Court to recognize constitutional rights to live in an environment free of pollution before a project produces the pollution.

### Background

With the economy growing at about 6% per year, Chile projects its energy demand will double by 2025. More than 80% of electricity is used by the industrial sector, and mostly for Chile's world-leading copper mining exports. The expected increase in energy demand aims to cover 70% of mining energy requirements, production of which the government plans to increase by five times.

MPX is a Brazilian company owned by the millionaire Eike Batista. The Chilean subsidiary company, CGX Castilla Generacion S.A. started the process to establish a thermal power station in Castilla in order to supply the mining industry. A second company OMX Operaciones Maritimas Ltda., a partner company owned by the same holding group, was in charge of the port construction. MPX also was involved in



the acquisition of a coal mining in Colombia and it was denounced to be intended to supply fuel mostly to thermal power stations in Brazil and Chile.

In January 2012, the German company E.ON joined MPX and become the dominant private energy generation company in Brazil. Both announced they had signed a "joint venture" where each would own 50% of all thermal and renewable energy in Brazil and Chile.

The community of Totoral, where the Castilla Project planned to be located, is a human settlement legally recognized since 1630 and since 2003, the Government of Chile has recognized it as an agricultural community with legal personhood and common property rights over 45,000 hectares (ha) for their activities. The owners of Hacienda Castilla started a legal process against this decision and claimed 25,000 ha to be part of Hacienda Castilla property. Hacienda Castilla won the case in 2008 after the lawyer of the Totoral community did not attend the hearings.

# **Castilla Project**

The Hacienda Castilla land covers a surface of 240,000 ha that is owned by holding group MPX Energia de Chile Ltda. (a subsidiary of the Brazilian company MPX, now holding group MPX/E.ON Joint Venture). The Castilla Project consisted of a thermal power station and a maritime port.

The investment in the construction and operation of the thermal power station was estimated at USD 4.4 billion with a projected lifetime of 30 years. The thermal power station was planned to be built on 612 ha of the Hacienda Castilla, near the area of Punta Cachos. The building would have included six turbines to be operated using pulverized coal as fuel, and two turbines to be operated using diesel. The thermal power station was expected to generate 2,354 MW to contribute to the energy supply of Chile, particularly for the electricity requirements of the mining activities. The project also considered the building of an electric sub-station, a transmission

line system of approximately 57km, a plant for desalinating sea water and a deposit for ashes of coal with a total surface of 125 ha. During construction, the project would create 1,800 new jobs while during operation only 270 persons would be required. Development plans for the maritime port Castilla, associated with the thermal power station Castilla, were treated independently, and were therefore submitted under a different Environmental Impact Assessment.

The maritime port was also planned to be built on 115 ha of the Hacienda Castilla, 15 km apart from the thermal power station, with a total investment of USD 300 million, and a projected lifetime of 50 years. The port was projected to be built in Punta Cachos and consisted of the construction and operation of a private, multipurpose port, with three points to embark/disembark coal, diesel, copper, iron, and other products in support of economic activities, especially for mining, energy and food among others. The construction of the maritime port would have generated 900 new jobs, lessening to only 142 during normal operation. The infrastructure designed for the arrival of coal and diesel was the most important and the largest in capacity, making it evident that the major purpose of the port was to provide fuel for the thermal power station.

Neither the thermal power station, nor the maritime port, could operate independently of each other, and were part of one larger project. Both power station and port have planned developments at sea and on land. Yet the holding group decided to submit separate EIAs to make the process of acquiring environmental permits easier, distracting attention from the cumulative and synergetic impacts of both projects.

### Impact

According local people affected and involved EJO, the Castilla thermal power station (2,354 MW) could have been considered one of the biggest and most polluting projects in Latin America. Diesel turbines would have generated



Street protest against Castilla Project - www.olca.cl



1,541 t/h of gases (SO2, NOx, CO, etc.) and introduced them directly to the atmosphere at 532oC. The coal turbines would have contributed 376 m3/s (i.e 1,353,600 m3/h) of gases at 50oC. The EJO argued that pulverized coal was an obsolete technology in Europe because of its high level of pollution, and claimed that air pollution would skyrocket to more than five times the amount of regional carbon emissions. In addition, coal turbines would have contributed 21 million m3 of ashes. The deposit for ashes was planned to be located in Quebrada del Morel, a priority site for ecological conservation. Also the ashes would have impacted the Agricultural Community of Totoral, who have dedicated more than 370 years to agricultural activities.

The project was also located in an area considered for ecological protection before the Regulatory Plan of Soil Use was changed, and represents a threat to tourism activities and conservation of the pristine beaches and the Flowering Desert. Furthermore, the project would have also impacted the marine environment since a large amount of water would be used by the thermal power station and a large portion returned to the sea at a temperature of 10oC higher In addition, potential spills of diesel or coal could occur. Concerns were raised regarding benthic extraction and fishing activities from artisan fishermen, as well as disruption of important ecosystems for endangered and vulnerable species such as green turtle, Humboldt penguin and cormorants among others. In addition, noise pollution will impact local habitants due to the operation of turbines, pulverizes, electric generators, etc.

### **Conflict and consequences**

Before the project was submitted to the EIA process, the company bought Hacienda Castilla and was in a legal process over land property rights with the Totoral agricultural community. The company also persuaded the former mayor of Copiapo to change permitted use of the land from ecological preservation to allow industrial developments. This took effect in 2008, allowing the Castilla Project to continue with its plan. Driven by government policy to double energy supply and increase mining production by 500% by 2020, the Castilla project found ample support to proceed.

