

CHAPTER 8. SUMMARY INDEX CARD

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1 INTRODUCTION

This chapter has as goal to provide, with index cards, the summary of the contents presented in Chapter 1, Chapter 2, Chapter 6 and Chapter 7 of this Environmental Impact Study, in order to facilitate enforcement referred in article 64 of the Act N° 19.300 of the General Basis of the Environment.

The information presented in the index cards is the following:

- **Index card 1:** it identifies for each stage of the Project, works or actions contemplated to be executed: way, location and opportunity of execution; and reference of the page of the Study where that work or action is described in details.
- **Index card 2:** it identifies for each stage of the Project the applicable environmental character standard, including environmental permits per sector; the environmental component involved; way in which compliance of the obligations contained in such standards will be done, and the competent organization of the management of the State enforces, if this was established.
- **Index card 3:** it identifies for each stage of the Project, works or actions contemplated to be executed; the environmental component involved; the environmental impact associated; description of each corresponding measure (whether this may be mitigation, repairs or compensation, risk prevention or accident controls); implementation fashion; index for quantification (if applicable), compliance with the measurements; opportunity and location of its implementation; and the page reference of the Study where the measure is described in details.

INDEX CARD 1: DESCRIPTION OF ACTIVITIES OF THE PROJECT

WORKS AND/OR ACTIONS	EXECUTION MODES	EXECUTION LOCATION	EXECUTION OPORTUNITY	EIA REFERENCE
CONSTRUCTION STAGE				
<ul style="list-style-type: none"> <input type="checkbox"/> Labor hiring. <input type="checkbox"/> Transport of personnel and goods to and from working faces and wastes areas of the installations of the Works. <input type="checkbox"/> Operation of equipment, machineries and trucks. <input type="checkbox"/> Personnel circulation in working faces <input type="checkbox"/> Reconsidering structures lines and foundations of S/S. <input type="checkbox"/> Clearance of land of installation of structures. <input type="checkbox"/> Land movements. <input type="checkbox"/> Construction of foundations. <input type="checkbox"/> Fillings. <input type="checkbox"/> Assembly of structures of line and equipment of S/S <input type="checkbox"/> Enabling of the restriction strip with forestry and pruning methods only in the corresponding areas. <input type="checkbox"/> Laying out and tightening of the conductors. <input type="checkbox"/> Tests and startups. . <input type="checkbox"/> Demobilization and cleaning of the working faces. <input type="checkbox"/> Equipment and machineries maintenance. 	<p>Through constructive processes supervised by the Owner of the Project.</p>	<p>In the carry out area of the Project, within Hacienda Río Colorado near Maitenes town in the municipality of San José de Maipo, Metropolitan Region of Santiago. The contemplated lines have a total length of 17,1 km and will be constituted by two tranches:</p> <p>1 Line between Maitenes S/S and Alfalfal S/S, of a 110 kV circuit, 7.6 km length and restriction strip of 30 m.</p> <p>2 Line between Alfalfal II Power Plant and Alfalfal S/S, of two 220 k circuits, 9, 5 km length and a restriction strip of 40 m.</p> <p>It is also contemplated the extension of Alfalfal S/S in 0, 45 ha.</p>	<p>Immediately after counting with all the environmental authorizations per sector with regards the Works.</p>	<p>Chapter 1, section 3.</p>

WORKS AND/OR ACTIONS	EXECUTION MODE	EXECUTION LOCATION	EXECUTION OPORTUNITY	EIA REFERENCE
OPERATION STAGE				
<ul style="list-style-type: none"> <input type="checkbox"/> Maintenance activities in the line and S/S (basic preventive, corrective programmed, failures and emergencies) <input type="checkbox"/> Maintenance of the restriction strip with forestry and pruning methods only in the corresponding areas <input type="checkbox"/> Energization of the lines 	<p>Through operational processes supervised by the Owner of the Project.</p>	<p>In the carry out area of the Project, within Hacienda Río Colorado near Maitenes town in the municipality of San José de Maipo, Metropolitan Region of Santiago. Contemplated lines have a total length of 17,1 Km and they will be constituted by two tranches:</p> <p>1 Line between Maitenes S/S and Alfalfal S/S, of a 110 kV circuit, 7, 6 km length and restriction strip of 30 m.</p> <p>2 Line between Alfalfal II Power Plant and Alfalfal S/S, of 220 kV circuit, 9, 5 km length and restriction strip of 40 m.</p> <p>It is also contemplated the extension of Alfalfal S/S in 0, 45 ha.</p>	<p>Once the construction stage of the Project is finished in an operational horizon of 50 years.</p>	<p>Chapter 1, section 4.</p>

