

# CHILE FACTS



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## Stopping the Massive HidroAysén Dam Project to Protect Patagonia's Natural Heritage

Chile's Patagonia is one of the last untouched regions left on the planet. Among its lush fjords, dense rainforests, snow-capped glaciers, and powerful wild rivers, local communities live with a rich traditional culture. Huemuls and other South American deer, pumas, blue and humpback whales, orcas, South American sea lions, and many bird species found nowhere else on earth all thrive in this expansive region. Due to its remote location, sparse population, and the low-impact lifestyle of its residents, Patagonia is currently one of the most pristine places in the world. Yet, this unspoiled region and its communities are threatened by plans for a massive hydroelectric complex called HidroAysén that would dam two of Patagonia's largest and wildest rivers. HidroAysén's environmental review was deeply flawed and the Chilean public is strongly against the project. The project is simply not a wise investment. Chile and potential investors should instead focus on the country's abundant and sustainable renewable energy alternatives.

### A MASSIVE HYDROELECTRIC PLANT COULD DESTROY PATAGONIA

Enel, one of the largest energy companies in Europe, and Colbún, a leading Chilean electric company, are proposing a joint venture called HidroAysén—a massive hydroelectric plant that would consist of five dams on two of Patagonia's largest and wildest rivers, the Baker and the Pascua. The

project, estimated to cost US \$10 billion, would have an installed capacity of 2,750 megawatts. It would also include building a smaller sixth plant on the Salto River to power the construction of the five main dams, a brand new coastal port and other infrastructure. The complex would then require a new 1,188 mile long high-voltage transmission line to carry the electricity from Patagonia to the main power grid farther north.



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The dams would flood 12,000 acres—about 1.5 times the size of Manhattan—of irreplaceable wildlife habitat. A portion of Laguna San Rafael National Park, a United Nations (UN) Biosphere Reserve, would also be flooded. This would be a violation of Chilean law, as well as the country's commitments as a signatory to the Washington Convention, a long-standing international treaty to protect wild flora and fauna. The new reservoirs and construction would fragment the territory of the last healthy population of huemuls, an endangered Andean deer that is a national symbol of Chile, and would threaten the species' survival. The dams would also alter the stable flows of the Baker and Pascua Rivers, changing water levels and sedimentation, and threatening the rich wetlands along both rivers and the biodiversity of the deltas.

Local communities would also be affected. The dams would flood some of the most fertile farming and ranching lands in the region. The small town of Cochrane could become overrun with HidroAysén's construction and see its current population of 3,000 nearly double—but without adequate infrastructure and services to handle this expansion.

The transmission line would traverse seismically and volcanically active terrain for 1,188 miles, and nearly one hundred miles of it would be built underwater. It would require 1,700 160-foot high towers, running through seven regions, 17 national parks and reserves, 26 main biodiversity conservation sites, and 26 wetlands—as well as indigenous communities and hundreds of private properties.

## WORKING WITH CHILEAN PARTNERS TO PROTECT PATAGONIA

Since 2006, NRDC and our partners on the Patagonia Defense Council, a coalition of more than 70 Chilean and international non-governmental organizations, have been working to stop HidroAysén. Through a combination of legal and technical analysis, social advocacy, and environmental awareness efforts, we succeeded in delaying the approval of HidroAysén's dams for almost three years. During that time, we raised the international profile of the issue and demonstrated that there are better options for Chile's energy future than massive hydroelectric projects in Patagonia. Despite Chile's misguided decision to grant environmental approval for the dams in May 2011, together with our partners, we are committed to continue our fight against this project.

## HIDROAYSÉN'S PROBLEMATIC AND UNRELIABLE ENVIRONMENTAL REVIEW PROCESS

The environmental review process for HidroAysén began in August 2008, when the company submitted its 10,000-page environmental impact assessment. In May 2011, after four rounds of review by state agencies and the submission of more than 5,000 additional pages of data, the environmental commission approved HidroAysén's dams. Yet, a thorough analysis of the document reveals major deficiencies, incorrect data, and glaring gaps in information. The main faults include the complete omission of the transmission line,

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One of the last healthy populations of the huemul, an endangered Andean deer that is a national symbol of Chile, lives in areas that would be flooded by HidroAysén







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The Baker River flows from Lake General Carrera, surrounded by the majestic Andes

even though international best practices call for evaluating projects and their transmission lines together, and the misidentification of the most basic scientific information such as the baseline, the type of rock on which the dams would be built, and an evaluation of the flooding zones. The document also presents an improperly designed reforestation plan and fails to consider alternatives or justify the need for the project. In addition, despite the risk of climate change-induced glacial melt, the potential effects of climate change on the dams are not addressed.

An NRDC report about Chile's environmental review process revealed major flaws in the system.<sup>1</sup> These flaws were evident in HidroAysén's review, which was fraught with legal irregularities and claims of corruption among the reviewing state agencies. One of the major concerns is that Chilean law mandates strong citizen participation in these processes, yet the public comment period on the environmental impact assessment was cut short by the authorities. Citizens were also not allowed to participate in the review of any of the additional 5,000 pages of information that HidroAysén submitted after the first review round.

