

# Colombian Coal Mining at the Crossroads

## PLANNED COAL MINES COULD DOUBLE THE SECTOR'S METHANE EMISSIONS EVEN AS CIVIL SOCIETY OPPOSITION AND GOVERNMENT POLICY SEEK REDUCTIONS

### Summary

Colombia is the coal powerhouse of Latin America and home to the region's only major coal mine projects currently under development. Global Energy Monitor (GEM) has conducted a survey of the country's coal mine proposals and found that up to 32 million tonnes (Mt) of capacity is currently announced, with the potential to release up to 161 thousand tonnes of new methane emissions each year, equivalent to 5 Mt CO<sub>2</sub> and [comparable](#) to the annual emissions of a new coal-fired power plant.

Besides new coal mine projects, Colombia is debating the resumption of activity at the La Jagua and Calenturitas coal mines in Cesar department. Collectively known as the Prodeco mines, these operations were among Colombia's largest when they were mothballed in 2020, producing 15 million tonnes of coal per annum and emitting an estimated 55 thousand tonnes of methane (1.6 Mt of CO<sub>2</sub> equivalent).

All told, if Colombia's proposed mines go into operation as planned and Prodeco's operations resume, the country's mining sector could emit an additional 216 thousand tonnes of methane per year, effectively doubling the existing sector-level emissions that Colombia last publicly [reported](#) to the United

Nations Framework Convention on Climate Change (UNFCCC).

Just one year after Colombia [pushed](#) to regulate fugitive methane emissions from its oil and gas sector and [endorsed](#) the Global Methane Pledge Energy Pathway, the prospect of creating new sources of methane poses a significant challenge to Colombia's goal to [reduce](#) greenhouse gas emissions 51% by 2030 [under](#) the Paris climate agreement.

The International Energy Agency's [Net Zero goals](#) for 2050 preclude the development of any new coal mines or mine expansions, and Colombia's new government has signaled its intention to move away from fossil fuels in favor of renewables. Government support for a clean energy transition is bolstered by significant citizen opposition to further coal development, yet major gaps in corporate transparency remain a roadblock to emissions assessments and a coal phaseout.

## Background

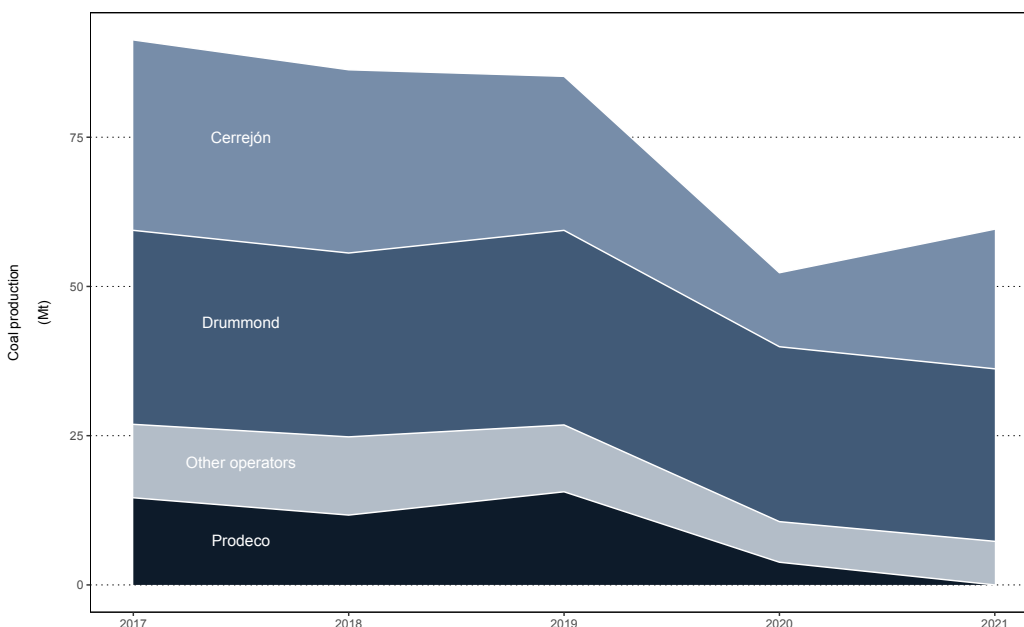
Colombia dominates the Latin American coal market, comprising roughly [80%](#) to [90%](#) of the coal produced in the region and [ranking](#) 12th globally in overall production. In 2021, the country [produced](#) nearly 60 million tonnes of coal, far outpacing Latin America's other leading producers, Brazil (8.2 Mt) and Mexico (7.4 Mt).

The vast majority of Colombia's coal production is concentrated in the *corredor minero* (mining corridor) in the departments of La Guajira and Cesar. Large international corporations manage most [production](#), including Latin America's largest operating mines: [Pribbenow](#) and [El Descanso](#), both owned by

US-based Drummond; and [Cerrejón](#), owned by the Swiss multinational Glencore.

In recent years, the Drummond- and Glencore-owned mines have accounted for nearly three quarters of national coal output. A fourth major coal project, owned by Glencore subsidiary [Prodeco](#), was averaging 15 million tonnes in annual production when the mines were indefinitely shut down in 2020 (see Figure 1). While coal production in Colombia rebounded slightly after taking a dip during the COVID-19 pandemic, the International Energy Agency [forecasts](#) output will plateau through 2025.