Source: Self elaboration over the information basis provided by AES Gener S.A

3 INDEX CARD 2: COMPLIANCE OF THE ENVIRONMENTAL STANDARD APPLICABLE TO THE PROJECT

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFERENCE
COMPONENT Quality of Air				
Construction and Operation.	<p>Supreme Decree N°144/61</p> <p>It establishes standards to avoid emissions or atmospheric pollutants of any nature. Ministry of Health Published in D.O. on 18/05/1961.</p>	<p>During the construction stage of the Project few atmospheric emissions corresponding mainly to particulate material (MP10) and internal combustion gases from vehicles, produced in excavation activities, land movements and vehicle transit, among others. These emissions will be temporary, of low magnitude and local character (see environmental assessment in Annex 6); in spite of the above, during the construction stage the following measures will be adopted:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Trucks with material moving out of the working faces will be covered with canvases to avoid leaks of material. <input type="checkbox"/> Adequate maintenance of the equipment, vehicles and machineries will be done (in specialist shops) in order to minimize atmospheric emissions. <input type="checkbox"/> If storage of materials with fine grading in the area of the Project carries out, these will be covered with plastic or textiles, until these are re used in the same location. <input type="checkbox"/> Engines will be off while vehicles and machineries are stopped and not operative. <p>Due to the features of the Project, during operation of it, the few atmospheric emissions will be reduced to maintenance activities associated to the eventual transit of machineries and vehicles. Wastes generated from working faces during the construction stage will be daily taken to Camp site 4 of PHAM, in specific to the waste management yard, in order to keep the area of work clean and without wastes altering its surrounding. During operation, every time a procedure generates wastes, these will be taken during the day to the waste management yard existing in Alfalfal Power Plant.</p> <p>Compliance of this standard will proceed in this way.</p>	Sanitary Authority of the Metropolitan Region.	Chapter 2, Section 3.1.

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFERENCE
Construction and Operation.	<p>Supreme Decree N° 59/98 It establishes the standard for quality of primary Particulate Matter MP₁₀. Ministry of the Presidency of the Republic. Published in the D.O. on 25/05/1998 and modified on 10/09/2002.</p>	<p>During the construction stage of the Project few atmospheric emissions corresponding mainly to particulate material (MP₁₀) and internal combustion gases from vehicles, produced in excavation activities, land movements and vehicle transit, among others. These emissions will be temporary, of low magnitude and local character (see environmental assessment in Annex 6); in spite of the above, during the construction stage the following measures will be adopted:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Trucks with material moving out of the working faces will be covered with canvases to avoid leaks of material. <input type="checkbox"/> Adequate maintenance of the equipment, vehicles and machineries will be done (in specialist shops) in order to minimize atmospheric emissions. <input type="checkbox"/> If storage of materials with fine grading in the area of the Project carries out, will be covered with plastic or textiles, until these are re used in the same location. <input type="checkbox"/> Engines will be off while vehicles and machineries are stopped and not operative. <p>Due to the features of the Project, during operation of it, the atmospheric emissions will be reduced to maintenance activities associated to the eventual transit of machineries and vehicles. Compliance of this standard will proceed in this way.</p>	Sanitary Authority of the Metropolitan Region.	Chapter 2, Section 3.1.
Construction and Operation.	<p>Supreme Decree N° 45/01. Modifies Decree N° 59/98 Annual Primary Standard of Air quality for Particulate Matter Ministry of the Presidency</p>	<p>During the construction stage of the Project few atmospheric emissions corresponding mainly to particulate material (MP₁₀) and internal combustion gases from vehicles, produced in excavation activities, land movements and vehicle transit, among others. These emissions will be temporary, of low magnitude and local character (see environmental assessment in Annex 6); in spite of the above, during the construction stage the following measures will be adopted:</p>	Sanitary Authority of the Metropolitan Region.	Chapter 2, Section 3.1.

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFERENCE
	Published in D.O. On 11/09/2001.	<p>Excavation activities, land movements and vehicle transit, among others. These emissions will be temporary, of low magnitude and local character (see environmental assessment in Annex 6); in spite of the above, during the construction stage the following measures will be adopted:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Trucks with material moving out of the working faces will be covered with canvases to avoid leaks of material. <input type="checkbox"/> An adequate maintenance of the equipment, vehicles and machineries (in specialist shops) in order to minimize atmospheric emissions. <input type="checkbox"/> If storage of materials with fine grading in the area of the Project carries out, these will be covered with plastic or textiles, until these are re used in the same location. <input type="checkbox"/> Engines will be off while vehicles and machineries are stopped and not operative. <p>Due to the features of the Project, during operation of it, the few atmospheric emissions will be reduced to maintenance activities associated to the eventual transit of machineries and vehicles</p>		
Construction.	<p>Supreme Decree N° 112/03 Primary Standard of Air Quality for Ozone (O₃). Ministry of the Presidency of the Republic. Published in D.O. on 06/03/2003.</p>	The Owner will comply with the standard, guaranteeing an adequate maintenance of the equipment, vehicles and machineries (in specialist shops) in order to minimize atmospheric emissions.	Sanitary Authority of the Metropolitan Region.	Chapter 2, Section 3.1.
Construction.	<p>Supreme Decree N° 113/03 Primary Standard on Air Quality for Sulphur Dioxide (SO₂). Ministry of the Presidency, .Published in D.O. on 06/03/2003.</p>	The Owner will comply with the standard, protecting an adequate maintenance of the equipment, vehicles and machineries (in specialist shops) in order to minimize atmospheric emissions. Environmental assessment of this pollutant is presented in Annex 6.	Sanitary Authority of the Metropolitan Region.	Chapter 2, Section 3.1.

