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The Policy and Institutional Effects of Resistance in Costa Rica's Energy Sector: A Case Study

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Abstract

Costa Rica has championed a state-led electricity model premised on hydroelectric power. This has enabled the country to produce a reliable energy supply with universal coverage, that is renewable and low-carbon, thus congruent with its identity as a global environmental leader. The state-owned electrical company (ICE), which enjoys a near monopoly in generation and distribution, and an absolute monopoly in transmission and export, has developed considerable expertise and technical know-how in hydroelectric power. The company has also had significant autonomy in the planning and development of projects. Social movements contributed to the enthronement of ICE but have also mobilized at various points to check its power. This paper examines the policy and institutional effects of this opposition. It shows how resistance to its latest megaproject, *Diquís*, follows a long tradition of social mobilization in the electric sector and has launched a debate about the country's energy model.

Introduction

Hydroelectric power has been a central component of electricity generation in Costa Rica since the late nineteenth century. When it nationalized its electricity sector in the early twentieth century the country chose hydro as its central axis of development. The state utility company, Instituto Costarricense de Electricidad (ICE), developed the necessary technical capacities in-house, collaborating with the University of Costa Rica (Chavez and Cortés Ramos 2013, 84). As the sole repository of technical expertise and a monopoly operator, it enjoyed considerable autonomy in the planning and direction of projects and sectoral policies. The large-scale projects it developed became a matter of national pride, and ICE came to be closely identified with a "Tico" model of development, based on social solidarity and environmental protection (Chavez and Cortés Ramos 2013, 72). Today the country enjoys virtually universal coverage in the electric sector with some of the highest percentages of generation from renewable sources worldwide. When policy reforms at the beginning of this century attempted to privatize the sector, one of the most ardent and sustained social movements in the country's history, the anti-Combo movement, organized in defense of ICE. As will be seen below, this was consistent with the role played by social movements at the beginning of the previous century in the long chain of events leading to the nationalization of electricity and the establishment of state leadership in that sector.

However, in recent years the company's infallibility has diminished. Partial reforms in the 1990s opened a space, albeit limited, for private generators that, together with a coop sector established in the 1960s, have driven investment into alternative renewables. They have capitalized upon the growing

affordability of smaller scale deployments for renewable energy sources that are well adapted to the country's topography and climate, including wind and solar, but also micro-hydro. Not only has this chipped away at ICE's market dominance, but by creating a powerful interest vying for greater liberalization of the sector, it has also diminished its political dominance.

At the same time, ICE has found itself at the center of the country's emergent socio-environmental conflicts. As awareness of the importance of water for economic development has grown in recent years, its control has become increasingly contentious (Programa Estado de La Nación 2013). Local communities claiming sovereignty over the resource have organized to defend against its usurpation, real or perceived.¹ As will be seen, this builds on a long history of social movements asserting and defending the country's sovereignty over hydraulic power, and the state's role in harnessing it. Despite considerable inroads in geothermal energy, ICE's continued reliance on mega hydro developments has placed it squarely within these conflicts. A broad social movement comprised of environmentalists, local community organizations, and indigenous organizations has repeatedly opposed these mega projects over the past two decades. Paradoxically, two decades after its rescue from privatization by one social movement ICE now finds itself severely challenged by another.

As will be discussed below, social movements have managed to stop mega projects in Pacuare and Saavegre and have detained and seriously imperiled what ICE considers to be its key energy project for the next 25 years, the Diquís project. As I will argue, this struggle, as others before it in the energy sector, has had tangible institutional and policy impacts. It has launched a debate about the country's energy model and prompted an institutional struggle for the governance of the energy sector. The first involves questioning the cost and sustainability of large-scale extractive energy projects, the consequences of monopoly power, and the role of private players in the energy sector. The second involves the reassertion of existent but latent powers in the executive branch to make ICE a more accountable player.

As I will also argue, these developments capitalize on a long history of social mobilization surrounding the control of valuable energy resources. Social mobilization opposing a private electricity monopoly in the early years of the sector's history led to the creation of a public one, but successive mobilizations chipped away at it, creating more of a hybrid sector with new municipal, coop and, more recently, private actors. While justice has been a continuous motivation for mobilization, the discourse articulated by social movements has evolved sequentially from a defense of national sovereignty over

¹ Throughout the CAFTA ratification process, for example, unfounded allegations about the privatization of water were among the issues that fueled mobilization against the agreement.

power resources, to a concern with the affordability and reliance of electricity, and finally to a demand for openness, accountability, and environmental responsibility. Through a historically grounded description of these mobilizations the present case study provides a longitudinal examination of the policy and institutional impacts of social mobilizations in the Costa Rican electricity sector.

