

Prospects for Mexico's Lithium Sector After Reforms to the Mining Law

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Key messages

- The Mining Law reform establishes that lithium exploration, mining and use are activities for which the state is responsible, without the option to grant concessions, based on the argument that they are activities in the public interest.
- The Mining Law reform leads to the existence of a dual legal system for lithium. On the one hand, the concessions already granted are regulated and monitored by the Ministry of the Economy. On the other hand, exploration and mining that takes place after the reform will be carried out by the state through a state-owned company.
- The objectives and responsibilities of the state within this dual system are unclear. For the mining and processing of lithium to be an opportunity that translates into benefits for Mexican people, clear, consistent and credible policies are needed.
- There are challenges in terms of governance, both for the special system created and the general concessions system. At NRGi, we have identified three aspects of governance we believe require analysis: (1) failures in governance of the general system; (2) governance of state-owned companies; and (3) supply chains and value generation.

INTRODUCTION

The urgency of promoting the energy transition and shifting towards decarbonization has led to the need to increase production and processing of certain minerals, such as lithium. Use of this mineral in battery manufacturing will help us migrate towards electromobility and greater use of renewable energies, which is causing an increase in both demand and the price of lithium. According to a World Bank report, by 2050, lithium production is forecast to increase by 488% compared to 2018.

This situation could be an opportunity for lithium-producing nations to earn revenue and accelerate their own domestic energy transitions. However, a repetition of the old problems Mexico and other natural resource-producing countries in the region have suffered must be avoided, where intense levels of extraction – with significant socio-environmental impacts and few benefits for local and national populations¹ – have led to high levels of conflict. As such, the opportunities that minerals bring to the energy transition should be targeted towards greater value generation for these countries and reduced social and environmental impacts.

¹ See the work carried out by NRGi in Latin America, in particular, considering what has been highlighted by civil society organizations: resourcegovernance.org/analysis-tools/publications/relatoria-minerales-estrategicos-cadenas-de-suministro-y-gobernanza-en-andes-ciclo-capacitacion

The same World Bank report recognized that increasing extractive or processing activities, in the case of those minerals critical to the energy transition, could have serious environmental and social implications if these activities are not managed responsibly to meet the demand of growing use of renewable energies.

In Mexico, discussions on critical minerals – and lithium, in particular – are at an early stage compared to the progress made by other countries in the region. Given the recent discovery of significant lithium deposits in Sonora, the Mexican Government has reformed the country's Mining Law in order to give this particular mineral strategic significance and create a special system in which the state has greater control than it would otherwise have over other minerals. However, the Government is facing a series of political, technical, environmental and social challenges² that must be addressed, given they could create obstacles to Mexico making good use of this resource. Improvements in lithium governance could help eliminate or mitigate these challenges and lead to greater benefits of its usage.

As such, this report will seek to identify some of the most urgent aspects for discussion and resolution from the perspective of natural resource governance. To do so, we will first briefly outline recent changes to Mexico's Mining Law, as well as their implications and, then, the key aspects of lithium governance that we at NRGi believe must be analyzed in order to maximize the benefits of productive activities related to this mineral in the national interest.

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LITHIUM SYSTEM CHANGE FROM THE MINING LAW

Before describing recent changes to the Mining Law, it is important to consider the constitutional reform initiative on electricity presented to Congress by President Andrés Manuel López Obrador in September 2020, given it is a direct antecedent of the Mining Law reform. As part of this constitutional reform initiative, the aim was to include the exploration, mining and use of lithium as a strategic activity within the framework of the economic chapter of the Mexican Constitution and, therefore, reserved exclusively for the state. In this way, the Government would maintain ownership of lithium and control over the organisations established to carry out the exploration, mining and use of this mineral.

On 17 April 2022, after the Mexican Chamber of Deputies rejected this constitutional reform, the President tabled an initiative to reform the country's Mining Law, re-establishing the need for the exploration, mining and use of lithium to be activities exclusive to the state and without the option to grant concessions, based on the argument that they are activities in the public interest. In just a few days, the reform initiative was approved in both chambers of Congress and published in the *Diario Oficial de la Federación*, Mexico's official daily government publication.