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFERENCE
Construction.	Supreme Decree N° 114/03 Primary Standard of Air Quality for Nitrogen Dioxide (NO ₂). Ministry of the Presidency of the Republic. Published in D.O. on 06/03/2003.	The Owner will comply with the standard, protecting an adequate maintenance of the equipment, vehicles and machineries (in specialist shops) in order to minimize atmospheric emissions. Environmental assessment of this pollutant is presented in Annex 6.	Sanitary Authority of the Metropolitan Region.	Chapter 2, Section 3.1.
Construction.	Supreme Decree N° 115/02 Primary Standard of Air Quality for Carbon Monoxide (CO). Ministry of Presidency of the Republic. Published in D.O. on 10/09/2002.	The Owner will comply with the standard, protecting an adequate maintenance of the equipment, vehicles and machineries (in specialist shops) in order to minimize atmospheric emissions. Environmental assessment of this pollutant is presented in Annex 6.	Sanitary Authority of the Metropolitan Region.	Chapter 2, Section 3.1.
Construction and Operation.	Supreme Decree N° 58/04 Revises and updates the Atmospheric Decontamination Prevention Plan for the Metropolitan Region (PPDA). Ministry of Presidency of the Republic. Published in D.O. on 29/01/2004.	During the construction stage of the Project, few atmospheric emissions corresponding mainly to particulate material (MP10) and internal combustion gases of vehicles, produced in the excavation activities, land movements and vehicle transit, among others. These emissions will be temporary, of low magnitude and local character (see environmental assessment in Annex 6); in spite of the above, during the construction stage the following measures will be adopted: <ul style="list-style-type: none"> <input type="checkbox"/> Trucks with material moving out of the working faces will be covered with canvases to avoid material leakage. <input type="checkbox"/> Adequate maintenance of the equipment, vehicles and machineries will be done (in specialist shops) in order to minimize atmospheric emissions. <input type="checkbox"/> If storage of materials with fine grading in the area of the Project carries out, these will be covered with plastic or textiles, until these are re used in the same location. 	Sanitary Authority of the Metropolitan Region.	Chapter 2, Section 3.1.

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFERENCE
		<input type="checkbox"/> Engines will be off while vehicles and machineries are stopped and not operative. Due to the features of the Project, during operation of it, the few atmospheric emissions will be reduced to maintenance activities associated to the eventual transit of machineries and vehicles. Compliance of this standard will proceed in this way.		
Construction and Operation.	Decree N° 55/94 It establishes emission standards applicable to indicated heavy motorized vehicles. Ministry of Transport and Telecommunications. Published in D.O. on 16/04/1994.	As control measurement of the combusted gas emissions, it will be demanded to contractors that motorized vehicles, shall be submitted to periodic maintenances (in specialized shops), and to comply with the emission regulations established by the Ministry of Transport and Telecommunications, enforced through the Technical Review Certificate.	MTT Enforcement department.	Chapter 2, Section 3.1.
Construction and Operation.	Supreme Decree N° 4/94 It establishes emission standards applicable to indicated motorized vehicles. Ministry of Transport and Telecommunications. Published in D.O. on 07/01/1994.	As control measurement of the combusted gas emissions, it will be demanded to contractors that motorized vehicles, shall be submitted to periodic maintenances (in specialized shops), and to comply with the emission regulations established by the Ministry of Transport and Telecommunications, enforced through the Technical Review Certificate.	MTT Enforcement department and Municipality.	Chapter 2, Section 3.1.
COMPONENT: Noise				
Construction and Operation.	Supreme Decree N° 146/98 Regulation over the	Regulations on levels Expected noise levels during the construction stage of the Project, when considering the mitigation measures pointed out in Chapter 6, comply with the limit	Sanitary Authority of the Metropolitan Region.	Chapter 2, Section 3.2.

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFERENCE
	Maximum annoying noise levels generated by fixed sources permitted. Ministry of the Presidency of the Republic. Published in D.O. on 17/04/1998.	Maximum noise permitted established by D.S. N° 146/97 of MINSEGPRES. Noise levels projected during the fixed operation stage comply with the current standard (see detail in Ministry of the Presidency Annex 7). Compliance of this standard will proceed in this way.		
Construction and Operation.	Supreme Decree N° 594/00 Regulation on basic sanitary and environmental conditions at workplaces. Ministry of Health. Published in D.O. on 29/04/2000.	AES Gener S.A. will demand the contractors to provide basic elements of safety to the workers during the construction and operation stage, in order to expose them to continuous sound levels equivalent to maximum lower to the stated indexes.	Sanitary Authority of the Metropolitan Region.	Chapter 2, Section 3.2.
COMPONENT: Wastes				
Construction and Operation.	Decree with Force of Law N° 725/00 Sanitary Code of Hygiene and Safety of the Environment. Ministry of Health Published in D.O. on 31/01/1968 and updated on 13/07/2005.	At working faces, portable toilets will be installed which will be maintained and withdrawn by a specialized and authorized company to do this type of activity, which will keep a record of maintenances performed. Later on, the Regional Secretary of the Ministry of Health will be duly reported regarding the name of the company awarded with the portable toilets service.	Sanitary Authority of the Metropolitan Region.	Chapter 2, Section 3.3.1.
Construction and Operation.	Supreme Decree N° 594/00 Regulations on basic sanitary and environmental conditions in workplaces. Ministry of Health Published in D.O. on 29/04/2000.	At working faces, portable toilets will be installed which will be maintained and withdrawn by a specialized and authorized company to do this type of activity, which will keep a record of maintenances performed. Later on, the Regional Secretary of the Ministry of Health will be duly reported regarding the name of the company awarded with the portable toilets service.	Sanitary Authority of the Metropolitan Region.	Chapter 2, Section 3.3.1.