**Figure 1: Colombian coal production by company, 2017-2021**



Sources: Drummond, El Cerrejón, and Prodeco corporate annual reports (2017-2021) and BP *Statistical Review of World Energy*, 2022

The future of Colombia's coal output is largely constrained by seaborne markets. Colombia is Latin America's undisputed leader in coal exports and one of the world's top coal exporters, ranking [third](#) globally in coking coal and [sixth](#) in thermal coal shipments. In 2022, Colombia [exported](#) 64 Mt of thermal coal and 6.5 Mt of coking and metallurgical coal. Türkiye is the [most reliable](#) consumer, regularly

[outpacing](#) all other importers since 2016 and [deriving](#) 42% to 50% of its annual coal imports from Colombia. Exports to Asia — mostly China and South Korea — have also risen somewhat in the past few years, yet still remain marginal, while Chile, Brazil, Israel and the Netherlands continue to rank among Colombia's [top 10 consumers](#).

However, Colombia's annual exports have also diminished significantly since peaking at 105 Mt in 2017. Over the past four years (2019 to 2022), exports have ranged between [59.7 Mt](#) and [74.7 Mt](#). The decline has been driven partly by the COVID-19 pandemic and the idling of the Prodeco mines in 2020, but also by a steady dropoff in demand from the United States and Europe. While European [demand](#) and

Colombian coal [export income](#) have both picked up in response to the Russia-Ukraine war, and demand for [metallurgical and coking coal](#) has increased due to growth in the Asian steel market, the International Energy Agency [forecasts](#) that exports will slow to 53 Mt by 2025, and the Colombian government expects coal's share of the national "export basket" to [decline](#) gradually between 2023 and 2026.

## Proposed Coal Mines

Colombia has significant new coal mine proposals announced for development. The three largest projects currently under consideration — [San Juan](#) (with estimated average annual production up to 28 Mtpa), [Cañaverales](#) (up to 2.5 Mtpa) and [Papayal](#) (up to 1.73 Mtpa) — are all owned by the Turkish multinational

Yildirim, through its Colombian subsidiary Best Coal Company (BCC). Other proposed coal projects currently listed by Colombia's national mining agency, ANM, are smaller, ranging in size from 0.19 Mtpa to 0.63 Mtpa.

**Table 1: Major coal projects under development in Colombia**

Coal Mine	Owner	Capacity (Mtpa)	Start Year
San Juan	BCC, Yildirim	<a href="#">9.2 - 28.0</a>	<a href="#">2026</a>
Cañaverales	BCC, Yildirim	<a href="#">1.2 - 2.5</a>	<a href="#">2024</a>
Papayal	BCC, Yildirim	<a href="#">0.8 - 1.73</a>	<a href="#">2024</a>

Source: Global Coal Mine Tracker, Global Energy Monitor

The largest project developer, BCC, has released inconsistent public information, making it difficult to fully discern the scale of its plans. As of March 2021, a [company report](#) predicted that the San Juan mine would have the capacity to produce 28 million tonnes each year over a 32-year life span, enough to make Best Coal Company the eighth largest [coal developer in the world](#). As recently as January 2022, parent company Yildirim included a [graph](#) on its website indicating that the BCC mines would continue producing coal through 2053, with annual production regularly exceeding 20 Mtpa over the 25-year span from 2025 through 2049.

Within the past six months, BCC has appeared to quietly scale back its ambitions. A [fact sheet](#) published by Colombian mining agency ANM in September

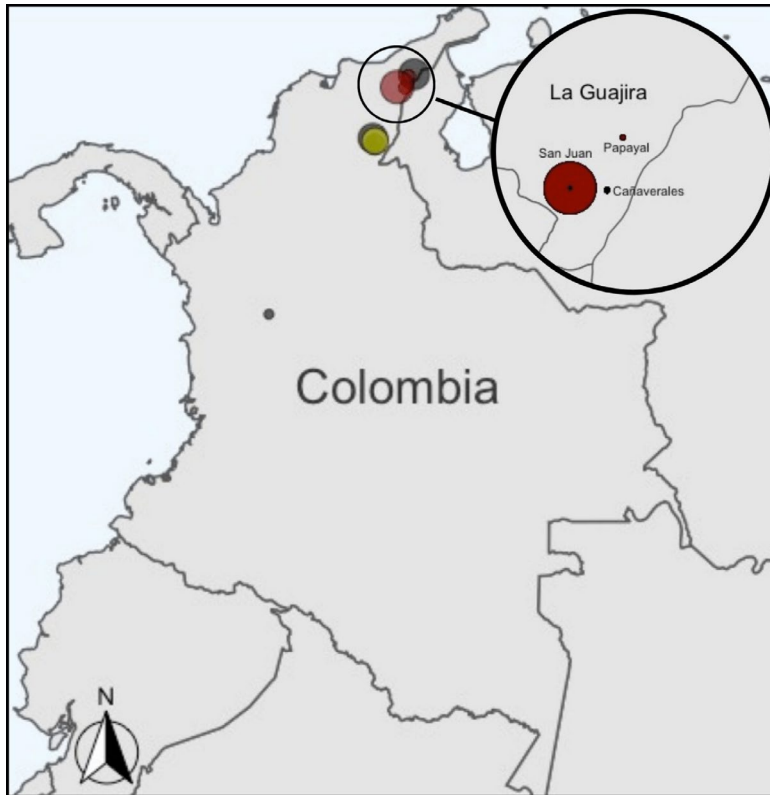
2022 shows that BCC has reduced production estimates for the San Juan mine to a range of 9.19 million tonnes to 10.52 million tonnes per annum over 15 years. The company has also reduced its capacity estimates for the [Cañaverales](#) and [Papayal](#) mines, once expected to produce as much as [2.5 Mtpa](#) and [1.73 Mtpa](#), respectively. Based on the ANM fact sheets, BCC's maximum combined production estimates for all three mines now total only 12.55 Mtpa, though parent company Yildirim's [website](#) continues to state that "total production per year will go beyond 35 m tons."