Institutional and policy impacts are examined in the framework established by Silva (2017). Without discussing the framework at length, and at the risk of oversimplifying it, I will assume that impacts can be either direct or indirect. Direct effects are those where immediate consequences can be traced to the actions of social movements, such as the success or failure of a project, or the influencing of policy based on movement demands. Indirect effects are those where mobilization influences allies or public opinion, which then influences outcomes independently. Effects can also be joint or mediated. In joint effects, movements influence public opinion, which elicits policies that reflect their objectives from policy makers that are sensitive to public opinion. In mediated effects, movements achieve their objectives by allying directly with institutional political actors. As to the effects themselves, they include agenda setting, policy initiation, formulation, implementation, and feedback loops, as well as formal and informal institutional changes, including new forms of inclusion or exclusion and improvements in state efficacy and efficiency.

History of social movements and the electrical sector

Costa Rica relied on hydroelectric power from the earliest period of its electrification. Its very first plant, inaugurated in 1884 with 50 kilowatts (kw) to light the streets of San José, was hydroelectric.² So were those which brought electricity to the other provincial capitals—Cartago (1892), Alajuela (1895), and Heredia (1897)(de la Cruz 2004, 159). The country's first major expansion of generating capacity was hydroelectric: two plants (750 kw) developed in 1900 by the Costa Rican Electric Light and Traction Company, which also ran electric trams in San José and was owned by Minor Keith (of United Fruit Company fame), with a third project (1,000 kw) following in 1912. Two local competitors appeared, the *Compañía Nacional de Electricidad* (1911) and the *Compañía Nacional Hidroeléctrica* (1922), adding 2,500 kw and 2,720 kw of power, respectively, all from hydroelectric sources. When the pacific railway connecting the capital to the port of Puntarenas was electrified in 1928, it was with power sourced from a new hydroelectric plant in Tacaes. All capacity expansion plans considered at

² It is noteworthy that this occurred a scant two years after Thomas Edison installed the first-ever public lighting and transportation system in New York City.

the time, like those for electrification of the central valley, or the utilization of surplus energy from the railroad project, were based on hydroelectric power (Jiménez Gómez 2009, 158). In fact, water was increasingly seen as a national resource, vital to the country's economic development. As early as 1910, the legislature nationalized "all hydraulic forces", reasoning that if such forces "constitute national riches superior in value to all other resources of our soil, it is the duty of the state to conserve them for the general interest"³ (Jiménez Gómez 2009, 156, Rodríguez Arguello 2000, 46).

In 1928, the American and Foreign Power Company, a subsidiary of the U.S.-based Electric Bond and Share Company gained financial control of all the local producers, in fact constituting a monopoly, that came to be known as "the Trust".⁴ This generated considerable opposition and led to the mobilization of diverse citizen groups. Numerous concentrations took place in the capital and provinces to denounce the foreign-owned monopoly as an infringement of national sovereignty in a sector of key strategic importance. Organized by the *Comisión Obrera* (Workers' Commission) they were soon joined by other groups like the *Comité de Defensa de la Riqueza Nacional* (Committee for the Defense of National Wealth) and the *Liga Cívica* (Civic League) in denouncing the transnational monopoly (de la Cruz 2004, 161, Jiménez Gómez 2009, 137). The Civic League, which included some of the most prominent public intellectuals and politicians of the day, led the call for the passage of legislation that would empower the state to control the monopoly and regulate the energy sector (Rodríguez Arguello 2000, 42). The result was the nationalization of all electricity derived from hydraulic forces—already a reserve of the state, as mentioned above—and the 1941 creation of the *Servicio Nacional de Electricidad* (SNE, National Electricity Service), a new state entity to regulate and control all aspects of hydroelectric extraction. This constituted Costa Rica's first sustained social mobilization in the electric sector with direct institutional and policy consequences. Its affirmation of the state as the steward of electricity extraction, and hydraulic resources as an inherently national energy source, set the course for the development of the electrical sector throughout the twentieth century, and into the twenty-first.