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFERENCE
		<p>During the construction and operation stage the expansion of Alfalfal S/S, the existing sanitary facilities in Alfalfal Power Plant will be used, which are adjacent to the mentioned substation.</p>		
<p>Construction and Operation.</p>	<p>Supreme Decree N° 594/00 Regulations on basic sanitary and environmental conditions in workplaces. Ministry of Health. Published in D.O. on 29/04/2000.</p>	<p>During the construction stage, the generated wastes will be managed depending on its generation location:</p> <p>1. Wastes generated by construction of the new lines</p> <p>Household wastes or assimilated to residential mainly corresponding to packages, papers and cartons, will be temporarily disposed in polyethylene bags inside a container label as "household garbage". From the working faces these bags will be daily carried to the waste management yard in Camp 4 facilities of PHAM, where finally, they will be withdrawn by municipal service and taken to the corresponding sanitary landfill.</p> <p>Construction wastes are comprised of woods, package and metals remains, mainly separated at origin according to its recycling potential. These will be transported to Camp 4 of PHAM. Elements that might be reused will be sorted and stored, in an orderly way and packaged for its later use in the works. The rest of it will be placed in an authorized sanitary landfill for this goal.</p> <p>Vegetation wastes will be comprised by those remains elements from pruning. These materials will be chopped or chipped and disposed in the muck disposal area of PHAM, in order to constitute materials for land development in the area.</p> <p>Hazardous wastes will be generated at a minimum form in the working faces; these will be daily transported to the hazardous wastes management yard present in Camp 4 of PHAM. Wastes will be managed and transported according to the demands established by D.S. N° 148/03. These area mainly used oils and wastes from oils, diesel and fats.</p>	<p>Sanitary Authority of the Metropolitan Region.</p>	<p>Chapter 2, Section 3.3.2.</p>

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFERENCE
		<p>2. Wastes generated by Alfalfal S/S expansion</p> <p>In Alfalfal S/S household wastes or assimilated to residential wastes will be generated due to works executed in there, which will be temporarily stored within its premises up to its withdrawal by the municipal service. Construction wastes generated during construction will be limited to equipment packages, which, if is not possible to be reused, will be disposed in the wood storage places in Camp 4 of PHAM</p> <p>Mainly, during the maintenance activities of the Project, the generation of wastes from construction and vegetation wastes. Each time a procedure generates wastes, these ones will be taken during the same day to the waste management yard at Alfalfal Power Plant (adjacent to the homonym S/S). In these yards they will be sorted and stored per type and amount.</p> <p>During operation stage, Hazardous waste will not be generated.</p>		
Construction and Operation.	<p>Decree with Force of Law N° 725/00 Sanitary Code. Environmental hygiene and safety. Ministry of Health Published in D.O. on 31/01/1968, updated 13/07/2005.</p>	<p>Wastes generated during the construction of the new lines will be stored temporarily in Camp 4 of Alto Maipo Hydroelectric Project, specifically in the waste management yard, to later be disposed in the corresponding sanitary landfill (in the case of household or assimilating to residential wastes and some construction wastes), or delivered to an authorized and certified company which does construction wastes remains recycling (iron).</p> <p>Wastes generated from the extension works of Alfalfal S/S, will be temporarily stored following the guidelines of the existing facilities management.</p>	Sanitary Authority of the Metropolitan Region.	Chapter 2, Section 3.3.2.

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFERENCE
		<p>During the maintenance activities of the Project, the generation of wastes from construction, and vegetation wastes are expected. Each time a procedure generates wastes, these ones will be taken during the same day to the waste management yard at Alfalfal Power Plant (adjacent to the homonym S/S). In these yards they will be sorted and stored per type and amount.</p> <p>It is important to register that during the operation stage, hazardous wastes will not be generated.</p>		
Construction.	<p>Supreme Decree N° 148/03 Sanitary Regulations on Hazardous Wastes Management. Ministry of Health. Published in D.O. on 16/06/2004.</p>	<p>At workplaces of the Project, hazardous wastes will be generated, at minimum level, during the construction stage, which will be daily carried to the waste management yard present in Camp 4 of PHAM, hazardous wastes area, where they will be stored according to the demands established by this Decree.</p> <p>During the operation stage, hazardous wastes will not be generated</p>	Sanitary Authority of the Metropolitan Region.	Chapter 2, Section 3.3.3.
COMPONENT: Archaeological and Cultural Heritage				
Construction	<p>Act N° 17.288 National Monuments. Supreme Decree N° 484/90 Regulations on Excavations and/or Archaeological, Anthropological and paleontological Prospection. Ministry of Education. Published in D.O. on 04/02/1970 and 02/04/1991.</p>	<p>Study of the base line of the Archaeology and Cultural Heritage has determined the absence of elements of archaeology; paleontology, historic and/or anthropology character in the carry out area of the Project (see Annex 14).</p> <p>Nevertheless, as preventive measure, it is contemplated a permanent archaeological monitoring during the land movement activities (excavations) generated in the construction of the Project (see section 4 of Chapter 6).</p> <p>At the same time, is important to affirm that if a site or archaeological site was discovered during the construction stage in the carry out area of the Project, works will be halted and reporting of the finding will be done to the competent authority to the Provincial Governor, who will order Carabineros to guard the area until the National Monuments Council arrives and take charge of it, as it is established in article 23 of the Act N° 17.188 Regulations.</p>	National Monuments Council.	Chapter 2, Section 3.4.