² See: *La batalla por el litio de México* by Violeta Núñez: [batalla_litio.pdf](#) ([entretijas.com.mx](#)). Also, *El litio: La nueva disputa comercial dinamizada por el falso mercado verde* by Colectivo Geocomunes, La Red Mexicana de Afectados/as por la Minería (REMA) y Miningwatch Canada: [Litio_Informe_Final_Enero2021.pdf](#) ([geocomunes.org](#)) and *Before Breaking Ground: Challenges and Opportunities for Mexican Lithium* ([innovationnewsnetwork.com](#))

In public discourse, reforms to the Mining Law were discussed as a nationalisation of lithium in Mexico. However, there are a number of ways in which this terminology is not accurate. Some note that, in accordance with Mexico's constitution, all minerals in the subsoil belong to the Nation and, as a result, it is not possible to talk about a nationalization of what is already the property of the Nation (since 1917). Others point out that there can be no nationalization per se if concessions granted prior to this reform continue to be recognized. In other words, as there has been no expropriation of these concessions, there can be no nationalization.³

In the reform's explanatory statement, nationalization is not specifically mentioned. The reform establishes the aim of "guaranteeing the self-determination and energy sovereignty of lithium." As such, articles of the Mining Law have been amended to create a special system for lithium compared to other minerals, establishing that the exploration, mining and use of lithium are exclusive to the state as they are activities in the public interest and, furthermore, that no lithium concessions will be granted, as is the case with other minerals. The reform focusses on the creation of a decentralized body responsible for the exploration, mining, administration and control of this mineral's value chains.

It is important to mention the reform does not establish a transitory system that provides clarity or certainty over what will happen to the lithium concessions that have already been granted. During one of his morning press conferences, the president signalled that the special system would take effect after being approved and, as a result, concessions already granted would not be affected. However, he also signalled that there would be a review of contracts to verify that concession holders are meeting their commitments.

Assuming that what the Mexican president has said stands, there is currently a dual system for lithium. On the one hand, the concessions already granted are regulated and monitored by the Ministry of the Economy. On the other hand, exploration and mining that takes place after the reform will be carried out by the state-owned company⁴ referred to in the Mining Law reform, for which a specific regulatory framework will have to be developed. Both the restrictions on private sector involvement and the dual system created by this regulatory change are likely to lead to problems that stakeholders will have to resolve in the courts. Experts in Mexican administrative⁵ and constitutional law⁶ have already indicated how the exclusivity of the state should be established in Article 27 of the Constitution, as was the case with the president's constitutional initiative that was rejected.

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³ Alfredo Jalife at the *Alfredo Jalife en el foro virtual Conversatorio: Geopolítica del Litio* organized by the Bolivian Ministry of Hydrocarbons and Energy.

⁴ The reform establishes the term "decentralized body" but, for the purposes of clarity, we will refer to it as a state-owned company.

⁵ According to José Roldán Xopa, state monopolies are directly established in the constitution. Furthermore, the initiative fails to make any reference to concessions already granted, so the limitation would also apply to concessions already granted and in force. The absence of rules on these concessions introduces real uncertainty about their future. The same applies to the body that will be under the authority of a yet-to-be-defined dependency, the funding for which will be found through compensatory movements, given no additional funding has been announced to that already budgeted for the ministry to which it will be administratively attached. Budgetary insecurity also presents an issue as to the viability of this body.

⁶ According to José Ramón Cossío, there are express and closed determinations in the Mexican Constitution on the activities and matters for which no concessions or licences may be granted. In other cases, individuals may be given authorisations under the conditions provided by the constitution and laws.

Furthermore, the absence of a transitory system leaves gaps in the framework that governs concessions already granted.⁷

Beyond analyzing the legal uncertainties of the reform, in this document, I will emphasize the implications of the reform from a governance perspective and the complementary actions that will need to take place in order to improve aspects that could translate into greater benefits for the country.

