



# Thematic Line 1

## Strengthening the Institutional Framework





- **About the team project**
- **General Background**
- **Diagnosis**
- **International review**
- **Proposals**
- **Acknowledgments**



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- **Master of Science, Electric Engineering**, The Victoria University of Manchester, United Kingdom.
- **Civil Electrical Engineer**, Universidad de Chile
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- **Director a Founding Partner of Systep Ingeniería y Diseños.**
- During **his professional activity of more than 50 years**, Dr. Rudnick has developed a vast trajectory in issues related to the regulation of the electric sector in Latin America, both in the regulation and pricing of transmission and distribution and in the organization of competitive generation markets.
- Dr. Rudnick also has developed several technical studies in the area of transmission and distribution. He has rendered consultancy services to large consumers, electric firms and governments in Argentina, Bolivia, Brazil, Canada, Central America and Panama, Chile, Colombia, Dominican Republic, Spain, England, Mexico, Peru, Tasmania, Uruguay, and Venezuela, and for the UNDP, UNCTAD and the World Bank.

# About Alejandro Navarro Espinosa



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- **Industrial Civil Engineer with an Electrical Engineering Diploma**, Pontificia Universidad Católica de Chile.
- **Senior Lecturer** in Electrical Engineering Department, Universidad de Chile.
- **Associated Director at SYSTEP Ingeniería y Diseños**. Santiago, Chile.
- As an expert in the area, he has been invited to teach courses and seminars for OLADE, International Development Bank, Universidad de Estatal de Campinas (Brazil), Universidad Nacional de San Juan (Argentina), among others.



# Thematic Line 1

## *General Background*

- **Identify actions and propose recommendations that seek the adaptation of the Peruvian electricity sector institutional framework for the transition towards a new sectorial architecture and electricity market.**
- This analysis examines 5 topics:
  1. Institutional Transformation of COES.
  2. Integration of Energy Planning.
  3. Dynamization of the Natural Gas Market.
  4. Modernization of Public-Owned Electricity Companies.
  5. Strengthening of market regulation and supervision/monitoring.

- **Bounded rationality of the agents** (and policymakers)
  - Incomplete information, limited time and resources, impossibility to properly assess all the alternatives and their outcomes, impossibility of engage in exhaustive cost-benefit analysis, etc. (Simon, 1985).
- **Institutions can help**
  - *institutions can be employed to improve the rationality of individual decision making, thereby improving the overall quality of policymaking\**.
  - *the problem rests not with individual policymakers or citizens; when it comes to making choices, humans are what they are. Instead, the problem lies with the design of public institutions, which could be better constructed to channel individual self-interest toward choices that result in more effective and efficient policy outcomes\**.

(\*) Kevin Smith and C. Larimer, *the public theory premier*, 2009

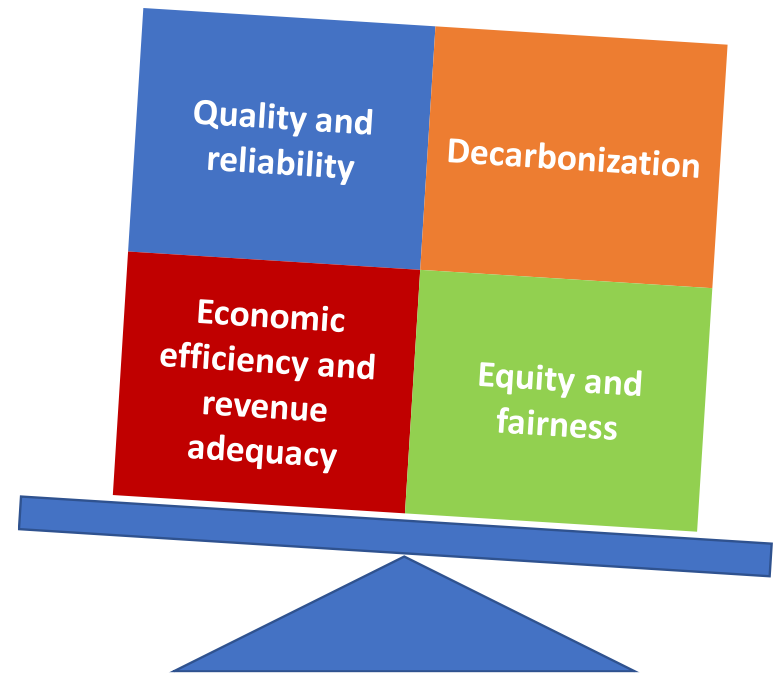
- **Checks and balances System – Separation of powers**
  - *Cuando el poder ejecutivo y el legislativo están unificados en el mismo individuo o el mismo cuerpo de magistrados, no hay libertad, porque surgirán siempre aprensiones de que si se llegarán a dictar leyes tiránicas serán ejecutadas también de forma tiránica (Montesquieu).*
  - Importancia de la existencia de instituciones con límites claros con obligaciones de supervisión cruzadas y evitando ser juez y parte, pero también ser creador de normas y vigilante de las mismas.





Pursuing effective solutions to promote development in our continent:

Energy Institutions in the región have the challenging task to balance  
**i) energy security, ii) emissions reduction, iii) economic efficiency and iv) justice and equity.**



## 1. Institutional framework diagnosis.

- Thorough analysis of laws, bylaws, resolutions and procedures that set rules regarding current institutional framework.
- Identify main elements to be improved or modified

## 2. Analysis of international markets.

- Analysis of benchmark markets and identification of international best practices.
- Selection of best practices that best fit the Peruvian context.

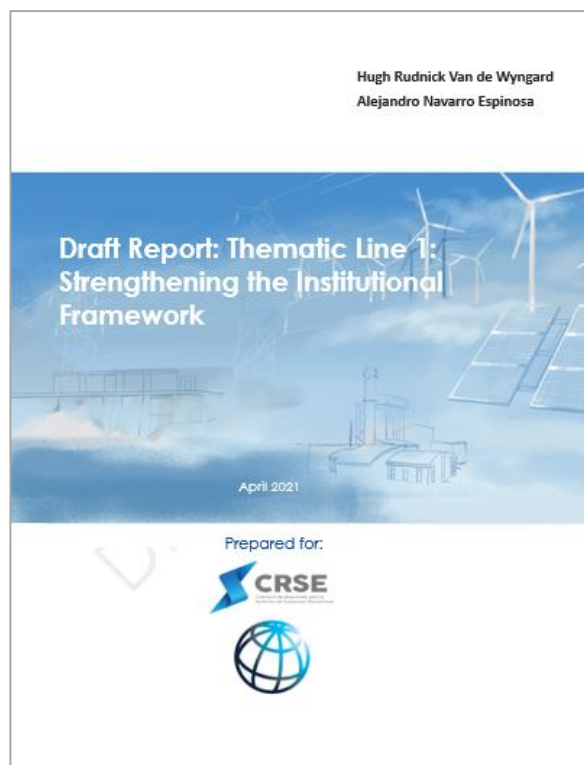
## 3. Elaboration of high-level proposals and recommendations.

- Elaboration of set of proposals to be applied in the Peruvian electricity sector.