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFERENCE
COMPONENT: Flora and fauna				
Construction and Operation.	<p>Supreme Decree N° 4.363/31 Law on Forests Act Decree N° 701 Regulations on Forestry Development. Ministry of Lands and Settlement and Agriculture, respectively. Published in D.O. on 31/07/1931 and 28/10/1974.</p>	<p>The Project has considered the necessary adjustments in its engineering, in order to carry out its structures in areas without native vegetation in conservation category, in this way, logging, elimination, destruction or grubbing-up of these species is not contemplated. Enabling of the restriction strip contemplates just one pruning procedure duly established and under forestry criteria (see Annex 2), whose goal is to avoid the generation of significant adverse effects on this environmental component, and at the same time, obeys the current electricity standard.</p> <p>In the same way, it has been considered to avoid, as much as possible, logging of native trees that are not in the conservation category. Nevertheless, in the case of not being possible to reallocate the foundation of the tower, an individual rescue will proceed, which is specified in Annex 2. It is important to clarify that under any circumstances, the activity will affect native species on the conservation category.</p>	National Forestry Corporation.	Chapter 2, Section 3.5.
Construction and Operation.	<p>Act N° 20.283 Law on recovery of Native Forest and Forestry Development. Ministry of Agriculture. Published in D.O. on 02/07/2008.</p>	<p>The Project has considered the necessary adjustments in its engineering, in order to carry out its structures in areas without native vegetation in conservation category, in this way, logging, elimination, destruction or grubbing-up of these species is not contemplated. Enabling of the restriction strip contemplates just one pruning procedure duly established and under forestry criteria (see Annex 2), whose goal is to avoid the generation of significant adverse effects on this environmental component, and at the same time, obeys the current electricity standard.</p> <p>In the same way, it has been considered to avoid, as much as possible, logging of native trees that are not in the conservation category. Nevertheless, in the case of not being possible to reallocate the foundation of the tower, an individual rescue will proceed, which is specified in Annex 2. It is important to clarify that under any circumstances, the activity will affect native species on the conservation category.</p>	Regional Secretariat of the Ministry of Agriculture.	Chapter 2, Section 3.5.

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFERENCE
Construction and Operation.	<p>Act N° 19.473, replaces text of Act N° 4.601 on Hunting and article 609 of the civil code. Decree N° 5. Regulation of the Hunting Law Ministry of Agriculture. Published in D.O. on 27/09/1996 and 07/12/1998.</p>	<p>In the influence area of the Project was identified the presence of seven specimen which are in some conservation states defined by SAG (2006), considered as vulnerable 5 species, 4 lizards: <i>Liolaemus lemniscatus</i>, <i>L. nigroviridis</i>, <i>L. monticola</i> and <i>L. tenuis</i>, and the condor (<i>Vultur gryphus</i>), while it is considered inadequately known specie: the culpeo fox (<i>Pseudalopex culapaeus</i>), and one specie catalogued as not endangered: <i>Liolaemus fuscus</i>.</p> <p>Considering that the greatest risk group corresponds to reptiles, all of them considered as endangered and low mobility, it has been considered the following environmental measures:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Perform a rescue of specimen of reptiles and micro mammals, in order to reallocate them in nearby areas, outside direct influence area of the Project. <input type="checkbox"/> Workers of the Project will be trained (through brochures and talks) in order to create conscience and procedures for protection of the terrestrial fauna, and restrictions in terms of chasing, scaring and hunting. Contractors will keep an updated registry of the training activities and the participants per camp or working face. <input type="checkbox"/> Additionally, this Project is incorporated to the spreading of actions for environmental protection program agreed upon by the Alto Maipo Hydroelectric Project, consisting in enabling or road signs with images of conservation interest species existing in the area and information on its hunting prohibition and biologic importance. These signs will be placed in tourist or visitors influx areas. <input type="checkbox"/> Compliance of this standard will proceed in this way. 	Metropolitan Region Agriculture and Livestock Service.	Chapter 2, Section 3.5.