## **CHILE DOES NOT NEED HIDROAYSÉN TO MEET ITS ENERGY NEEDS—THERE ARE BETTER OPTIONS**

Technical studies show that HidroAysén is not necessary to meet Chile's future energy demand. One of these studies concluded that Chile already has more than enough projects under construction, approved, or awaiting approval, to meet even the highest energy demand projections through 2025. The study found that with very modest efforts to boost energy efficiency and renewable energy, Chile could avoid building 40 percent of the coal-fired power plants it already has in progress. A 2011 updated version of the study showed that there is even less need for HidroAysén now than before.<sup>2</sup>

Chile has abundant renewable energy resources that, when coupled with modest energy efficiency measures, are more than sufficient to meet the country's energy needs through 2030. What is more, these options are already moving forward, with solar, geothermal, wind, and biomass plants currently operating or under development throughout Chile. A new study by Bloomberg New Energy Finance shows that most of these technologies are already cost-competitive with conventional energy today.<sup>3</sup> In the near future, tidal and wave energy technologies could help turn Chile's long coastline into a clean source of power. Energy efficiency is also an area where Chile can make great gains. Several Members of Parliament have joined forces with leading academics and technical experts to promote Chile's renewables and efficiency sectors, and are working on legislation that will foster both.



## CHILEANS ARE INCREASINGLY AGAINST HIDROAYSÉN

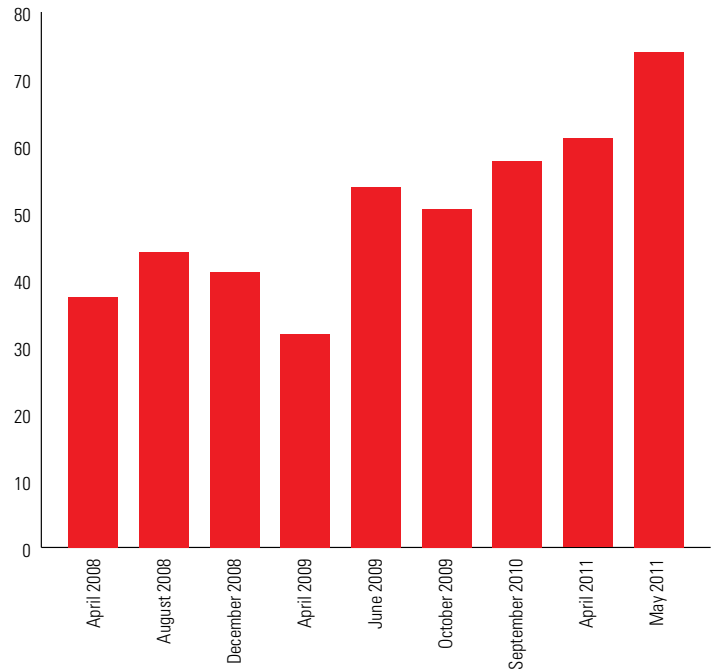
Significantly, the Chilean public is against HidroAysén, with polls showing that 74 percent of Chileans oppose the project. Since HidroAysén was officially announced in 2008, the public's disapproval of the project has steadily increased. The largest jump in the number of people against HidroAysén coincided with the project's environmental approval, in April to May of 2011, when tens of thousands of people took to the streets in protest and the percentage of Chileans against the dams jumped from 61.1 percent to 74 percent in a month.

## HIDROAYSÉN IS NOT A WISE INVESTMENT

HidroAysén's parent companies will likely seek outside financing for this \$10 billion project. Yet, the issues with the environmental review and lack of public support underscore that HidroAysén is a risky investment for any bank or institution. Legal challenges to the project, based on irregularities in the environmental impact assessment and review process, have reached all the way to the Supreme Court. In addition, it will likely be years before the transmission line receives approval, given the extreme technical complexity of its environmental impact assessment review.

With the variety of other options available to Chile, large, destructive energy projects in Patagonia like HidroAysén are simply not the best way forward for the country. Chile can meet its future energy demand without the irreparable harm to communities and the environment the proposed HidroAysén dams would cause. Chilean citizens have already spoken out against HidroAysén. The government and potential investors must now listen. Instead of supporting HidroAysén, they should expand Chile's abundant renewable energy options to fulfill the country's potential as a world leader in safe and sustainable renewable energy generation.

## Percentage of Chileans against Large Hydro Development in Patagonia<sup>4</sup>



Patagonia's ice fields are the third largest fresh water reserve on the planet, after Antarctica and Greenland

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<sup>1</sup> Fortaleciendo el Sistema de Evaluación de Impacto Ambiental de Chile: Lecciones de la legislación internacional (December 2011) <http://www.nrdc.org/laondaverde/international/SEIAreport.asp>

<sup>2</sup> Román, Roberto and Hall Stephen, and associates; *Se Necesitan Represas en la Patagonia? Un análisis del futuro energético chileno*; Universidad de Chile, Santiago, Chile; June 2009. Román, Roberto and Hall, Stephen; *El Futuro Energético de Chile está en Eficiencia Energética y las Energías Renovables*; April 2011.

<sup>3</sup> Bloomberg New Energy Finance, "Chile Levelised Cost of Energy presented to NRDC" (April 2011); [http://docs.nrdc.org/energy/ene\\_11052401.asp](http://docs.nrdc.org/energy/ene_11052401.asp)

<sup>4</sup> Ipsos Public Affairs, "Estudio de Opinión Pública," April 2011; [http://www.ipsos.cl/documentos/Informe\\_de\\_actualidad\\_abr\\_2011.pdf](http://www.ipsos.cl/documentos/Informe_de_actualidad_abr_2011.pdf).