BCC has planned for the immediate development of the Cañaverales mine, with Papayal and San Juan to follow in [2024](#) and [2026](#), respectively. Together with these new mines, BCC's [business plans](#) envision

development of significant new export infrastructure, including a 150-kilometer railway and the associated 35 Mtpa [BCC Port](#) facility in Dibulla on Colombia's Caribbean coast. As of March 2023, none of the proposed BCC mines has yet received an environmental license from Colombia's national

permitting agency ANLA, though developers continue to promote them. Parent company Yildirim has repeatedly [noted](#) in its annual reports that BCC's San Juan mine alone would comprise "the largest integrated underground coal mining project in the Americas."

**Figure 2: Colombia's coal mines and major proposals**



Coal production in Colombia is highly concentrated. The black dots represent operating coal mines, yellow dots represent mothballed coal mines, and red dots represent proposed coal mines, sized by production and capacity. There are 3 major proposed coal mines in Colombia with all planned capacity clustered in La Guajira. Circle size increased on La Guajira map pullout. Source: Global Energy Monitor, Global Coal Mine Tracker.

### Coal mine development scenarios

GEM has analyzed proposed projects based on all available public data and found that under a lower or minimum proposed capacity scenario — based on data from ANM's [2022 fact sheets](#) — development of the BCC mines would increase Colombia's annual coal production 11 Mt, which is more than 21% compared to 2021 levels and the highest output since 2019 (see Figure 3).

If the mines were developed according to the higher or peak capacity scenario, anticipated by Yildirim's

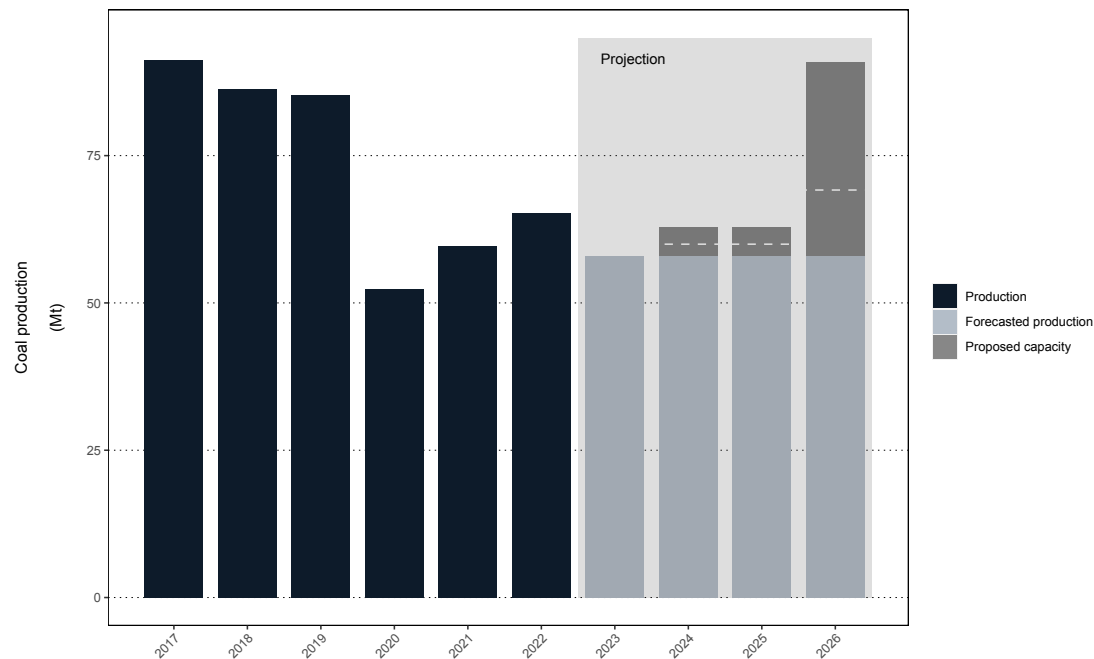
previous production [forecast](#), annual national production could increase to more than 32 Mt, more than 50% over Colombia's 2021 output, with production potentially returning to 2017 levels.

In addition to new mines, questions still remain about the Prodeco operations, [mothballed](#) since 2020 and [returned](#) to the Colombian government in 2021. Mining agency [ANM](#) began seeking [new operators](#) for the mines in 2022, but later [suspended](#) its call for bids pending resolution of [legal proceedings](#) aimed

at defining Prodeco's outstanding [obligations](#) to local [communities](#). Based on [historical output](#), reactivation of the Prodeco mines could add another 15 to 20 Mtpa to Colombia's national output, resulting in annual production figures that might equal or exceed the peak levels attained in 2017.