Improvements in governance apply to both the special system created and the general system, and perhaps the first question that needs to be analyzed is whether the creation of special systems is good practice in terms of governance.

The creation of a special system for lithium, it being considered a strategic mineral, is a measure that has been introduced in other parts of the world to meet climate and decarbonization goals. In the European Union, for example, lithium was included on a list of essential raw materials drawn up to comply with the Green Deal in 2020. In the United States, lithium also appears on a list of critical minerals and, furthermore, President Joe Biden announced an investment plan to expand domestic production and guarantee the continuity of supply chains.

In Latin America, these special systems have been created with an eye to the opportunities that exist in terms of economic development for producing countries. In both Bolivia and Chile, lithium is considered a strategic mineral and special systems have been established, albeit implemented differently and with differing levels of involvement of the private sector, but with similar objectives in terms of promoting value generation through production chains.⁸

As for Mexico, with its dual system, the state's objectives and responsibilities have not been made completely clear. What has been clear is the intention for a stronger and more present state in both the mining and use of lithium. But there are different ways in which the state can be strengthened to pursue the national interest and that of the communities affected by mining. As policy maker, operator and regulator, the state has different roles that could be essential in promoting innovation, efficiency and transparency in the use of resources.

As such, it would be a mistake to think the problem is solved by only creating a state-owned company. Regardless of the public or private ownership of companies, there are many challenges for which institutional capacity is necessary. For the mining and processing of lithium to be an opportunity that translates into benefits over and above the costs incurred for the Mexican people, clear, consistent and credible policies are needed.

In the following section, I will analyze some of the key aspects of the lithium governance agenda, both within the special system created and the general concessions system.

⁷ According to the statement from the Mexican Chamber of Mining (CAMIMEX), one of the seven reasons why the nationalization of lithium is a mistake is that any attempt to cancel or revoke lithium concessions that have already been granted would face legal challenge. Most likely, current concessions would not be affected, as they are protected by Mexican law. www.camimex.org.mx/index.php/boletin/boletines/articulo/13157

⁸ Martín Obaya, ECLAC Consultant at the *Gobernanza del litio en México: lecciones desde otros países de América Latina* forum organized by NRGÍ and ECLAC.

KEY ASPECTS OF THE GOVERNANCE AGENDA

Below, I outline three relevant aspects of governance that continue or are born out of the Mining Law reforms that are important to resolve in the short term so that lithium activity can translate into benefits for Mexican people:

1. Failures in governance of the general system

Assuming that the concessions granted before the Mining Law reforms came into effect will continue and that, furthermore, they represent a large part of known lithium resources, it is vital the flaws in the general concessions system are examined. Although the general system has not been changed by the reform, the minerals boom caused by the energy transition is an opportunity to raise governance standards on lithium and mining in general in Mexico. The Sonora Lithium Project – run by Canadian mining company Bacanora Lithium and Chinese corporation Gangfeng Lithium – alone represents over 90% of all resources identified by the United States Geological Survey.⁹ As such, if this project is to continue under the concessions system, it is precisely this system that should be the focus of governance strengthening efforts.

Although the general system has not been changed by the reform, the minerals boom caused by the energy transition is an opportunity to raise governance standards on lithium and mining in general in Mexico.

According to the latest NRGi Natural Resources Governance Index, the governance of the mining sector in Mexico is insufficient, with a score of 59/100 (below the hydrocarbons sector, which is rated satisfactory with a score of 76/100).

Some of the most significant failings specifically relate to the local impacts component. In Mexico's mining sector, there is no regulatory framework on producing social impact studies. In terms of environmental impact studies, environmental impact statements (MIA) are available. However, these statements are not fully or systematically shared with the public, and only once they are published. There is no compliance monitoring. Similarly, there is very little information on subnational transfers of revenue from natural resources.

The initiative's explanatory statement speaks of an approximation of human rights, protection of indigenous communities, and refers to the social-environmental problems related to mining in Mexico. However, the reform does not make the isolated changes that would be needed in the regulatory framework to improve on these issues. It fails to do this both for the special system for lithium and the general concessions system.