# Final draft report



- Institutional framework diagnosis
- Analysis of international markets
- Elaboration of high-level proposals and recommendations



Draft Report: Thematic Line 1: Strengthening the Institutional Framework

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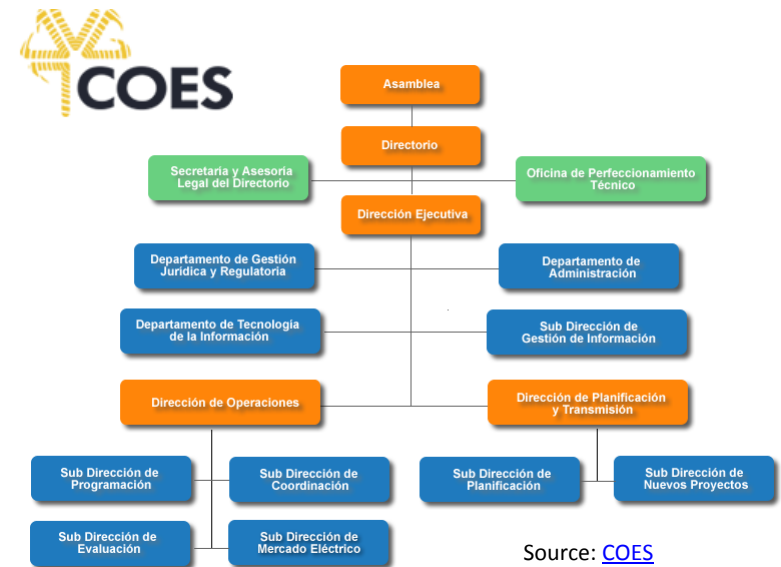
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## Thematic Line 1

### *1. Institutional Transformation of COES*

- COES is SEIN's system operator and short-term market manager.
- The current COES' structure exists since the enactment of the Law N° 28.832 (2006).
- Before this law, COES was composed only by generation and transmission companies.
- COES has:
  - i. Public Interest responsibilities (such as elaborate technical procedures, elaborate the transmission plan, guarantee competition conditions in the short-term market).
  - ii. Operational functions (coordinate real time operation, manage short-term market, develop and execute operation programs, solve controversies among COES' members among others).
- COES is composed by the SEIN's agents and its decisions are binding for all agents.

- COES has three main bodies: The Assembly, the Board of Directors, and the Executive Direction.
- The Assembly is the supreme body:
  - It is composed by four subcommittees: o) Generation companies, ii) Distribution companies, iii) Transmission companies, iv) and Free Users.
  - Its main functions are to appoint and remove the Board Chair, approve the annual budget, approve and modify COES's statutes, among others.
- The Board of Directors:
  - Is responsible for the compliance for COES' main functions.
  - Each subcommittees elect one director. Chair is elected by the Assembly.
  - Among its main responsibilities, the Board appoints the Executive Director and solves controversies.
- The Executive Direction:
  - Manages COES.
  - Is composed by the Operating Directorate and the Planning Directorate

# Diagnosis - Summary



Element	Diagnosis	Effects
Corporate Governance	<ul style="list-style-type: none"><li>• Underrepresentation of agents (small agents, new technologies).</li><li>• Some members could have more influence than others.</li><li>• COES Board is not completely independent from COES members</li></ul>	<ul style="list-style-type: none"><li>• Adoption of agreements and COES' functions could be biased on behalf of specific groups of interests.</li><li>• Incumbent players have more influence than new players (and technologies).</li></ul>
Budget	<ul style="list-style-type: none"><li>• Budget payments are allocated to each member based on revenues registered in the short-term market</li></ul>	<ul style="list-style-type: none"><li>• Incentives for large companies to exert their influence through delaying Budget payments.</li></ul>
Dispute Resolution	<ul style="list-style-type: none"><li>• COES' Directors and Executive Director could simultaneously act as judge and party.</li><li>• Ad-hoc tribunals are created only if disputes are escalated to that instance.</li></ul>	<ul style="list-style-type: none"><li>• Potential conflicts of interests.</li><li>• Ad-hoc tribunals could not have sufficient knowledge (or independency) and experience in solving controversies.</li></ul>

Element	Diagnosis	Effects
COES' functions	<ul style="list-style-type: none"><li>• SEIN operation and market management are undertaken by a same unit, considering that the current strong interdependency between both functions.</li><li>• COES does not have explicit market monitoring functions.</li><li>• COES elaborates transmission plans</li></ul>	<ul style="list-style-type: none"><li>• More specialized units will be required in system operation and market management if moving forward to a new electricity framework.</li><li>• An active competition oversight will be required if including new market-based mechanisms.</li><li>• Transmission plan have successfully conducted by COES. However, strategic energy plans should be elaborated by a different entity.</li></ul>



# International Analysis - Governance



	CAISO (USA)	PJM (USA)	IESO (CANADA)	CEN (Chile)	AEMO (Australia)
Board Members & Executive Management	5 members 3-year term Management appointed by Board.	10 members 3-year term Management appointed by Board.	Between 8 and 10 . 2-year term Management appointed by Board.	5 members 5-year term Management appointed by Board.	Between 5 and 10. 4-year term Management appointed by Board.
Nomination and appointment	Agents participate in nomination. Governor decides appointment.	Agents participate in nomination and final election.	Board Nominates, Ministry of Energy appoints.	Nominations Committee composed by 4 members (2 are government officials) appoints members.	Market participants participate in nomination. Appointment by Energy Ministers.
Who funds Budget?	Market participants through system fees.	Market participants through system fees.	Market participants through system fees.	End users through postage stamp charges.	Market participants through system fees

# International Analysis – Dispute Resolution



	CAISO (USA)	PJM (USA)	IESO (CANADA)	CEN (Chile)	AEMO (Australia)
Dispute Resolution	3-stage procedure involving: <ul style="list-style-type: none"> <li>i) Good-faith negotiation</li> <li>ii) Mediation</li> <li>iii) Arbitration</li> </ul>			Independent Expert Tribunal (Expert Panel)	2-stage procedure involving: <ul style="list-style-type: none"> <li>i) Negotiation</li> <li>ii) Dispute Resolution procedure.</li> </ul>