The Great Depression greatly limited the investment capacity of the state, so no new plants were added and the sector continued under private monopoly for two additional decades. At the same time, nationalization stymied private investment, greatly limiting the quality and quantity of energy supplied (León, Arroyo Blanco, and Montero Mora 2016, 103). Broad dissatisfaction resulted in new civic mobilizations, as in the case of the *Asociación Nacional para la Defensa del Consumidor Eléctrico*

³ As in subsequent cases, translation from the original Spanish language sources are my own.

⁴ A formal merger occurred in 1941 with the creation of the *Compañía Nacional de Fuerza y Luz* (CNFL), sanctioned by the National Congress, with a 25-year concession and the grant of an exclusive purchase option to the Costa Rican state. See (Fernández Robles 1985, 241-247).

(National Association for the Defense of the Consumer of Electricity), which advocated for a “national” solution to the problems of energy supply, echoing the earlier calls of the Liga Cívica. Given the inability of the national government to provide this solution, the group supported efforts at the municipal level, resulting in the *Carrillos de Poás* hydroelectric project, started in 1946 by the city of Heredia and completed in 1951 (ICE Undated-a, ESPH). This led to the creation, in 1949, of the Junta Administrativa del Servicio Eléctrico Municipal de Heredia (JASEMH), later converted to the Empresa de Servicios Públicos de Heredia (ESPH).

More significant changes came in 1949. That year marked the end of a civil conflict that brought José Figueres to power.⁵ His movement espoused a social democratic agenda, with an explicit role for the state in directing economic development. It moved swiftly to implement it through a series of decrees, one of which led to the creation of ICE.⁶ The new organization’s mandate included “taking advantage of hydroelectric energy to fortify the national economy and promote the greatest welfare for the Costa Rican people” (Junta Fundadora de la Segunda República 1949, 1). The charge is clearly compatible with, and can be seen as a logical continuation of, the reasoning behind the 1910 nationalization of hydraulic resources and the 1928 nationalization of hydroelectric energy. Thus, the choice of hydro power as a national imperative and the view of its development as a sovereign public good, were ingrained in the organization from its inception.

ICE did not immediately displace the CNFL.⁷ In fact, the multinational continued to own the distribution lines for almost twenty years more, giving it considerable leverage over its newborn competitor, and the ability to charge high electricity prices with frequent and—in light of the poor quality of the service—seemingly arbitrarily large rate increases. Alvarenga (2005, Ch. 3) describes how this situation became a catalyst for social protest that would be emulated in future mobilizations. She portrays the emergence of a broad social movement, starting in 1952, around three key groups: The *Juntas Progresistas* (Progressive Councils), the *Asociación Nacional para la Defensa del Consumidor Eléctrico* (ANDCE, introduced above), and the *Alianza de Mujeres Costarricenses* (Alliance of Costa Rican Women, AMC). The *Juntas Progresistas* were neighborhood-based councils organized to advocate for

⁵ After a transitional period at the head of a Junta, and ceding power so that the legitimately elected Otilio Ulate could finish his period, Figueres founded the National Liberation Party (PLN) and was elected to the presidency in 1953. The party was largely dominant until 1978, including an additional term for Figueres (1970-74), and has remained among the main political actors.

⁶ Other institutional reforms were the abolition of the army, the nationalization of the banking sector, and the extension of suffrage to women. These reforms were ratified by a constituent assembly and included in the Constitution of 1949.

⁷ The buyout of Electric Bond and Share’s stock in CNFL would not be finalized until 1967.

local public works and united in a national federation, although their main influence was in the capital. The AMC sought to educate women about their citizenship rights and advocate for better housing, health services and employment.⁸

In response to the rate hikes, the *Juntas* proselytized on street corners to drive supporters to community meetings, where protest actions were discussed, agreed to, and launched. Key among these actions were citizen marches, payment strikes, and *apagones* (blackouts). The latter two strategies were efforts to coordinate action at the household level as a show of collective force. The strikes were aimed at denying payment to the electric company, while the *apagones* were intended to black out entire sectors of the city by leaving the lights off at dusk. While the ANDCE went door-to-door collecting pledges to refuse payment, the threat of disconnection dissuaded many from joining, stymying the payment strike. But the *apagones* were highly successful. The marches were also joined by union members, students, and even the chambers of commerce and agriculture. The movement's message, broadcast through flyers and interviews in the press and radio, sought to delegitimize the rate hikes by highlighting their injustice. Eventually, however, it evolved into a full-throated demand to nationalize the CNFL.