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFERENCE
Construction and Operation.	Supreme Decree N° 82/74. Prohibits logging of trees and bushes in the indicated Andean pre-mountain range and mountain range areas. Ministry of Agriculture. Published in D.O. on 02/07/1974.	The Project contemplates pruning of vegetation present in the restriction strip of the Project, established in 59,9 ha. In this sense, native species in conservation category in the area of the Project will not be logged; logging of native trees that are not in conservation category will be avoided as well as bushes due to the construction of the Project.	National Forestry Corporation.	Chapter 2, Section 3.5.
Construction and Operation.	Exempt Decree N° 693/03 Ministry of Agriculture. Published in D.O. on 08/02/2003.	During the construction and operation stages of the Project, it has been considered a set of mitigation and compensation measures for the identified fauna in the Colorado river watershed. In relation to vegetation, the Project has considered the necessary adjustments in its engineering, in order to carry out its structures in areas without native vegetation in conservation category, in this way, logging, elimination, destruction or grubbing-up of such species is not contemplated. Enabling of the restrictive strip contemplates only one procedure of pruning duly established and under the forestry criteria (see Annex 2), whose goal is to avoid the generation of significant adverse effects over this environmental component, which, at the same time, comply with the current electricity standard. Likewise, it has been considered to avoid, as much as possible, logging of native trees which are not in the conservation category. Nevertheless, if it's not possible to reallocate the foundation of the tower, an individual rescue will proceed, which is specified in Annex 2. It is important to clarify that under no circumstance, this activity will affect native species in conservation category.	Agriculture and Livestock Service and National Forestry Corporation.	Chapter 2, Section 3.5.
Construction	Exempt Resolution N° 1.825 Ministry of Agriculture. Published in D.O. on 05/08/1994.	When using wood packages in goods transport entering the country will be timely reported to the provincial Office of SAG regarding entry of foreign wood packages for these to be inspected by SAG inspectors and defined its disposition.	Metropolitan Region Agriculture and Livestock Service.	Chapter 2, Section 3.5.

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFERENCE
TERRITORY PLANNING				
Construction and Operation.	<p>Supreme Decree N° 89/98 which modifies Decree N° 47/92</p> <p>General Ordinance of Urbanism and Constructions (OGUC). Ministry of Housing and Urban Planning. Published in D.O. on 29/07/1998.</p>	<p>The Owner complies with the current territory standard, so as for the "Electricity Transmission Lines Maitenes S/S – Alfalfal S/S and Alfalfal II Power Plant – Alfalfal S/S" Project corresponds to an energetic Infrastructure, specifically to an energy distribution grid, therefore, it will always be admitted because they will be subject to the dispositions established by competent organizations.</p>	<p>Regional Secretariat of the Ministry of Housing and Urban Planning.</p>	<p>Chapter 2, Section 3.6.</p>
Construction and Operation.	<p>Resolution N° 20 and its modifications, from the Metropolitan Regional Government of Santiago, Approves Metropolitan Regulating Plan of Santiago. Ministry of Housing and Urban Planning. Published in D.O. on 04/11/1994</p>	<p>Without prejudice of stated in OGUC on the energy infrastructure carry out, we need to register that the territory regulation tool enforcing the Metropolitan Regulation Plan of Santiago (PRMS) of 1994, specifically in Natural Value Areas defined as Ecological Preservation Area.</p> <p>The present Project is subject to the Environmental Impact Assessment System through eventual impacts that could carry out its construction and operation. By the restriction strip proposed for each one of the lines in compliance with the distances established by article 8.4.3 b) form this territory regulation tool</p>	<p>Regional Secretariat of the Ministry of Housing and Urban Planning.</p>	<p>Chapter 2, Section 3.6.</p>
Construction and Operation.	<p>Law Decree N° 1.224 National Tourism Service. Published in D.O. on 21/11/2001.</p>	<p>The carry out area of the Project corresponds to a Tourist Interest Zone; therefore the entry of the Project into the Environmental Impact Assessment System will be done through an Environmental Impact Assessment.</p> <p>In Chapter 6, a group of measures for the management of the impacts of the Project.</p>	<p>National Tourism Service</p>	<p>Chapter 2, Section 3.6.</p>
ELECTRICITY STANDARD				

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFEREN
Construction And Operation.	<p>Decree with Force of Law N° 4/20.018.</p> <p>Fixes Revised, Coordinated and Systematized Text of Decree with Force of Nature, Act N°1, of Mining, 1982, Electric Service General Law, in Electricity Energy Matters. Published in D.O. on 05/02/2007.</p>	Concessions according to the pointed out in the standard per sector will be required.	Superintendence of Electricity and Fuels.	Chapter 2, Section 4.1.
Construction and Operation.	<p>Supreme Decree N° 327</p> <p>Sets the Regulations on Electric Services General Law. Published in D.O. on 01/09/1998.</p>	The Project will be adjusted to the considerations indicated in this Decree.	Superintendence of Electricity and Fuels.	Chapter 2, Section 4.1.
Construction and Operation.	<p>NSEG 5 In from 1971 "Electricity, Electric Installations of strong Currents", Supreme Decree N° 4.188/55 of the Home Office, re-updated by Resolution N° 692/71 of the Superintendence of Electricity and Gas." Home Office.</p>	AES Gener S.A. will strictly obey the quoted technical standard, and the Electric Project will be presented to SEC according to the specific standard per sector.	Superintendence of Electricity and Fuels.	Chapter 2, Section 4.1.
Construction and Operation.	<p>NSEG 6 In from 1971, "Electricity, Crossings and Parallelisms", approved by Supreme Decree N° 1261/57 of the Home Office re-updated by Resolution N° 692/71 of the Superintendence of Electricity and Gas Services. Home Office.</p>	AES Gener S.A. has established the design of the Project, the restrictions from crossings and parallelisms of the electric lines present in its carry out area.	Superintendence of Electricity and Fuels.	Chapter 2, Section 4.1.