Given the declining global demand for coal, and the slowdown in Colombian coal exports predicted by both the [Colombian government](#) and the [IEA](#), it seems implausible that a production increase of this magnitude could be absorbed by international markets, posing a concern about stranded assets and calling into question the economic wisdom of developing new mines.

**Figure 3: Colombian coal mining capacity under development in two scenarios**



The proposed capacity is represented by gray bars; the minimum capacity scenario and peak capacity scenario are demarcated by the white dashed line. Forecasted production is based on IEA figures.

Sources: BP Statistical Review of World Energy; Asociación Colombiana de Minería; International Energy Agency, *Coal 2022*; Best Coal Company corporate annual report and ANM factsheet; GEM analysis.

## New Methane Emissions

Colombia's coal deposits have relatively low methane concentrations, according to some [desorption tests](#); nevertheless the industry has [continued](#) to struggle with workplace safety hazards because of methane-related incidents. In March 2023, at least 21 miners were killed by a series of [methane explosions](#) in Sutatausa, Cundinamarca, adding to the grim total of [418 people](#), mostly workers, who died in accidents related to Colombian coal mine methane between 2005 and 2022.

Colombia has not [reported](#) coal mine methane emissions to the UNFCCC since 2004, when it estimated 219 thousand tonnes of emissions. But an academic study by researchers at Universidad Pedagógica y Tecnológica de Colombia and Unidad de Planeación Minero Energética [estimated](#) that open pit mines in the major producing regions of Cesar and La Guajira emitted 106 thousand tonnes in 2015. In 2020, the US EPA [projected](#) coal mine methane in Colombia at 344 thousand tonnes in the coming years.

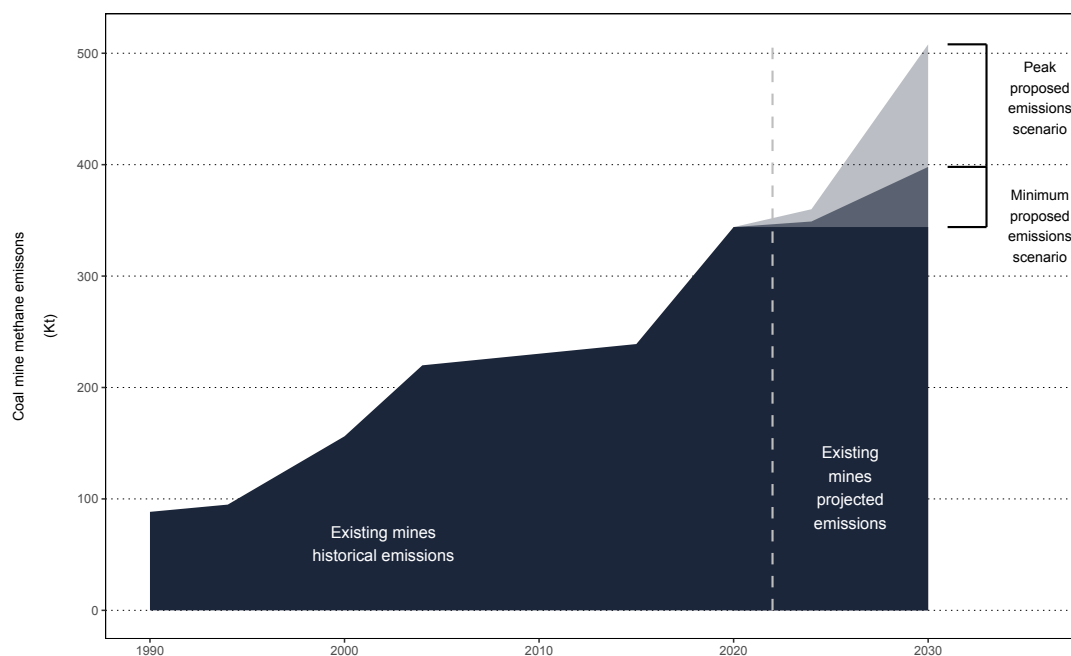
According to GEM's [Global Coal Mine Tracker](#), which catalogs data on individual coal mines and provides methane emissions estimates, the operating coal mine methane emissions in Colombia were 239 thousand tonnes in 2021, closely matching previously reported figures and academic and government projections and estimates.

GEM has also estimated the potential methane emissions of the new proposed mines under development, for each capacity scenario outlined in BCC documentation (methodology [here](#)), though the coal deposits under development may have even higher [concentrations](#) of methane.

Under the minimum capacity scenario, the BCC mines could emit 54 thousand tonnes of methane per year, [equivalent](#) to 1.6 Mt CO<sub>2</sub>, comparable to the historic emissions of the mothballed Prodeco mines (1.6 Mt CO<sub>2</sub>e).

Under the peak capacity scenario, which is based on BCC's highest estimated annual production figure for each of its new mines, GEM found that the mines could emit up to 161 thousand tonnes of methane per year, equivalent to 5 Mt CO<sub>2</sub>, comparable to the annual emissions of a coal-fired power plant.