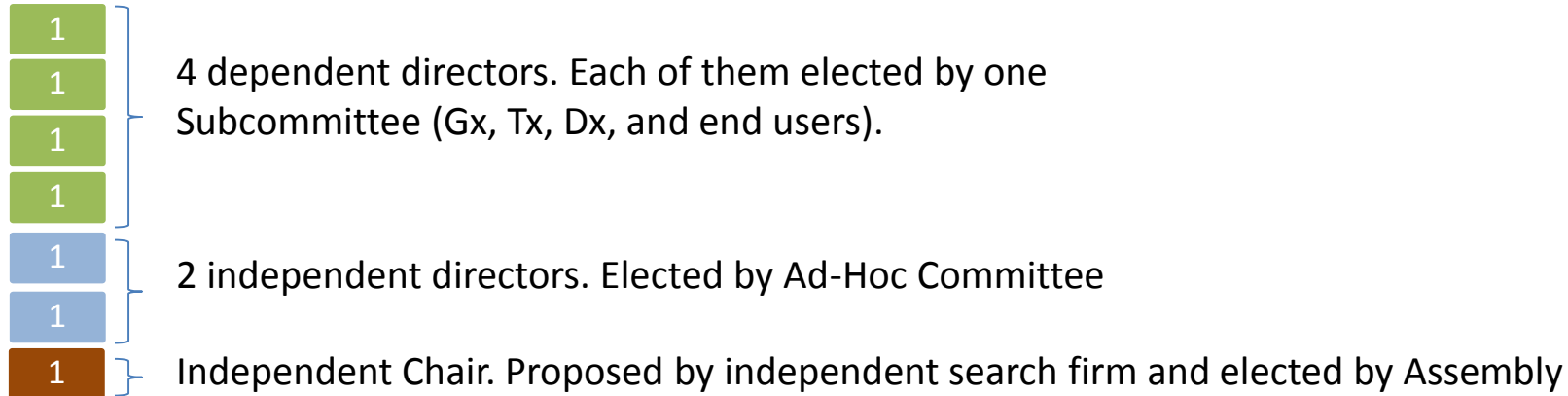


- System Operation and Management:
  - These functions are conducted by same entity although in some ISOs under different divisions (CEN, CAISO).
  - PJM has subsidiaries that help in specific functions (market settlements and billings, renewable credit).
- Long-term planning functions:
  - All ISO's conduct planning functions, subject to the approval of regulators and/or including the participation of stakeholders.
- Market Monitoring:
  - PJM, CAISO and CEN have own market monitoring unit.
  - IESO have market monitoring unit that reports to the regulator
  - In Australia, market monitoring unit is within regulator.

# Proposals – Board Members

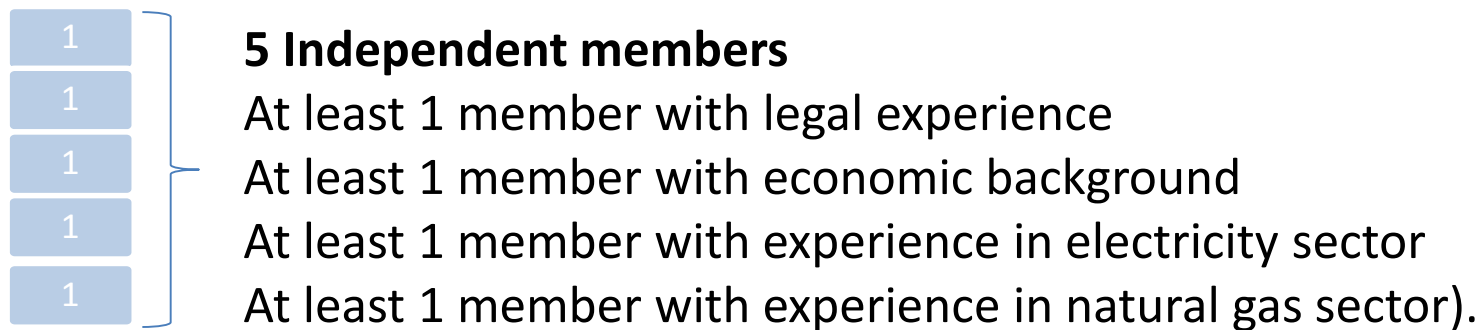


- Increase number of board members (from 5 to 7).



- Members appointed every 4 years.
- Non-chair members elected in staggered terms.
- Board meetings held at least every 2 weeks (currently at least once per month). Must have at least 5 attending members.
- Vertically integrated companies can have only one registered member with voting rights.
- COES' budget allocated to end users through postage stamp charge.

- Dispute Resolution:
  - A permanent **Independent Expert Tribunal** composed by 5 members should be created.
  - Responsible for solving disputes by COES' bodies with market agents, disputes between OSINERGMIN and COES or market agents, and disputes among agents.
  - Decisions are binding for all parties.
  - Members would be appointed by independent Ad-hoc Committee



- System Operation and Management:
  - No any strong evidence in favor of separating the market management functions from the system operation responsibilities. Separating these functions under separate divisions will depend on the number of market-based mechanisms that will be incorporated.
- Long-term planning functions:
  - COES should continue to conduct transmission planning, however a comprehensive energy planning must be conducted by a different entity.
- Market Monitoring:
  - A new market monitoring unit should be established, reporting directly to COES' board. The unit, mainly focused on the wholesale market, should provide inputs to INDECOPI.



Source: [COES](#)

# Thematic Line 1

## *2. Integration of energy planning*

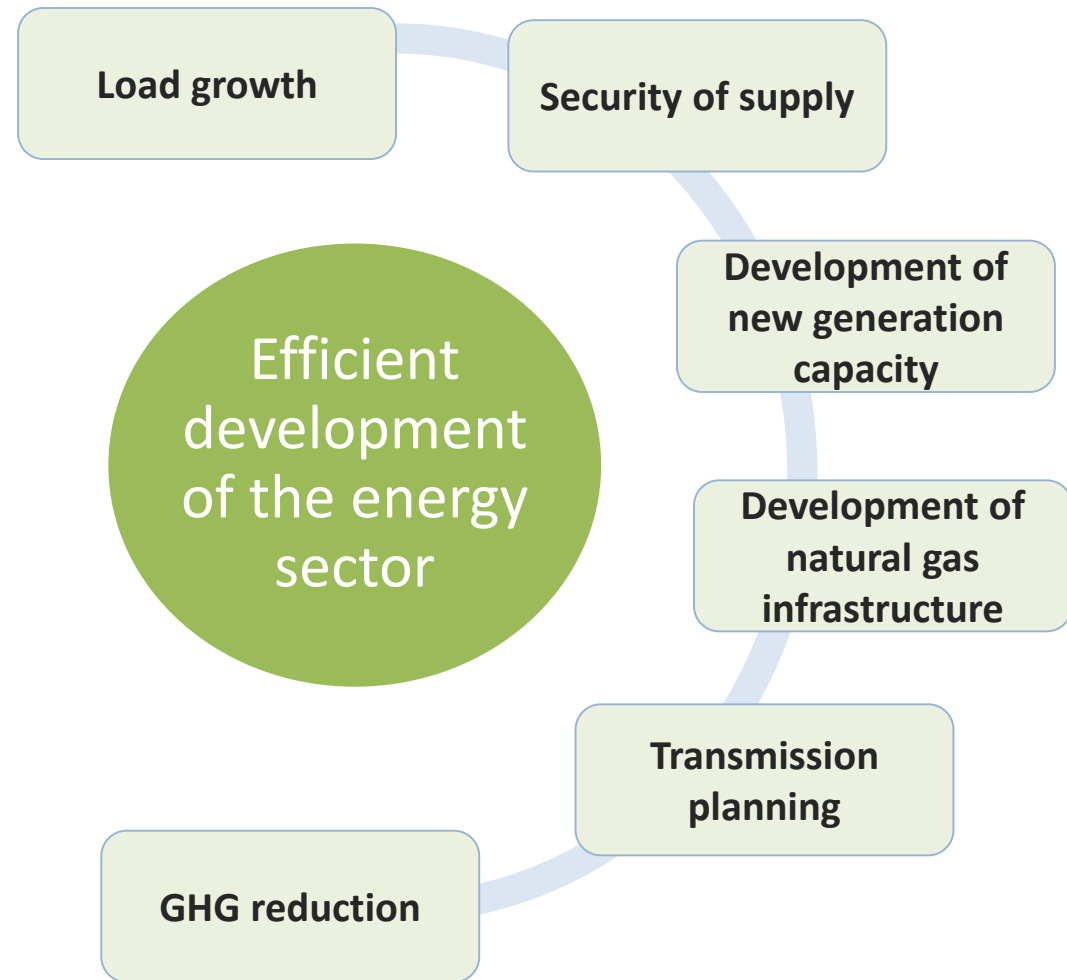
- There are multiple agents that intervene, either directly or indirectly in different planning processes (in transmission and natural gas) or in initiatives that encourage the development of new infrastructure (e.g., in generation).