STAGE	ENVIRONMENTAL REGULATIONS	COMPLIANCE MODE	ENFORCING ORGANISM	EIA REFERENCE
PUBLIC ROADS AND TRANSPORTATION				
Construction	Supreme Decree N° 75/87 It establishes conditions for the indicated load transport. Ministry of Transport and Telecommunications. Published in D.O. on 07/07/1987.	During the construction stage, the incumbent of the project will comply with the demands established in this standard through the use of suitable vehicles and the execution of actions to avoid the leakage or dispersion of the materials such as covering the transported materials with canvases, damping of them, appropriate load and download, periodic maintenance of the trucks, etc.	MTT Department of Enforcement and Municipality	Chapter 2, Section 4.2.
Construction and Operation.	Decree with Force of Law N° 850 Ministry of Transport and Telecommunications. Published in D.O. on 25/02/1998	The Project will not be able to produce alterations on existing roads.	Roads Department	Chapter 2, Section 4.2.
Construction and Operation.	Supreme Decree N° 158/80 and Decree N° 1.910/00 It establishes the weight limits per shaft and total gross weight. Ministry of Public Works. Published in D.O. on 07/04/1980	The Project will not be able to produce alterations on existing roads.	Roads Department	Chapter 2, Section 4.2.
Construction and Operation.	Exempt Decree N° 130 It establishes restrictions over the transit of load trucks. Illustrious Municipality of San José de Maipo	Trucks to be used will be adjusted to the restrictions presented in this legal body, in terms of traffic suspension of trucks over four tons on route G-25 during the indicated days and hours.	Carabineros de Chile.	Chapter 2, Section 4.2.
ENVIRONMENTAL PERMITS PER AREA				
Construction.	Article 99 of SEIA Regulations (Updated) . D.S. N° 95/01. Ministry of the Presidency. Published in D.O. on 07/12/2002	The adopted measures for reallocation of Fauna are detailed in Chapter 6 section 3.	SAG.	Chapter 2, Section 5.

Source: Self Elaboration.

4 INDEX CARD 3: DESCRIPTION OF MITIGATION, REPAIRS AND/OR COMPENSATION, RISK PREVENTION AND/OR ACCIDENT CONTROL OF THE PROJECT MEASURES

CONSTRUCTION STAGE	
COMPONENT: Noise	
Work or action to be executed	Activities destined for construction of the lines and S/S
Environmental impact associated	IR1: Noise generation over the receptors near the Project.
Measure to be implemented	<p>In order to mitigate the impact IR1 associated to the measurement point A, the following measures will be carried out:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use of mobile barriers, which will be located in the working face, specially, around concrete mixer equipment and mixer trucks, besides particular activities such as cut of materials. These barriers will have a minimum altitude is 2 m and will have a minimum density of 10 Kg/m², for instance OSB wood of 15 mm thickness (see Annex 7). <input type="checkbox"/> Transit of unnecessary heavy equipment will be avoided and, in general, the installation of any noisy source near to the adjacent building. <input type="checkbox"/> Maintenances corresponding to equipment will be done, in order to keep them in conditions similar to new equipment. <input type="checkbox"/> Correct use of equipment that have as default noise control systems, for instance not opening compressors doors or any other machinery that might have a soundproofing booth will be endeavored. <input type="checkbox"/> The number and lasting of idle equipment in the area; especially generated by the engine of trucks during a long waiting stay will be limited. <input type="checkbox"/> All the used equipment in the construction site will count with exit and silencer systems, recommended by the manufacturer to keep the associated noise at a lower level. <input type="checkbox"/> Use of horns will be forbidden at the workplace. For such effects, a written notification on this measure will be done to the truck driver. <input type="checkbox"/> Additionally a management Plan with the community, informing about the activities program to be developed will be contemplated, for instance over the occurrence of noisy events, such as construction of foundations, amount of time these will last and when these will be carried out over point A.
Implementation Mode	Measures of noise levels according to D.S. N° 146/97
Verifiable indicator according to the Follow up Plan	Noise levels registered during measurements.
Implementation Opportunity	Monthly during the period where is located in the working faces near Point A (EI Alfalfal).
Implementation location	Working faces located near Point A (EI Alfalfal).
EIA Reference	Chapter 4 section 2.2; Chapter 5 section 3.2; Chapter 6 section 3; Chapter 7 section 3.