**Figure 4: Coal mine methane emissions in Colombia**



Sources: UNFCCC, Greenhouse Gas Inventory Data is used for existing mines' historical emissions and EPA Non-CO<sub>2</sub> Greenhouse Emission Projections & Mitigation Potential Reports (2019 & 2022) for existing mines' projected emissions; Global Energy Monitor, Global Coal Mine Tracker and GEM analysis are used for peak and minimum proposed emissions scenarios.

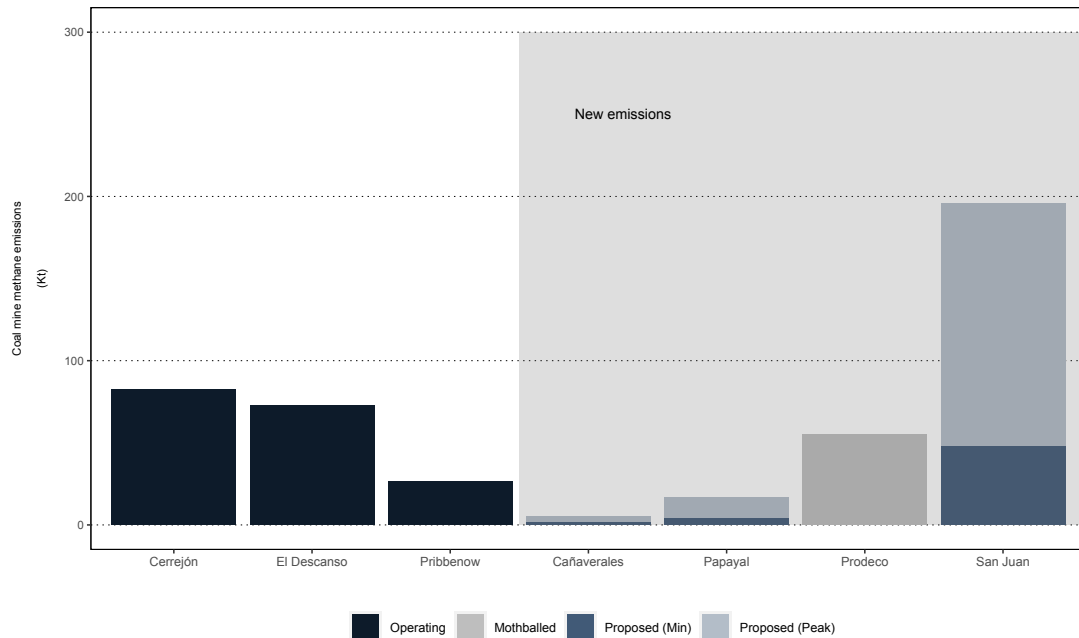
The San Juan mine in La Guajira is overwhelmingly the most consequential new methane emitter, representing a full 91% to 98% of the estimated total for BCC's proposed mines. The deep underground mine, located near large [coal and natural gas reserves](#), would be significantly larger than any previous subterranean coal mining project in Colombia, making

its impact difficult to accurately predict, while posing unprecedented challenges in methane management and control. If put into operation without any methane abatement, the mine could become Colombia's single largest source of coal mine methane (Figure 5).

Meanwhile, any reactivation of operations at the mothballed Prodeco mines would further exacerbate the problem, adding an estimated 55 thousand

tonnes of new methane emissions annually (see Figure 5).

**Figure 5: Coal mine methane emissions at major and proposed mines in Colombia**



Source: Global Energy Monitor, Global Coal Mine Tracker and GEM analysis.

## Mitigation Gap

In 2018 the government [sought](#) to recover, use, and oxidize 129 thousand tonnes of methane (3.8 Mt CO<sub>2</sub>e) in the mining sector. But in 2021 the Colombian government [forecasted a rise](#) in coal mine methane emissions in the current decade — from 6.1 Mt CO<sub>2</sub>e in 2020 to 6.3 Mt CO<sub>2</sub>e in 2030. To reduce those emissions, the government has planned a combination of [mitigation and efficiency standards](#), which would cut the sector’s emissions 8% (0.459 Mt CO<sub>2</sub>e) through 2050. However, responsibility for mitigation remains largely at the discretion of the coal companies. And — as acknowledged in Colombia’s 2021 [report](#) to the UNFCCC — there are still significant knowledge gaps, including incomplete information about methane emissions from abandoned mines and variances in measurement methodologies that may lead to underestimates of true emissions, raising questions about the effectiveness of proposed mitigation measures.