Process	Transmission planning and development	Generation development	Development of natural gas infrastructure
Entities that are involved	<ul style="list-style-type: none"> <li>• COES</li> <li>• OSINERGMIN</li> <li>• Proinversión</li> <li>• MINEM</li> </ul>	<ul style="list-style-type: none"> <li>• Distribution Companies</li> <li>• MINEM</li> <li>• OSINERGMIN/Proinversión</li> </ul>	<ul style="list-style-type: none"> <li>• Perupetro</li> <li>• Proinversión</li> <li>• MINEM</li> <li>• Concessionaires</li> </ul>
Participants	<ul style="list-style-type: none"> <li>• Agents</li> <li>• Government</li> </ul>	<ul style="list-style-type: none"> <li>• State-owned companies</li> <li>• Private agents</li> <li>• Distribution companies</li> </ul>	<ul style="list-style-type: none"> <li>• Concessionaires</li> <li>• Agents</li> <li>• Perupetro</li> </ul>



- Transmission planning processes have followed consistent criteria and have successfully been conducted in the last 10 years.
- Transmission Plans:
  - Transmission plans are elaborated by COES, reviewed by OSINERGMIN, and approved by MINEM
  - Transmission expansion planning processes that are performed every 2 years by COES and approved by the MINEM considering a 10-years horizon.
  - Transmission Plans bring two main results: The Binding Plan and the Long-Term Plan. The Binding Plan considers all the projects whose execution is needed while the plan is in force (2 years). Long-Term Plans includes all non-binding projects that will be reviewed and reconsidered in future plan updates.
- Transmission Investment Plans:
  - Set of investments (either new or network upgrades) that includes transmission facilities outcoming from a planning study, updated every 4 years.
  - Planning studies are mandatory and must be developed by each concessionary.

***“Energy system integration***  
*the coordinated planning and operation of the energy system ‘as a whole’, across multiple energy carriers, infrastructures, and consumption sectors – is the pathway towards an effective, affordable and deep decarbonization of the European economy in line with the Paris Agreement and the UN’s 2030 Agenda for Sustainable Development.”*

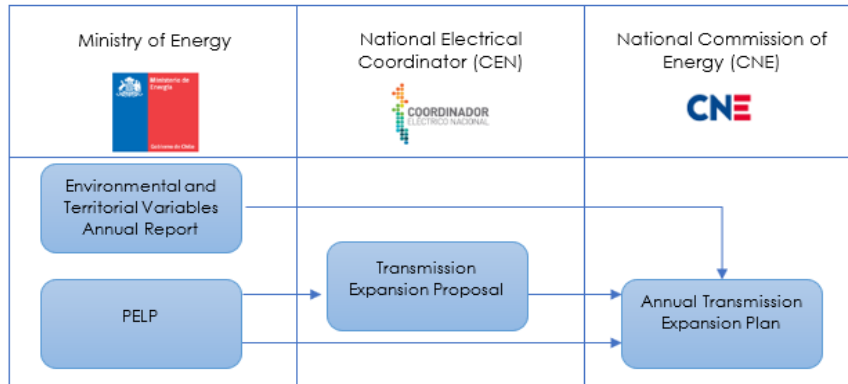


(\*) European Commission, Powering a climate-neutral economy: An EU Strategy for Energy System Integration , July, 2020

Elements	Diagnosis	Main effects
Planning processes and development of new infrastructure	<ul style="list-style-type: none"> <li>Planning processes are conducted by multiple agents and there is no comprehensive energy sector planning.</li> <li>No coordination between the energy sector and other industries.</li> <li>No systematic planning process pursuing consistent public policies under a long-term view.</li> </ul>	<ul style="list-style-type: none"> <li>Absence of integrated energy planning has led to non-optimal investment and inefficient development of the energy sector.</li> <li>Weak coordination between the country's energy plans and its social and environmental objectives.</li> <li>Goals defined by acting governments.</li> </ul>
Transmission planning	<ul style="list-style-type: none"> <li>Transmission Investment plants, elaborated by concessionaries and Transmission Planning, elaborated by COES are not synchronized in time.</li> </ul>	<ul style="list-style-type: none"> <li>The non synchronization could lead to a delay in the connection of power plants to SCTs and SSTs.</li> </ul>



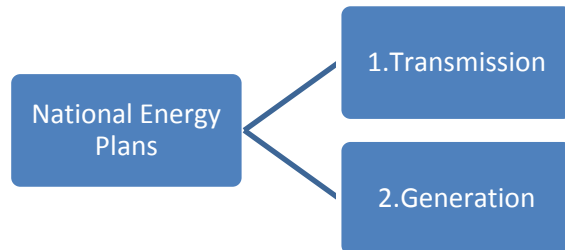
## Energy plans in Chile



1. Ministry of Energy elaborates Long-term energy plans (PELP), defining different long-term scenarios.
2. CEN elaborates transmission expansion proposal (considering PELP's assumptions).
3. CNE elaborates final transmission expansion plan → binding development of new transmission infrastructure.



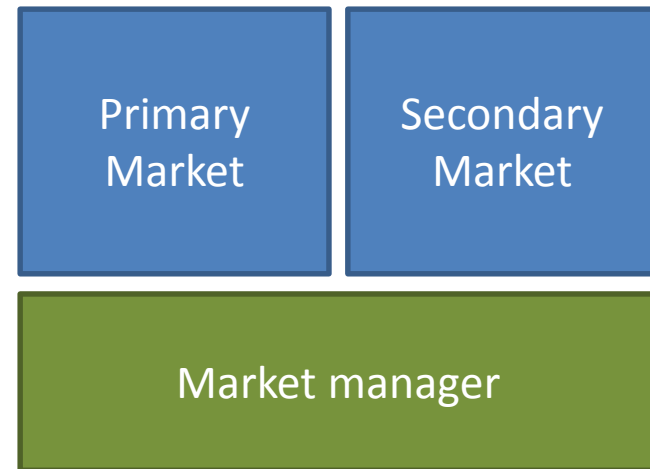
## Energy plans in Colombia



1. UPME (unit within Ministry of Energy and Mining) elaborates long-term energy plans under different long-term scenarios
2. Long-term plans output are a **Compulsory Transmission Expansion Plan** and an **Indicative Generation Expansion Plan**.