CONSTRUCTION STAGE	
COMPONENT: Geology and Geomorphology	
Work or action to be implemented	<input type="checkbox"/> Land movement <input type="checkbox"/> Construction of foundations. <input type="checkbox"/> Fillings.
Environmental impact associated	Without impact associated. Nevertheless, it is required to monitor that land will be in similar conditions to the original once the construction stage is finished.
Measure to be implemented	In those locations where there is natural land coverage liable to be eroded along with years due to construction of foundations, the stabilization and restoration measures are considered in order to leave the land in conditions similar to the original ones.
Implementation mode	Monitoring will be done through visual inspection.
Verifiable indicator according to the Follow up Plan	The foundations area of the towers that are still pending will be visited. A report will be delivered to SAG indicating the final result of the inspection.
Implementation opportunity	Once the construction stage is completed.
Implementation location	Around the foundations of the towers.
EIA reference	Chapter 1 section 3.1.5; Chapter 5 section 3.3; Chapter 7 section 3.
COMPONENT Flora and vegetation	
Work or action to be executed	Reallocation of people in the area foreseen for construction of the foundations of the towers.
Environmental impact associated	Without impact associated. In case of having reallocated people, the phytosanitary status, coloration, turgency and mortality of them will be monitored.
Implementation measure	Monitoring of Phytosanitary state, Coloration, turgency and mortality of the reallocated people.
Implementation mode	Monitoring will be done through visual inspection.
Verifiable indicator according to the Follow up Plan	Phytosanitary status, coloration, turgency and mortality of the reallocated people will be done. A report will be delivered to CONAF indicating the final result of each monitoring.
Implementation opportunity	The monitoring will be done from the 1, 6, 12 and 24 month after the reallocation of the people.
Implementation location	In the reallocation area of the people, near its original habitat.
EIA reference	Chapter 1 section 3.1.3; Chapter 7 section 3; Annex 2.
COMPONENT: Vertebrates Fauna	
Work or action to be executed	Perform a rescue of specimen of reptiles and micro mammals, in order to reallocate them in nearby areas, outside direct influence area of the Project.
Associated environmental impact	IR1: Alteration to the quality of habitat. State of the rescued and reallocated species.
Measure to be implemented	Perform a rescue of specimen of reptiles and micro mammals, in order to reallocate them in nearby areas, outside direct influence area of the Project.

CONSTRUCTION STAGE	
Implementation mode	Monitoring of rescue will be done through visual inspection.
Verifiable indicator according to the Follow up Plan	Presence of reallocated species in areas of reallocation sites. A report will be delivered to SAG indicating the result of each monitoring.
Implementation opportunity	Monitoring will be carried out the 1, 2 and 3 month once the rescue and reallocation of the species is done. An assessment about keeping these measures will be done together with the authorities after the third monitoring.
Implementation location	In the reallocation area of the people, near its original habitat.
EIA reference	Chapter 5 section 4.2; Chapter 6 section 3; Chapter 7 section 3.
COMPONENT: Archaeological and Cultural Heritage	
Work or action to be executed	Land movement (excavations).
Associated Environmental Impact	Without impact associated. An in land analysis of the potential existence of other archaeological remains that might be underground, not identified in the lifting of the base line will be carried out.
Measure to be implemented	In order to identify the potential archaeological remains underground, it is contemplated a permanent archaeological monitoring during the activities of land movements (excavations) associated to the construction of the foundations.
Implementation mode	Monitoring will be done through visual inspection.
Verifiable indicator according to the Follow up Plan	Archaeological report at the end of the land movement stage in the case of not identifying remains of archaeological character.
Implementation opportunity	Monitoring will be done during the whole period of land movements (excavations) associated to the construction of foundations.
Implementation location	Area of construction of foundations.
EIA reference	Chapter 5 section 5.2; Chapter 6 section 4; Chapter 7 section 3.
COMPONENT: Landscape	
Work or action to be executed	<input type="checkbox"/> Clearance of land of construction of the structures. <input type="checkbox"/> Land movements. <input type="checkbox"/> Construction of foundations. <input type="checkbox"/> Assembly of structures and equipment of S/S. <input type="checkbox"/> Enabling of the restrictive strip with forestry and pruning methods only in the corresponding areas. <input type="checkbox"/> Laying out and tightening of the conductors.
Associated environmental impact	IP1: Alteration to the visual quality of the landscape
Measure to be implemented	<p>Construction of a lookout in the future access road to Alfalfal II Power Plant, in the area near to the auxiliary forebay of Maitenes Power Plant, where it will be possible to have panoramic views of the valley.</p> <p>The design of itself will be established according to aesthetic and environmental criteria, in order to avoid not generating new landscape impacts, as well as affecting the existing vegetation of the area.</p>
Implementation mode	Technical inspection of the lookout design. Later on, visits to the construction site to see the final result will be done.
Verifiable indicator according to the	Aesthetic and environmental criteria report considered in the design of the

CONSTRUCTION STAGE	
Follow up Plan.	Lookout and demands of the lookout.
Implementation opportunity	Prior to operation of the Project.
Implementation location	In the foreseen area for the lookout carry out.
E IA reference	Chapter 5 section 5.3; Chapter 6 section 3; Chapter 7 section 3.

Source: Self Elaboration.