Undoubtedly, this is a missed opportunity because, despite identifying the problem, the regulatory steps that could help are not taken. It would be a mistake to think that a company, just because it is state-owned, will not engage in bad practice leading to negative local impacts.

In the same way, in terms of the contributions that concession holders pay, the initiative identifies that mining leaves few fiscal resources in Mexico, particularly for the states and municipalities. However, no changes have been made to the law to improve the traceability of the distribution of subnational transfers.

In Chile, for example, with the new commissions system and specific lithium contract contributions, greater capacity to capture revenue has been introduced as part of the special system.

⁹ According to the feasibility study carried out for Bacanora Lithium and the technical report issued by these companies, 1.657 billion tons of lithium have been reported as resources. According to the United States Geological Survey, Mexico has 1.7 million tons of resources.

Establishing a “good deal” on natural resources implies obtaining the greatest benefit from the mining of these resources, either through tax revenue or other benefits. This term is inextricably linked to establishing efficient tax systems that help capture revenue created in the extractive industries, regardless of whether the operator is privately or publicly owned.

2. Governance of state-owned companies

The Mining Law reform introduces the concept of the state-owned company for the special lithium system. This is a decentralized public body for the exploration, mining and use of lithium. It is important to note that the creation of the decentralised public body remains outstanding, and will be determined by the Federal Executive, in accordance with Article 10 of the Mining Law. Similarly, despite the fact both mining and industrial policy are in the hands of the Ministry of the Economy, the reform does not indicate whether this new decentralised body will be coordinated on a sector-by-sector basis by the Ministry, as is the case with the Mexican Geological Survey.

Alongside these considerations, it is important to recognize the risks inherent to state-owned companies in order to regulate them appropriately in the new law. Based on case studies of state-owned companies in Zambia and Congo, NRGi has identified some significant challenges for state-owned companies in the mining sector and has made recommendations, such as clearly defining objectives and mandates, objectives on commercial efficiency, long-term planning, as well as the need to have an organization that promotes efficiency and accountability, among others.

While it is recognized that state-owned companies can play a key role in a country's development by generating positive externalities that stimulate various sectors with high potential for growth, these companies also bring significant risk of corruption and low productivity. State-owned companies are particularly vulnerable to corruption given their closeness to the government, politicians and public servants. Similarly, the lack of oversight on the part of the state can also undermine state-owned company incentives to act in their own best interests and that of citizens.

Furthermore, it should be noted that the creation of state-owned companies for lithium is taking place in the midst of a *commodities boom*, which brings additional risks of corruption. Anti-corruption practices in state-owned companies and among their partners is one aspect that requires further analysis.

How can we ensure companies are productive and corruption-free? That they respect the rights of communities and are environmentally responsible? These are just some of the issues that must be thoroughly investigated in order to try to mitigate these risks from a design point of view and in their relationships with the State's oversight and regulatory bodies.

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3. Supply chains and value generation

At regional level, discussions around generating value through lithium production chains have been a fundamental issue. At the Lithium Governance in Mexico: Lessons from Other Latin American Countries forum organised by NRGi and ECLAC, it was stressed that lithium's value-adding strategies should not be lost sight of, and lessons on the institutional capacities required by differentiated strategies in exploration, mining and processing activities should be considered.

Bolivia, with a focus on domestic production, plans to require forward-facing supply chains as a condition of lithium extraction. Argentina, where lithium is not a strategic mineral, treats lithium like any other mining investment. Chile represents a halfway-point, with a strategic sector in which there are incentives to add value, but where production management remains in the hands of private companies.

Both Chile and Bolivia have decided to press on with developing capacities in the fields of research, development and local industrialisation in order to make progress in their value chains and not just be exporters of lithium, but also exporters of its components, while seeking to manufacture storage systems at national, local and regional level.