- Energy plans:
  - Long-term planning process would be conducted by a specialized unit within MINEM with technical independence.
  - Energy plans conducted every 6 years and reviewed every 2 years considering a 30-year horizon.
  - Participation instances of stakeholders, although definitive scenarios will be defined based on objective metrics and criteria.
  - Planning process would involve the co-optimization of electricity and gas sectors.
  - Outputs: **indicative guidance for generation and gas sectors** and main inputs to be considered in transmission planning.

- Transmission planning:
  - A single process, led by COES, integrating the Transmission Plans and Transmission Investment Plans.
  - Final plan subject to be approval by OSINERGMIN.
  - Each proposed project would be evaluated in its own merit (net present value must be positive).
  
- Additional proposals:
  - Planning of technology-focused auctions should take into account the main results of long-term energy plans and include the participation of stakeholders.
  - Auctions to supply regulated users should be centralized into a single bidding process. Distribution companies with excess contracted capacity could transfer contracts to companies with insufficient energy requirements.



## Thematic Line 1

### ***3. Dynamization of the Natural Gas Market***

- Most of the internal natural gas consumption is supplied by CAMISEA fields (lot N° 88)
- The development of the CAMISEA Project was conducted after the Consortium Shell/Mobil ceased the development of the CAMISEA fields.
- The government elaborated a promotion strategy to exploit the CAMISEA reserves and incentivize the creation of an internal gas market, and awarded the production, transport and distribution concessions to private investors.
- The regulation governing the CAMISEA project are different from the norms set to rule natural gas activities in other fields:
  - Price caps are set for natural gas supply.
  - A revenue mechanism (paid by the demand) to guarantee the pipeline's viability was established to the transport system.



- There are multiple constraints and have characteristics that have distorted price formation in the electricity and natural gas markets:
  - High take or pay levels for natural gas supply, transport and distribution contracts.
  - Generators are allowed to declare part of the total natural gas costs (although the Supreme Court recently judged against this rule)
  - High firm transport contract requirements to gas-based power plants to receive capacity payments
  - An almost non-existing secondary market where consumers can trade their excess contracted capacity.
  - There are still many regions that not have access to affordable natural gas.

Elements	Diagnosis	Main effects
Gas supply and transport contracts	<ul style="list-style-type: none"> <li>Gas supply and transportation contract schemes signed by generators and gas provides include take or pay clauses</li> <li>Gas-based plants are not declaring their total gas costs, only declaring the share not considered as take or pay.</li> </ul>	<ul style="list-style-type: none"> <li>Low incentives for generators to trade excess gas supply and transport capacity.</li> <li>The existing constraints have led to an inefficient consumption of natural gas in the electricity market as well as in other industries.</li> </ul>
Capacity payments requirements	<ul style="list-style-type: none"> <li>Gas-based plants are required to firm transport agreements (have high levels of Daily Reserved Capacity) to receive capacity payments.</li> </ul>	<ul style="list-style-type: none"> <li>Recently, Supreme Court judged declaring the existing price declaration scheme as unconstitutional, while firm transport capacity requirements to be considered for capacity payments were reduce. The impacts of these measures remain to be seen.</li> </ul>

Elements	Diagnosis	Main effects
Secondary market	<ul style="list-style-type: none"> <li>A secondary market considering electronic auctions has not been implemented yet.</li> <li>Only few bilateral agreements between consumers are signed.</li> <li>Bilateral sales currently only consider the transfer of transportation capacity.</li> </ul>	<ul style="list-style-type: none"> <li>Recent norms have instructed the implementation of secondary market within a 2 year-period that would operate through electronic auctions and would be managed by MINEM. The implementation of a market manager could help dynamizing the secondary market.</li> <li>Raising consumption of other users would increase interest in signing bilateral agreements with generation companies.</li> </ul>
Natural gas consumption among different type of users	<ul style="list-style-type: none"> <li>Massification of gas consumption began to take in Lima, Callao and interior regions of Peru.</li> <li>However, prices paid by end users in interior regions are higher to transportation costs, considering that natural gas is liquefied and transported by tankers to these regions</li> </ul>	



- Proposal are centered in improving the secondary market. A highly liquid secondary market would contribute to drive generators to include their full fuel gas costs in their variable costs' declaration.
- The modifications that will be considered for the secondary market, included in the new Bylaws point in the right direction.
- The secondary market should consider the following:
  - A single independent entity (and not MINEM) must be responsible in both managing and administrating the secondary gas market.
  - The role of the Market Manager is to promote and manage the trading of natural gas supply and transport capacity in the secondary market
  - Contracts traded in the secondary market must be standardized.
  - Market manager must assure an adequate remuneration with the right incentives (symmetric incentives with penalties and premiums).



Source: [FONAFE](https://www.fonafe.gob.pe/)

## Thematic Line 1

# 4. Modernization of Public-Owned Electric Companies

- Private and public participation in the electricity sector:
  - Transmission activities are conducted by private companies.
  - Most of distribution companies are state-owned.
  - State-owned generation companies, have lost share in the total capacity mix on behalf of private companies.
  - **Main challenges are in distribution companies that need to undertake significant investments to increase electricity coverage and improve the quality of service**