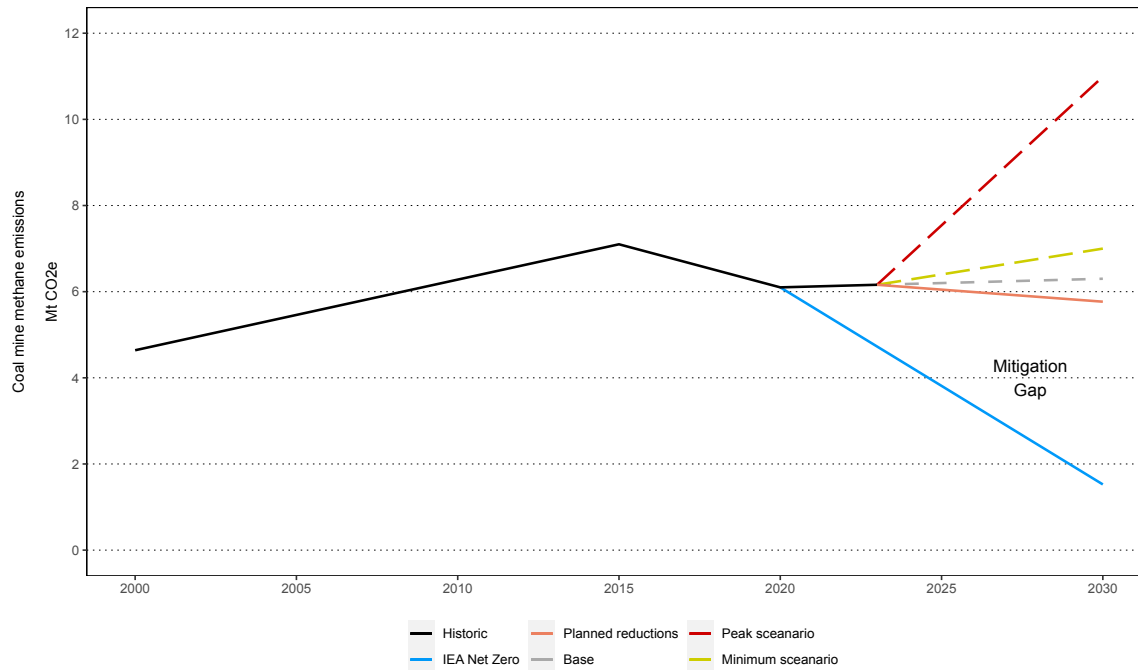
Colombia’s planned mitigation targets fall short of the IEA’s [Net Zero Roadmap](#), which has noted the need for a 75% global reduction in coal mine methane emissions this decade. This “mitigation gap” is worsened by the prospect of new mines: a minimum capacity scenario would boost emissions 21% over Colombia’s planned reductions target and four times a global Net Zero pathway; a peak capacity scenario would boost emissions 90% over Colombia’s planned reduction targets and seven times a Net Zero pathway (Figure 6). In either instance, the government would need to make steeper cuts to remain in line with its own targets or IEA’s Net Zero pathways.

Whatever the full extent of the potential emissions, the opening of new mines, and/or the resumption of operations at the mothballed Prodeco mines, would pose a serious challenge to Colombia’s [goal](#) of a 51%

reduction in greenhouse gas emissions by 2030 under the Paris agreement and would represent a regrettable undermining of Colombia’s February

2022 initiative to become the first Latin American country to [regulate](#) fugitive methane emissions from oil and gas.

**Figure 6: Mitigation gap in Colombia’s methane emissions and IEA’s Net Zero Pathway**



The black line is historic emissions reported to the UNFCCC. The dashed gray line is the “base” – the Colombian government’s forecasted emissions under a business as usual scenario. The orange line is the Colombian government’s planned reductions in methane emissions. The yellow line is new emissions under the minimum capacity development scenario, and the red line is the new emissions under the peak capacity development scenario.

Sources: UNFCCC, Ministerio de Minas y Energía, IEA Net Zero by 2050, GEM analysis.

## Civil Society Opposition

Colombian civil society organizations have opposed major coal proposals on multiple grounds, including issues of transparency and potential impacts on health and the natural environment. Without

environmental permits, the future of all three major proposed coal mine projects in the country could still be swayed by citizen opposition, legal challenges and/or governmental decisions.

### Questions of transparency

Transparency remains an ongoing concern. Civil society opponents of the projects have warned that Yildirim and BCC may be [downplaying](#) the scope of their planned operations. In public commentary, the company has focused [exclusively](#) on the Cañaverales mine. In October 2021, Yildirim issued

a statement [asserting](#) that the Cañaverales mine “is not a megaproject,” noting that the company only planned to extract 12 million tons of coal over a period of 10 years. Despite [assurances](#) from BCC officials, opponents remain [wary](#) of the potential for the Cañaverales mine to [expand](#) into a much larger



project encompassing the huge [San Juan](#) mine, along with the [Papayal](#) mine, the San Juan del Cesar-Dibulla railway connection and the 35 Mtpa [BCC Port](#) on Colombia's Caribbean coast. The company's efforts to characterize the Cañaverales mine as a minor project are also [at odds](#) with language in recent Yildirim annual reports.

Despite the fact that all three mines appear to be active projects, Yildirim has removed all mention of them from its 2021 [annual report](#), after having devoted full-page spreads to its Colombian operations in [each of the five previous years](#). The company has also removed a graph from its [website](#) that as recently as January 2022 [showed](#) BCC's mines averaging 22 million tonnes in annual coal production over a 30-year period (2023-2053), peaking at almost 33 million tonnes in 2029. These retractions of previously available information make it difficult to gauge the company's future intentions. Yildirim's assertion that "[BCC is not a Turkish company](#)" also raises questions of transparency, given the fact that BCC is a [subsidiary](#) of Yildirim, a company based in Türkiye, the largest importer of Colombian coal.

