

Environmental Aspects of Electricity

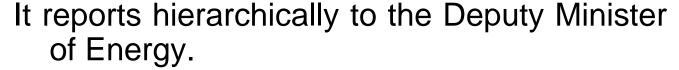


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General Manager Energy and Environmental Matters

DGAAE

The Directorate General of Energy and Environmental Matters (DGAAE) is an agency within the Ministry of Energy and Mines.



The DGAAE started operations on <u>1 April</u>, <u>2004</u>.





Functions and Powers of the DGAAE

Propose the conservation and environmental protection policy for sustainable development of energy activities.







Functions and Powers of the DGAAE

- Standardise the environmental and social impact assessment related to sector activities.
- Evaluate and approve environmental studies presented to the Ministry of Energy and Mines.
- Promote training and qualification programmes regarding environmental subjects and matters concerning the relations of companies with civil society.
- Register and authorise public and private institutions to draft Environmental Studies on the impacts of activities in the sector.



DGAAE HAS THE AUTHORITY TO EVALUATE

Environmental Studies for projects involving electricityrelated activities:

- Rural Electrification Projects (Rural Electrical Systems) that encompass two or more regions.
- Electrical Generation with Renewable Energy (Hydropower, Solar, Wind, Geothermal and other) and Thermoelectricity Power Plants producing over 20MW of power.
- Electrical Transmission (national Transmission Lines).
- Electrical Distribution greater to or equal to 30MW.

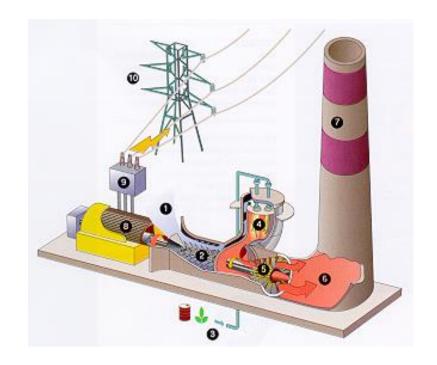
Regulations Electricity Sector

- Regulation on Environmental Protection in Electrical Activities, D.S. No. 29-94-EM.
- D.S No. 011-2009-EM.- Amending Supreme Decree No. 025-2007-EM Implementing Regulation of Law No. 28749, General Rural Electrification Law
- Regulation on Citizen Participation in Energy Activities in the Administrative Procedures of Evaluation of Environmental Studies, R.M. No. 223-2010-MEM-DM.
- DS No. 054-2003-PCM, Decree approving special provisions for the execution of administrative procedures.
- DS No. 060-2013-PCM, Decree approving special provisions for the execution of administrative procedures and other measures for promoting public and private investment projects.

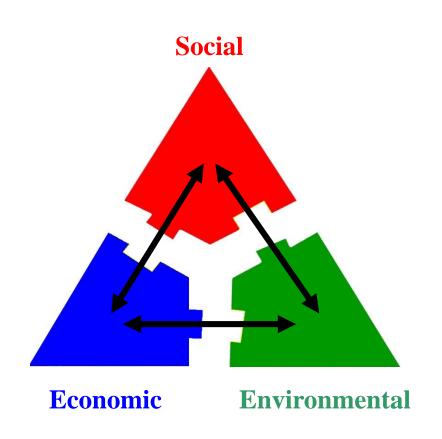
REGULATION ON ENVIRONMENTAL PROTECTION IN ELECTRICAL ACTIVITIES, D.S. NO. 29-94-EM

Aimed at establishing regulations and the interaction of electrical activities in

Generation, Transmission and Distribution systems with the environment under the concept of sustainable development.



Sustainable Development





Before initiating, modifying or expanding any electricityrelated activity, the following is required:

- Environmental Study.
- Environmental standards, Peruvian LMP Legislation / International IFC.
- Regulation on Citizen Participation.
- Coordination with other authorities.





- Art. 4 indicates that only projects that require permits or concessions must submit EIAs to the DGAAE.
- Art. 7 indicates that natural and legal persons that do not require a concession or permit must adopt any measures necessary to mitigate the impact of their activities on the environment, observing the Maximum Allowable Limits.

Classification of D.S.019-2009-MINAM Projects



Article 36.- Classification of investment projects

Public or private projects subject to SEIA in one of the following categories:

- Category I Environmental Impact Statement (EIS): Environmental study which assesses investment projects for which slight
- negative environmental impacts are foreseen. Category II Semidetailed Environmental Impact Study (EIS-sd): Environmental study which assesses investment projects for which moderate
- negative environmental impacts are foreseen. Category III Semidetailed Environmental Impact Study (EIS-sd): Environmental study which assesses investment projects for which significant negative environmental impacts are foreseen.

Request for Classification ... Art. 41



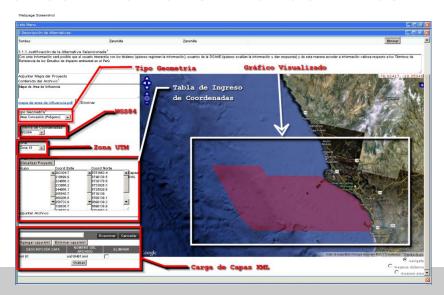
The owner must submit the request for classification of its project with at least the following:

- a)General information about the owner and the entity authorised to prepare the Preliminary Assessment.
- b)Description of the project.
- c)Aspects of the physical, biotic, social, cultural and economic environment.
- d)Citizen Participation Plan.
- e)Description of possible environmental impacts.
- f)Prevention, mitigation or corrective measures for environmental impacts.
- g)Monitoring and Control Plan.
- h)Shutdown or Decommissioning Plan.
- i)Execution timeline.
- j)Implementation budget.