## Ownership in generation segment

Ownership	Installed Capacity (MW)	Share %
Public	1,623	12%
Private	11,557	88%

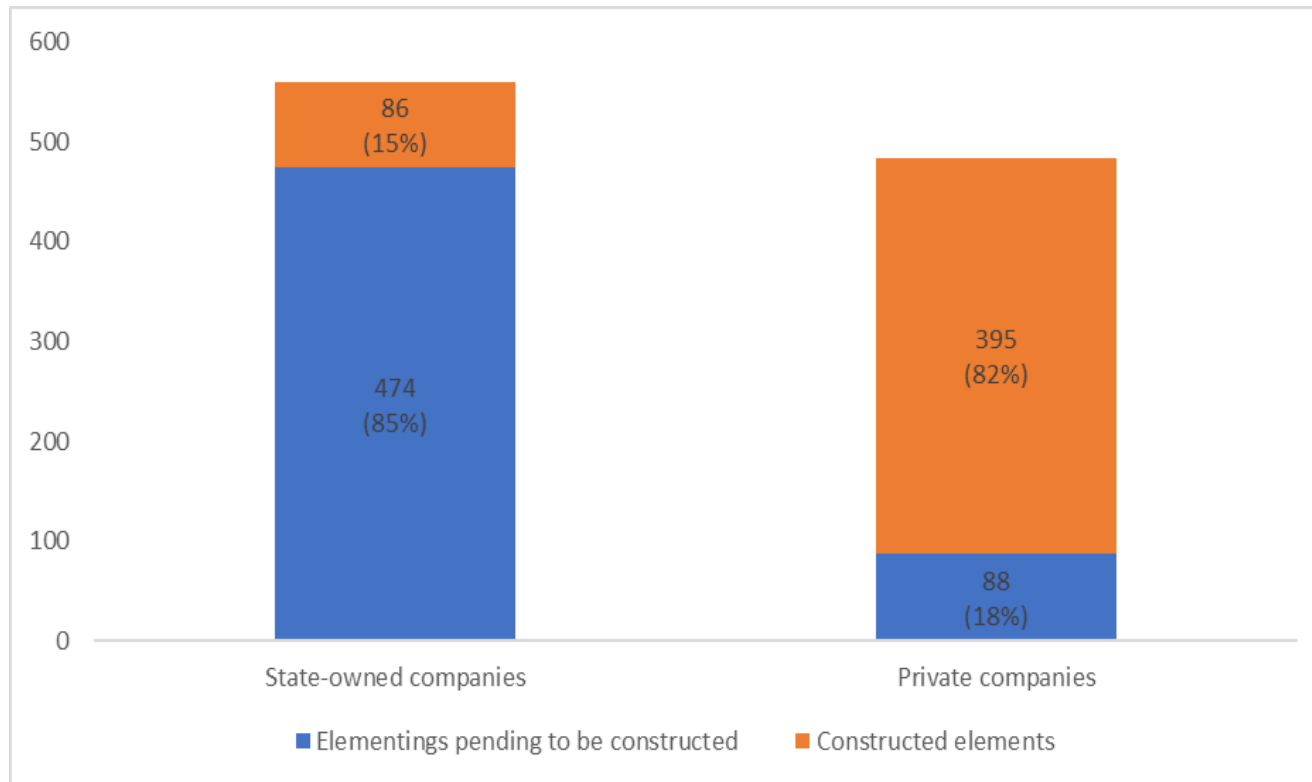
Source: COES, 2019

## Ownership in distribution segment

Ownership	Clients served	Share %
Public	4,760,889	63%
Private	2,852,313	37%

Source: SÍDEC, 2019.

- Progress of Investment Plans conducted by distribution companies (important delay in public developments)



Source: OSINERGMIN

Elements	Diagnosis	Main effects
Financial and legal barriers preventing an efficient operation and management of state-owned companies	<ul style="list-style-type: none"> <li>• Legal barriers prevent companies to increase their financial leverage and issue debt.</li> <li>• FONAFE retrieves the totality of the net income generated by public companies.</li> <li>• State-owned companies cannot independently decide on the allocation of the cash-flow generated by their operations.</li> <li>• FONAFE must approve the investment and operative budgets.</li> </ul>	<ul style="list-style-type: none"> <li>• Distribution companies do not have the enough resources to invest in network upgrades and expansions to improve their quality of service.</li> <li>• Distribution Investment Plans, that would be funded by a trust created and managed by FONAFE, have not been implemented yet.</li> <li>• Budget approval process is slow and inefficient</li> </ul>



Elements	Diagnosis	Main effects
Excessive control, regulation, and supervision of public entities over distribution companies	<ul style="list-style-type: none"> <li>• OSINERGMIN sets the distribution tariffs.</li> <li>• FONAFE oversees the operation of the state-owned, companies.</li> <li>• FONAFE is also responsible in setting the main guidelines that rule over public companies.</li> <li>• General Comptroller of the Republic controls the legality of administrative acts and safeguards the correct use of public funds.</li> </ul>	<ul style="list-style-type: none"> <li>• The intervention of multiple public entities leads to an excess of bureaucracy that ends up introducing obstacles and slowing down the decision-making process and the efficient management of public companies.</li> </ul>
Other barriers	<ul style="list-style-type: none"> <li>• Obstacles to lay off employees in state-owned companies.</li> <li>• Lower average wages in the public sector</li> </ul>	<ul style="list-style-type: none"> <li>• Public companies are not attractive enough to younger and talented new hires.</li> </ul>



## Codensa in Colombia:

- Successful distribution company in the Capital District.
- Grupo Energía Bogotá (controlled by Bogotá's capital District) controls the economic interests (>50%).
- Enel (private agent) controls the operational control (>50%)



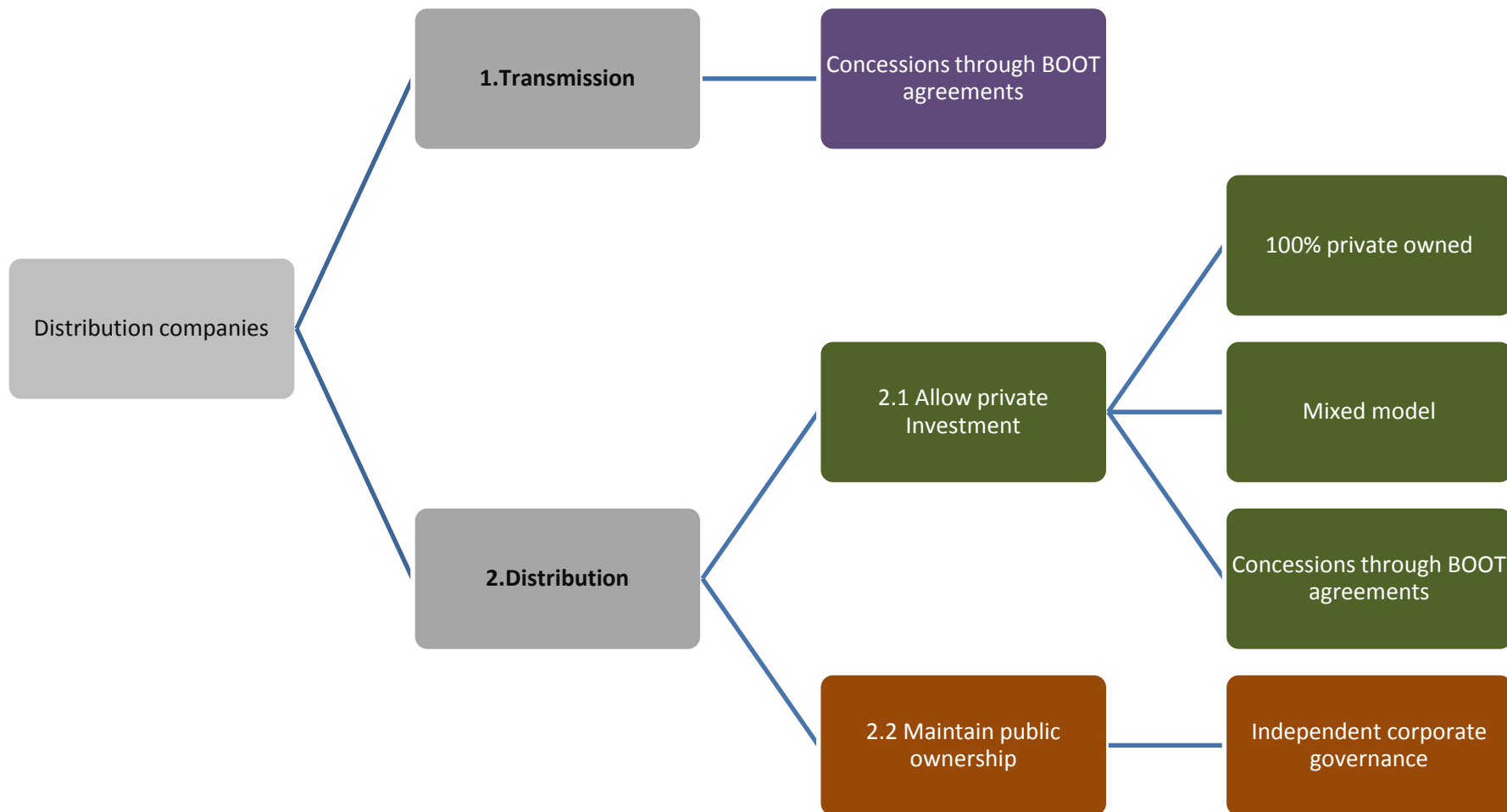
## Empresas Públicas de Medellín in Colombia:

- Company controlled by Medellín's municipality.
- Have businesses in different utilities' segments in Colombia and abroad.