Upon the submission of the EIA in December 2008, local people and EJOs started to mobilize to stop the project receiving environmental permits. They claimed the impacts of this highly polluting thermo power station threatened their livelihood as well as coastal and marine environments. From 2009 to 2012 the social movement worked dynamically to defend its rights and prevent the approval of Castilla project. However, several massive protests, meetings with authorities of Chile and Brazil, and public denouncing of social and ecological conflicts failed to stop the project. Legal avenues were therefore taken.

Throughout the process, political and economic influences were denounced. After the assumption of the new administration under President Sebastian Pinera, the company pressured government to change the project classification of the former Health authority from "polluting" with which it would not be possible to grant environmental permits, to "annoying". An appeal to the Court regarding the illegality of the decision of the new administration in changing the classification of the project from "polluting" to "annoying" was presented by the lawyers of the social organisations. In 2010 the Supreme Court decided that the process to change the health classification of the project was illegal but suggested a way forward. Instead of voting and rejecting the project, the government decided to postpone the voting process. Shortly after, the government established the "Intergovernmental Committee for Expediting Investments" (CAI in Spanish) aimed to advise the President in public policies to expedite investment projects and help to coordinate different public institutions.





Several appeals were presented to the Court – www.olca.cl

By the end of the year, the government granted environmental permits for the maritime port and then officially reclassified the thermal power station project as annoying, following the procedure suggested by Supreme Court decision. To avoid more appeals being presented by EJOs, the voting on the EIA of the Castilla thermal power station was scheduled two days after the new re- classification of the Health authority, and in 2011 environmental permits were granted to the project. In August, the General Comptroller Republic of Chile released a report revealing several irregularities and pressures from the government in the approval process of the EIA of the projects through the CAI that were acting beyond the law, including the health authority reclassification of project, and that the change in soil use made by the former mayor was also illegal since the company paid for the studies.

Meanwhile, before the approval of the project, the company volunteered to build a private protected area for biodiversity and cultural heritage in a sector north of thermal power station, in a so- called strategy of "habitat trading", under the management of a foundation established by the company, the Dominguez family (who lead the opposition until 2010), and other community representatives.

All these strategies used by the company and government, as drivers of Chilean investment and energy policies, highlight an unequal distribution of public goods and power imbalances among actors during the decision making process.

After the approval of both, the port and the thermal power station, local communities, fishermen, EJOs and congressmen presented again several appeals to the Court. In 2012 the

Supreme Court accumulated all the appeals into one and called for a conciliation process between the company and the claimants.

Several former opponents to the project promoted the signing of an arrangement in exchange for economic compensation while others firmly maintained a view that human rights and environmental conservation are incommensurable in value. Therefore, the conciliation process failed and the Supreme Court unanimously ruled against the Castilla project, stating the need for the joint reevaluation of the port and thermal power plant, and reaffirming the constitutional right to live in an environment free of pollution.

The decision of the Supreme Court is a lesson for investors that their projects are being watched and that strong social mobilization can ensure human rights and nature conservation. This case is emblematic since the judicial systems decided for the first time in favor of the constitutional rights to live in an environment free of pollution, before the industry could actually inflict damage, taking into consideration the precautionary principle and making a reinterpretation of environmental legislation. The decision also stated that the executive power had acted illegally in the Castilla case, revealing the failure of an environmental process that is ultimately driven by political forces rather than technical criteria.

In this sense, Castilla is an example that communities should not delegate collective power to "specialists", "lawyers" or "healthier and more educated" people, etc. It provides evidence that local communities need to trust in themselves and their beliefs in the incommensurable valuation of its

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principles, as well as accept the advice of people that do not want to take control over the conflict. The success of Castilla socio-environmental conflict relied also in the ability of a small community that was able to shift its local problem to one of regional and national importance, by using the concept of "Atacama without Coal" and discussing the energetic model of the country.

## Chronology of major events

**2008 – 2009**: Submission of EIA for the Castilla thermal power station project and maritime port separately

**2009 – 2012**: Local communities, fishermen and EJOs, among others mobilize to stop the approval of Castilla project.

**2010 - 2012**: MPX implement a strategy that includes economical negotiations with opponents. It divided the movement on some that support it in exchange of monetary compensation and other that firmly opposed it given the incommensurable value of their livelihood and environment.

2010: New administration of President Pinera assumed the Chilean government and Health authority of Atacama will grant a green light to the project and change the classification of Castilla Thermal Power Station project from "pollutant" to "annoying".

**2010**: Legal avenues were undertaken and Supreme Court confirmed the decision to change classification was illegal and the EIA process for thermal power station was stopped.

**2010**: Government of Chile created the Intergovernmental Committee for Expediting Investments (CAI in spanish).

**2010**: EIA for maritime port was approved.

**2011:** Health authority of Atacama reaffirmed its decision to re-classify the thermal power station project as "annoying".

**2011:** EIA for Castilla Thermal Power Station was approved and legal appeals were presented.

**2011**: The General Comptroller Republic of Chile release a report regarding the

irregularities and political surrounding the approval process of the EIA of the projects and the work of the CAI.

**2012**: German company E.ON decided to make a joint venture with MPX.

**2012**: The Court of Antofagasta accept one appeal and state that the decision of Health authority to change "pollutant" to "annoying" is illegal because it is against the constitutional right "to live in an environment free of pollution"

**2012**: Supreme Court requested a conciliation process between the company and the opponents. Opponents stated that human rights and nature are not subject to economical valuation, and the conciliation process failed.

August 2012: Supreme Court unanimously failed against the Castilla project. It deliberated that the port and the thermal power station need to be reevaluated together and reaffirmed the constitutional right to live in an environment free of pollution.

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