In addition, human rights groups and local residents [assert](#) that BCC has failed to [comply](#) with legal requirements for fair and open [community consultation](#), noting that BCC has denied access to technical details about the Cañaverales project while [refusing to discuss the larger context](#) of BCC's planned operations elsewhere in La Guajira. Community members have claimed that:

### Health, human rights, and environmental concerns

Cañaverales residents have objected to the proximity of the proposed mine to the town center and the adjacent [Cañaverales natural spring](#), which serves the community's everyday drinking [water needs](#) while providing irrigation for local farms. The mine's main excavation zone would be only [700 meters](#) from Cañaverales' town church and 2.1 km from the Cañaverales spring, which lies within a [protected forest reserve](#) declared by Corpoguajira to be off-limits

- the fragmented data provided by BCC is a violation of local citizens' right to information, and an attempt to deny the project's true impacts, which could include forced resettlement of Afro-descendant communities in the region surrounding the mines.
- BCC and Colombia's Ministry of the Interior have used pressure tactics to rush or avoid required consultations, which are a fundamental constitutional right under Colombian law.
- community consultations to date have not incorporated expert opinions that would help adequately assess the impacts of the Cañaverales mine on local water resources.
- there have been too few public hearings, and hearings have been of insufficient duration to adequately consider the social, environmental, spiritual, cultural, and human rights [implications](#) of the project proposed by BCC.
- Colombia's Ministry of the Interior has [delegated](#) excessive authority to the company itself.

One key [consultation](#), with Los Negros de Cañaverales — a council of nearly 1000 Afro-descendent citizens of Cañaverales — remains to be held in 2023, and is a precondition for environmental permitting of the Cañaverales mine by Colombia's national licensing agency ANLA.

to all mining activity. Other [detrimental impacts](#) cited by the mine's opponents include disruption of the traditional agricultural economy and dramatic increases in land prices.

These concerns reflect a long-standing pattern of alleged human rights, legal, and environmental abuses perpetrated by international mining companies in Colombia. The Cerrejón mine, only 60

kilometers north of Cañaverales, for instance, has faced accusations of major improprieties, including [displacement](#) of Indigenous and Afro-descendent communities, [air](#) and [water](#) pollution, threats to [food](#) and [water](#) security, [stream diversions](#), high rates of [cancer and metal intoxication](#), [tax evasion](#), and [labor rights violations](#).

Similar concerns about health and human rights surround Prodeco's mothballed La Jagua and

Calenturitas mines. Colombian civil society organizations have argued for the mines' permanent decommissioning, while insisting that Prodeco develop a [mine closure plan](#) that assumes responsibility for social and environmental problems stemming from the company's three decades of mining operations, including [compensation](#) for the mines' environmental impact, resettlement of communities impacted by coal pollution from the mines, and job transition prospects for laid-off mine workers.

## Citizen Opposition to Coal: Recent Latin American Success Stories

In 2022, two of Latin America's largest coal mine projects were shut down by the courts, thanks in large part to activism by concerned citizens and civil society organizations. These recent success stories suggest that community opposition could still help undermine the Best Coal Company mines in Colombia.

### Brazil's Guaíba Mine

When first announced in 2014, Copelmi's Guaíba mine in Rio Grande do Sul state was projected to be Brazil's largest open-pit coal mine. Estimates of the mine's lifetime coal production potential ranged from 4.7 million tonnes per annum ([142 million tonnes](#) over [30 years](#)) to 7.2 million tonnes per annum ([166 million tonnes](#) over [23 years](#)), with peak annual capacity estimated at nearly [8 million tonnes](#).

Environmentalists, Indigenous communities, and other groups in the Porto Alegre region voiced strong opposition to the Guaíba mine from its inception. Opponents cited the mine's potential to contaminate the [Jacui River](#) and threaten Latin America's largest organic [rice production](#) zone, along with the adverse [air quality and health impacts](#) associated with particulate matter from the mine.

In February 2022, a judge from the 9th Federal Court of Porto Alegre declared the licensing process for the Guaíba mine [null and void](#), based on the owners' failure to properly consult with the Mbyá-Guarani Guajayvi community. In March 2022, Rio Grande do Sul's state environmental agency FEPAM officially shelved the Guaíba mine project, noting [unsatisfactory compliance with requests for information during the environmental licensing process](#). Brazilian and international civil society groups [celebrated](#) these decisions as a victory for Indigenous rights and the environment.

### Chile's Invierno Mine

In June 2022, Chile's Supreme Court [definitively shut down](#) the country's lone substantial coal mine, the [Invierno mine](#) on Isla Riesco, upholding a lower court ruling that the use of explosives at the site was inconsistent with prevailing regulations. The Invierno mine, which won [environmental approval](#) in 2011, had reserves of [73 million tonnes](#) and an annual production capacity of six million tonnes. The mine was producing [2.3 Mtpa](#) at the time it ceased operations following cancellation of its blasting permit in 2019.

Chilean environmental groups, including Alerta Isla Riesco, [Coalición Chao Carbón](#), and others, had been opposing the mine since 2010 and [hailed the ruling](#) as a key step forward in the fight against climate change. [Opponents](#) had documented the highly polluting nature and low thermal value of Mina Invierno's coal, while

filing multiple [complaints](#) with government agencies about the mine's high particulate matter emissions, unauthorized coal stockpiles, contamination of local waterways and wetlands, and other health and environmental concerns.