## Codelco in Chile:

- Codelco has become a state-owned company, rather than a "government-owned" corporation.
- Decision making is conducted under a long-term horizon, considering long-term investments and the company's development.

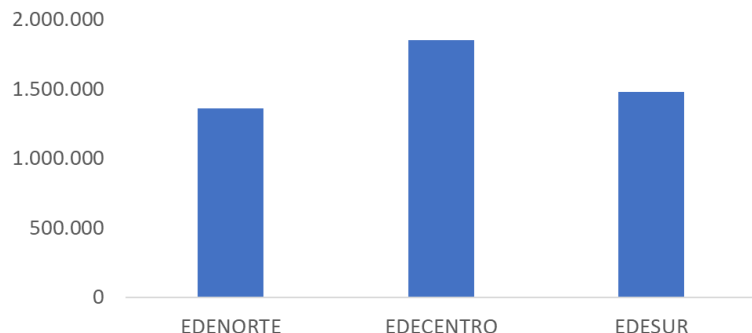




- Transmission assets owned by public companies:
  - Auctioned and granted through concessions to private companies for a 30-year concession period.
  - New infrastructure would be auctioned following the rules in existing SGT systems' tenders. Existing infrastructure would be grouped into regional clusters and auctioned in public tenders.

- Distribution assets would be grouped in regional clusters
  - EDENOR: Electronoroeste, Electronorte, and Electro Oriente.
  - EDECENTRO: Electrocentro, Hidrandina, and Electro Ucayali.
  - EDESUR: Electro Sur Este, Electrosur, Electro Puno, and SEAL

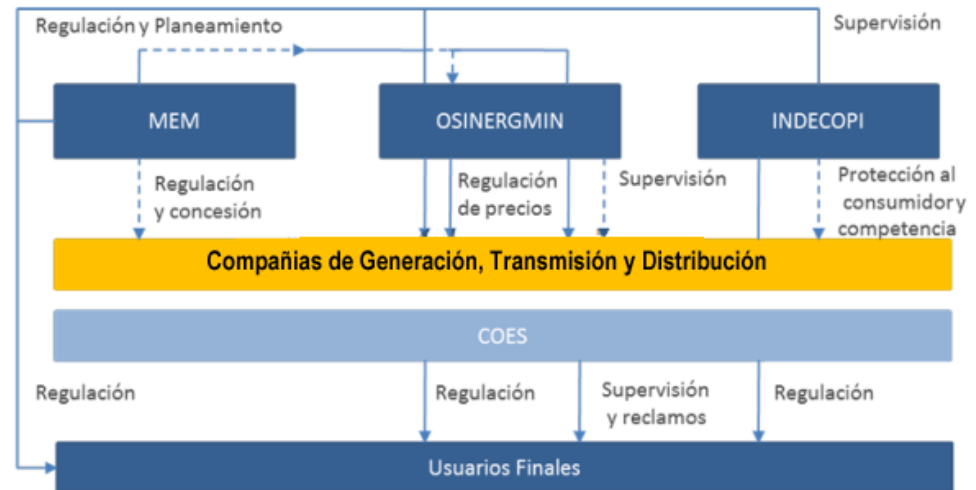
## Clients served (2019)



## 2019 Financial Statements (in thousand US\$)

	EDENOR	EDECENTRO	EDESUR
Revenues	466,181	515,464	402,609
Costs	398,689	424,501	346,989
Operational income	67,492	90,963	55,621
Net Income	51,477	69,61	49,047

- Regional distribution clusters would be granted to private investors through concessions:
  - Distribution companies would remain under public ownership, but the operation, and management of the distribution assets would be auctioned to private operators for a 30-year period concession.
  - Distribution companies would continue to comply with regulation (including tariff setting).
  - Concessionaires would be required to comply with quality of supply standards to be able to participate in any future auction involving the same or different distribution assets.



Source: <https://hrudnick.sitios.ing.uc.cl/>

## Thematic Line 1

### *5. Strengthening of market regulation and supervision/monitoring*

- OSINERGMIN is the regulator of the energy sector.
- OSINERGMIN's current structure exists since its merger with the Electricity Tariff Commission in 2000.
- The institution is responsible in performing supervisory, regulatory, normative, fiduciary, and sanctioning, dispute resolution and user complaints solution functions
- OSINERGMIN's main bodies are i) the Board of Directors, ii) the Executive Director, iii) the General Management, iv) the Commission for Energy Rates (GART), v) the Dispute Resolution Tribunal, vi) the User's Claim Council, and vii) the Collegiate bodies.
- The Board of Directors is composed by five members that are proposed by the Ministers Council's Presidency (2), MINEM (1), the Ministry of Economy and Finance (1), and INDECOPI (1).



- **OSINERGMIN must act according to the following principles:**

- Guarantee Open Access
- **Neutrality**
- Nondiscriminatory
- **Decisions based on a Cost-Benefit analysis.**
- Transparency
- **Impartiality**
- Autonomy
- Subsidiary
- Ponder effects caused by decisions
- Efficiency and effectiveness
- Promptness

Elements	Diagnosis	Main effects
OSINERGMIN's multiple functions	<ul style="list-style-type: none"> <li>OSINERGMIN is responsible in performing supervisory, regulatory, normative, fiduciary, and sanctioning, dispute resolution and user complaints solution functions.</li> <li>These multiples functions could be undertaken to a same procedure</li> </ul>	<ul style="list-style-type: none"> <li>All these diverse activities require multidisciplinary teams composed by specialized members in legal, economical, and technical matters.</li> <li>OSINERGMIN could have specific biases when conducting their regulatory, supervision, sanction, and dispute resolution functions on a same matter.</li> </ul>
	<ul style="list-style-type: none"> <li>OSINERGMIN is not responsible of market monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>An active competition oversight will be required if including new market-based mechanisms.</li> </ul>

Elements	Diagnosis	Main effects
OSINERGMIN's dispute resolution functions	<ul style="list-style-type: none"> <li>OSINERGMIN Board members are mainly appointed by Government officials.</li> <li>Tribunal's members are independent of OSINERGMIN, but are appointed, mainly by Government's representatives</li> </ul>	<ul style="list-style-type: none"> <li>Government, through its institutions could act as a judge and at the same time be judged involving their actions and decisions</li> <li>Potential conflicts of interests where OSINERGMIN could decide on controversies with agents involving acts taken by state-owned companies.</li> </ul>



## Chile:

- Regulatory functions: National Energy Commission (CNE).
- Supervisory functions: Superintendence of Electricity and Fuels (SEC)



## Colombia:

- Regulatory functions: Commission for the Regulation of Electricity and Gas (CREG).
- Supervisory functions: Superintendent of Domiciliary Public Utilities (SSPD).