These objectives have been difficult to meet and have demonstrated the complexity and enormous number of challenges to be overcome. Nationalist approaches such as Bolivia's – the country with the largest amount of lithium resources, according to USGS – were born out of the idea that the production and sale of lithium should be led by Bolivian stakeholders and promote public/private partnerships to be integrated within battery manufacturing value chains, concentrating all the benefits within Bolivia and developing capacities.¹⁰ After more than a decade of significant investment, the expected results have not materialized, lithium carbonate production is not significant, nor has progress been made – beyond initial trials – in manufacturing cathodes or assembling lithium batteries. Recently, a competitive selection process was launched to find private companies that can help produce lithium on an industrial scale using new methods and technologies.¹¹

As for Mexico, in various forums, including the Open Parliament on Electricity Reform, government officials have spoken about the importance of bringing about the industrialisation of lithium. The State needs to invest more in research, development, innovation, education, expertise, science and technology in order to be able to manufacture batteries and industrialise minerals, including lithium. Furthermore, this requires state planning in order to avoid being subject to international pricing and ensure profitable prices, even when these resources are in short supply.¹² The opportunities afforded to Mexico by virtue of its proximity to the United States and the electric car market that is growing rapidly also need to be taken into account, while making the most of the automotive infrastructure that already exists in the region.

Lithium's value-adding strategies should not be lost sight of, and lessons on the institutional capacities required by differentiated strategies in exploration, mining and processing activities should be considered.

10 Law 928, Sole Article, Paragraph III www.ylb.gob.bo/resources/normativa_legal/04_ley_928.2017.pdf

11 Interview with Fernando Patzy, NRGi Regional Manager for the Andes.

12 Contributions of Alejandro Armenta and Alberto Montoya at *Parlamento Abierto* forums www.diputados.gob.mx/parlamentoreformaelectrica/sub/16.html#videos

At the [Prospects of Lithium in Latin America](#) forum, organised by the Bolivian Ministry of Hydrocarbons, Energy Secretary Rocío Nahle pointed out that industrial innovation policies are being designed in collaboration with the National Science and Technology Council (CONACYT). Though she said state support for developing technologies, systems and equipment was being considered, alongside funding from development banks, the initiative does not provide information about these policies, nor the resources and instruments planned for their implementation.

Mexico has to decide where it wants to focus its public policy in terms of lithium. The experiences of countries within this lithium triangle are highly relevant and useful to Mexico. For example, Bolivia's experience shows that if a country wants to boost its public sector, it must make investments and strengthen the capacities of state institutions. In Chile, they have committed to increasing mining revenue and encouraging local investment. Currently, further changes are being discussed that would also involve creating a public company to extract lithium.

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CONCLUSIONS

The reforms to the Mining Law are far from having resolved the problems and challenges involved in developing Mexico's lithium industry. As a first step, there must be greater clarity of the objectives, the responsibilities of each authority, and the appropriate instruments to meet the established goals.

The Mining Law reform initiative establishes the aim of guaranteeing the self-determination and energy sovereignty of lithium, which suggests it seeks to expand domestic production and industrialization in order to safeguard national supply chains. However, the way in which these objectives will be achieved still needs specifying. Secondly, the role of the regulator, the operator, and who is responsible for setting policy – both in terms of mining and industrial production and fiscal policy – must be defined, in order to determine the role of the State and the institutional framework.

Similarly, in the Mining Law reform's explanatory statement, although flaws in the general concessions system have been recognised in terms of social and environmental impacts, as well as in fiscal and revenue matters, the opportunity to make specific changes to improve these aspects has not been taken advantage of, neither in the case of lithium nor mining in general.

Only three aspects of governance were explored here, the discussion and analysis of which will help overcome the challenges faced. To do so, observing the experiences of other countries in the region like Chile, Argentina and Bolivia could prove very useful.

It is important and urgent that a plural and informed discussion takes place in which the progress of other countries in the region can be beneficial, involving the social, public and private sectors, with a view to identifying the greatest benefit and national interest. NRGi will seek to contribute to this discussion and work with the various sectors involved to identify the improvements in governance that are needed.

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