Request for Classification ... Art. No. 41



- For Category I, the Preliminary Assessment document constitutes the EIS referred to in article 36; if applicable, it shall be approved by the Competent Authority, which will issue the environmental certification.
- For Categories II and III, the owner must submit a proposal for terms of reference for the corresponding environmental impact study for approval.
- ToR for common or similar activities.





NOT ONLY DGAAE -> BINDING OPINIONS OF OTHER INSTITUTIONS

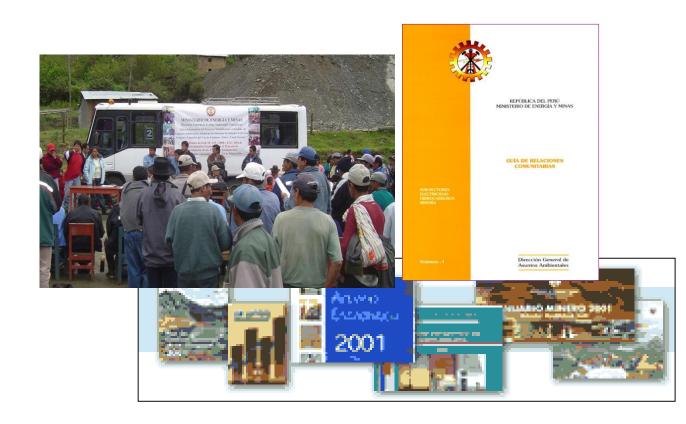
- Technical Opinion of the Ministry of Agriculture DS No. 056-97-PCM.
- Within protected natural areas or buffer zones, the Ministry requests a Favourable Technical Opinion from SERNANP-MINAM.
- For the approval of environmental impact studies related to water resources, a favourable opinion from the National Water Authority (ANA) is required. Art 81 of the Law on Water Resources.
- Binding Prior Technical Opinion of MINCU Indian Reserves Peoples in Voluntary Isolation or Initial Contact. Art. No. 35 of the Regulation of the Law on Peoples in Isolation or Initial Contact.







ENVIRONMENTAL STUDIES



Citizen Participation

Citizen Participation

Citizen participation is a dynamic, flexible process which, through the application of various mechanisms, aims to do the following: make timely and useful information about projected or ongoing energy activities available to the affected population; promote dialogue and consensus-building; and discover and channel opinions, positions, viewpoints, observations or contributions with respect to the activities for decision-making by the Competent Authority in the administrative proceedings under its responsibility.







Citizen Participation Mechanisms Evaluation process - Environmental Impact Studies

MANDATORY:

- ✓ Workshops
- Public Hearings



COMPLEMENTARY:

- ✓ Comment/suggestion box
- ✓ Guided tours of the project area or facilities
- √ Team of Promoters
- ✓ Citizen Information and Participation Office

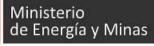




PARTICIPATIVE WORKSHOPS













- ✓In the language of the zone
- ✓In the area of direct influence





LAWS THAT REGULATE GEOTHERMAL ENERGY IN PERU

 Law No. 26848, Organic Law or Geothermal Resources. (1997-07-29)

 Supreme Decree No. 019-2010-EM, New Implementing Regulation of the Organic Law on Geothermal Resources. (2010-04-08)



<u>RECONAISSANCE</u> - (FREE): limited to observing whether the zone of interest may be a source of resources.

EXPLORATION – (AUTHORISATION OF GEOTHERMAL RESOURCES): determines the dimensions, position, characteristics and magnitude of the geothermal resources.

Phase I.- for carrying out studies before the drilling of deep exploratory wells.

Phase II.- for the drilling of deep exploratory wells.

<u>EXPLORATION</u> – (CONCESSION OF GEOTHERMAL RESOURCES): to obtain geothermal energy by commercial exploitation of geothermal fluids.



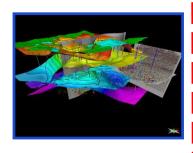
Geothermal Project Environmental Studies

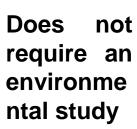
EXPLORATION

EXPLORATION PHASE I

EXPLORATION PHASE II

OPERATION











Preliminary Environmental Assessment

DIA

-DIA

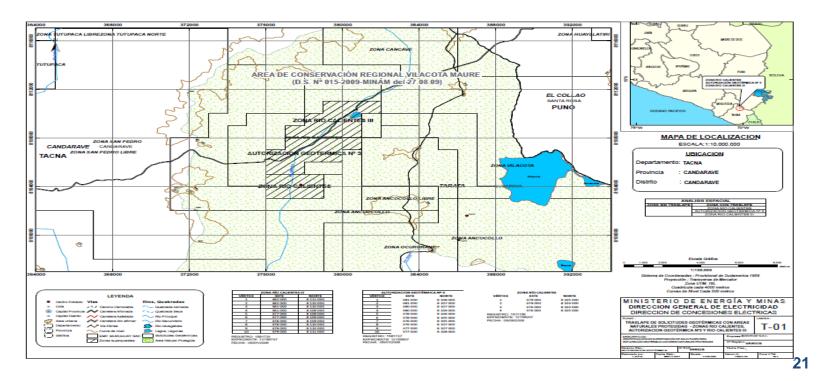
-EIA (sd)

-EIA (d)

Classified according to the environmental impacts to be generated, as applicable.

OVERLAP WITH PROTECTED NATURAL AREAS

In the cases where areas included in geothermal permit applications overlap with protected natural areas, a technical compatibility opinion issued by SERNANP is required in accordance with articles 27 and 28 of Law No. 26834, Law on Protected Natural Areas.



THANK YOU VERY MUCH

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