- Market Monitoring:
  - A new market monitoring unit should be established, reporting directly to COES' board. COES' Market Monitoring Unit would be focused on the wholesale market and would provide all relevant information and inputs to INDECOP's Antitrust Commission.
  - Any ruling to correct, mitigate, or punish antitrust behavior will be performed by INDECOP's Antitrust Tribunal.
  
- Dispute Resolution:
  - A permanent **Independent Expert Tribunal** composed by 5 members should be created.
  - Responsible for solving disputes by COES' bodies with market agents, disputes between OSINERGMIN and COES or market agents, and disputes among agents.
  - Decisions are binding for all parties.

- OSINERGMIN:
  - Responsible for regulatory functions: tariff settings, dictate regulations and procedures.
  - Current governance and structure would be maintained (Board will continue to be appointed by government officials).
  - Budget should not be financed by market agents.
- **New Superintendence of Electricity and Hydrocarbons:**
  - Responsible for supervisory, fiduciary and sanctioning functions.
  - Carry out sanctions on agents for breach of obligations and non-compliance with regulations.
  - Managed by a Superintendent, appointed by the President of Peru out of 5 candidates proposed by and independent Ad-hoc Committee.

# Thematic Line 1

## *Final Remarks*

- Based on the diagnosis, there are several elements in the Peruvian institutional framework that need to be improved
- COES:
  - The existing instructional framework does not fully guarantee COES' governance independence of market agents.
  - Potential conflicts of interests of Dispute Resolution Bodies regarding disputes of different entities.
  - Absence of market monitoring unit.
- Planning:
  - Planning process is conducted by multiple different agents and there is no comprehensive energy sector planning, that follows consistent goals and criteria under a long-term view.



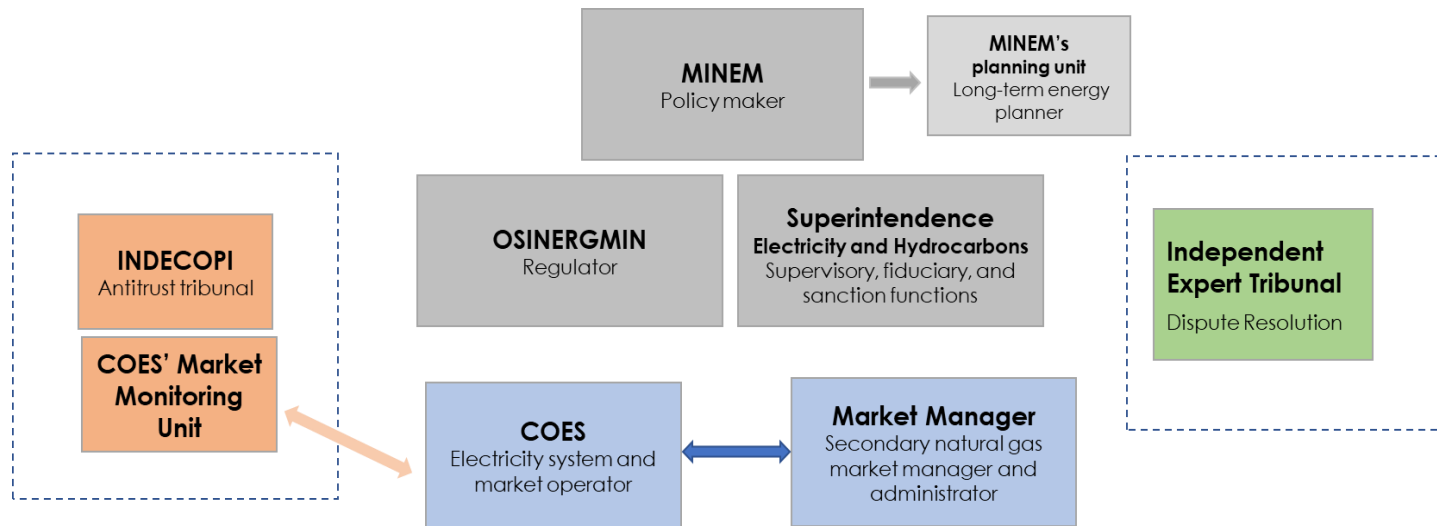
- Natural Gas Market:
  - Take or pay clauses, high firm contracted capacity requirements and absence of a dynamic secondary gas market has driven to an inefficient use of natural gas.
- State-owned companies
  - Legal, financial and administrative barriers prevent state-owned companies to operated efficiently.
- Supervisory and regulatory functions
  - Concentrating supervisory, regulatory, normative, fiduciary, and sanctioning, dispute resolution and user complaints, provide technical challenges and possible conflicts of interest.

- COES:
  - There are no completely independent ISOs: or under partial or total government influence or allow the participation of members.
  - No sufficient evidence to backup separating system operation and market management functions.
  - Dispute Resolution mechanisms studied have different stages (negotiation, mediation and solved by independent tribunal) or directly solved by independent tribunal.
- Planning:
  - There are successful experiences of long-term energy planning processes that can provide (indicative) guidelines to the development of the sector.
- State-owned companies:
  - There are successful examples of state-owned or public-private companies.
- Supervisory and regulatory functions
  - Supervisory and regulatory functions can be conducted by separate entities.

- **COES:**
  - Increasing the number of Board Members by adding independent members.
  - Raising the quorum of Board meetings and meetings periodicity.
  - Establishing a market monitoring unit.
  - Establishing an Independent Expert Tribunal responsible for dispute resolution.
  - COES' budget allocated to end users through a postage stamp charge.
  - Budget would be proposed by COES, approved by OSINERGMIN and if there are discrepancies, solved by the Independent Expert Tribunal
- **Planning:**
  - Implementing a long-term energy planning process conducted by a unit within MINEM.
  - Merging transmission plans and transmission investments plants into one process.

- Natural Gas Market:
  - Merging the management and administration functions into one independent entity (Market Manager), responsible in managing the secondary gas market.
  - Standardizing gas contracts
- State-owned companies:
  - Auctioning existing and new transmission assets, and distribution assets, owned by public distribution companies through concessions.
- Supervisory and regulatory functions:
  - Separating supervisory and regulatory functions in different public entities.

# Institutional framework - summary



1. OSINERGMIN → regulatory functions
2. Superintendencia of Electricity and Hydrocarbons → supervisory functions.
3. MINEM (specialized unit) → long-term planning.
4. COES → system operator, market manager, transmission planning.
5. Independent Expert Tribunal → dispute resolution.
6. Natural Gas Market Manager → market manager and administrator.
7. COES' market monitoring unit → provides competition analysis to INDECOPI.

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# Thematic Line 1

## Strengthening the Institutional Framework



Spanish Fund for Latin America and the Caribbean