## Colombia's New National Coal Policy: Springboard to a Just Energy Transition?

In February 2023, the Colombian government [released](#) its national development plan for 2022-2026, which reflects the Petro administration's commitment to reducing Colombia's dependence on coal and other fossil fuels. Key elements of the plan included:

- prohibiting new development of large-scale open pit coal mines, while honoring pre-existing contracts for companies already engaged in mining
- gradually reducing coal, oil, and gas exports, and replacing these with exports of high added-value Colombian goods
- using the proceeds from fossil fuel exports to fund a transition to domestically produced green energy.

As the Petro government continues to flesh out details of its much-heralded "[Just Energy Transition](#)," what remains to be seen is how its policies will impact development of the proposed coal mines in La Guajira department and the mothballed Prodeco mines in Cesar department.

Because BCC has pre-existing mining titles and an approved work plan in place for the Cañaverales mine, the government's options for influencing its progress are limited; however, several scenarios could still slow or derail the BCC mines' development:

- The required consultation between BCC and the local community in 2023 could reveal new details about the Cañaverales mine's environmental impact, leading licensing agency ANLA

to withhold the required permits and/or shelve the project.

- If the community consultation fails to resolve the parties' disputes, Cañaverales residents could bring their case to court, further delaying a decision on the mine's future.
- A drop in global coal prices could make one or more of the BCC mines economically inviable.
- The government could discourage further development of the San Juan and Papayal mines — which are not as far along in the approval process as Cañaverales — by enacting new taxes, changing Colombia's [mining code](#), and/or imposing environmental and labor restrictions.
- [Public opposition](#) could spur the Petro government to intervene more forcefully and embrace the Cañaverales mine as an emblematic case for Colombia's energy transition.

The Prodeco mines present a separate set of issues. In mid-March 2023, Colombia's legislature [eliminated](#) the National Development Plan's prohibition on new open pit coal mines, underscoring the economic importance of coal mining in Cesar department and the political obstacles facing Petro's decarbonization agenda. Cesar-based politicians have argued for [resumption of operations](#) at the Prodeco mines, suggesting that the associated mining royalties could help fund the energy transition. At the same time, Colombian officials like National Mining Agency Director [Álvaro Pardo](#) and Environment Minister Susana Muhamad continue to make the case for a coal phaseout, proposing that Cesar department become a [pilot clean energy transition project](#) for

Colombia and lending support to [civil society's insistence](#) that Prodeco be held accountable for a responsible mine closure plan.

Whatever the future of these mines, continued investment in the coal economy is clearly incompatible with Colombia's stated emissions targets, and greater transparency from mine developers is crucial to assessing the exact scope of the threat.

In conclusion, it's important to note that Colombia's potential as a renewable energy producer is among the most promising in Latin America. With wise policy guidance from the country's new government, La Guajira and Cesar's substantial wind and solar resources can play a key role in a sustainable

economic transition for Colombia's mining corridor. As noted in Global Energy Monitor's March 2023 report, [A Race to the Top: Latin America](#), 25 GW of new utility-scale solar farms and 12 GW of new wind farms have been proposed for Colombia over the next decade; these figures include 9.7 GW of prospective renewables capacity in La Guajira and 1.7 GW in Cesar department. If Colombia can find responsible ways to involve [local communities](#) in developing these abundant renewable energy resources without perpetuating the extractivist model that has too often treated mining corridor communities as "sacrifice zones," the country could avert the worst impacts of new coal mines and associated methane emissions, and transform a coal powerhouse into a hub of clean energy.

## Methodology

Global Energy Monitor used its [Global Coal Mine Tracker](#)—a database of operating and proposed coal mines worldwide—to model global methane emissions estimates at the individual mine level. We estimated methane gas content at each mine in our dataset based on the mine's depth and its rank

of coal, if public information on the coal seam gas content was unavailable. The [methodology](#) follows that of the Model for Calculating Coal Mine Methane (MC2M), as detailed in our previous report [Bigger than Oil or Gas? Sizing Up Coal Mine Methane](#) (March 2022).

## Acknowledgments

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## Background on Global Energy Monitor

Global Energy Monitor (GEM) develops and shares information in support of the worldwide movement for clean energy. By studying the evolving international energy landscape and creating databases, reports, and interactive tools that enhance understanding, GEM seeks to build an open guide to the

world's energy system. Users of GEM's data and reports include the International Energy Agency, United Nations Environment Programme, the World Bank, and the Bloomberg Global Coal Countdown. Follow us at [www.globalenergymonitor.org](http://www.globalenergymonitor.org) and on Twitter @GlobalEnergyMon.

## About the Global Coal Mine Tracker

The Global Coal Mine Tracker is a worldwide dataset of coal mines and proposed projects. The tracker provides asset-level details on ownership structure,

development stage and status, coal type, production, workforce size, reserves and resources, methane emissions, geolocation, and over 30 other categories.

## About the Latin America Energy Portal

GEM's Portal Energético para América Latina offers a tri-lingual, region-wide perspective on thousands of energy projects in Latin America and the Caribbean, synthesizing GEM's research on the region through interactive maps and wiki pages in Spanish, Portuguese, and English. Additional resources

include country energy profiles and links to reports, maps and other data from national governments and organizations working towards a sustainable energy transition in the region. Follow us at [www.portalen-energetico.org](http://www.portalen-energetico.org) and on Twitter @PortEnergia.

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