In 1958 a 45% increase in electricity rates drove the movement into action with renewed strength. By this juncture its discourse was fully nationalist. A major concentration was called for September 15, 1958, the country's Independence Day. The symbolism was unequivocal: it linked the movement's struggle against the foreign company with the fight against imperial oppression, won first during the independence movement against Spain, and then again in the National Campaign of 1856-57 against the filibustering William Walker. "Let the people of Costa Rica reclaim what belongs to them legitimately—the light, the energy emanating from our rivers" (Alvarenga Venutolo 2005, 141), read one editorial inciting participants. All political forces in the country joined the march, making it a resounding success. Even the President, Mario Echandi, spoke at the rally, committing, in the heat of the moment, to fulfill "an aspiration of Costa Ricans manifested through all times", by nationalizing the CNFL. He later retracted himself under pressure from the opposition (PLN).⁹ However, the episode is significant in two ways. First, it shows continuity with the claim for energy sovereignty espoused by the social movements

⁸ This was not, strictly speaking, a feminist organization, since it embraced traditional female roles as part of its discourse. While it was pluralist—as an alliance would be—it was closely linked to, and embraced by, the far left *Partido Vanguardia Popular*. As Wickham-Crowley and Eckstein (2015, 37) have argued, women in Latin America mobilized for a variety of socio-economic causes well before doing so for gender-specific concerns.

⁹ The communist leader Manuel Mora spoke at the rally also, making Echandi susceptible to criticism from anti-communist sectors. Expropriating an American company in 1958 entailed a complex national and international calculus given the stage of the Cold War at the time.

of the previous decades. Second, the president's verbal validation of the claim suggests a recognition of its broad base of popular support, and that the state's role in supplying electricity enjoyed widespread legitimacy. The movement was reasserting the view that energy was intimately linked to public wellbeing and therefore reclaiming it as a right of citizenship.

A new period of sustained social mobilization occurred in 1962 during a payment strike against high electricity prices in the province of Cartago. Over twenty-five concentrations of as many as five thousand residents took place over several months, culminating in a confrontation with the police that resulted in three deaths and multiple wounded (Alvarenga Venutolo 2005, Ch. 4). While by this time ICE had already become the largest generator in the country, it continued to depend on CNFL for much of its distribution, a situation that the latter continued to exploit. Efforts were afoot to increase centralization of the energy sector, but significant fragmentation still existed, particularly at the regional level. The SNE was officially in charge of regulating electricity rates, but its capabilities were scant, and therefore also its authority. A thermal factor had been approved as a surcharge on electricity bills to cover the costs of fuel and production in bunker-fired plants constructed in 1958 as a stop-gap measure to deal with the existing power shortage. Cartago subscribers thought the measure impacted them unfairly, particularly given that their own supply of electricity was spotty. Protestors were thus motivated by what they saw as pricing injustice.

They were unified in refusing to pay their electrical bills as a form of protest, employing teams of electricians to reconnect service when the company severed it. The movement relied on a local radio station to broadcast an anti-hegemonic discourse and as a rallying point for concentrations and mobilizations. The basis of that discourse was regionalist, portraying the centralization efforts underway as a usurpation of provincial power, exploiting the historical resentment of Cartago's loss of the capital after the end of the colonial period. Ironically, the central government validated those claims by choosing to repress the movement by force, ending in a bloody confrontation.¹⁰ The crisis would not be fully resolved until 1964 with the establishment of the *Junta Administrativa de Servicios Eléctricos de Cartago* (JASEC), the second instance, with Heredia's, of a municipal exception to ICE's mandate as the sole sectoral actor. It marked a change in the aims of social movements in the electrical sector, where the object of contention shifted from energy nationalism to pricing injustice, and the target of mobilization became ICE.

¹⁰ Alvarenga points to an overreaction due to U.S. influence and fears of communist infiltration of the protest movement at a time of heightened Cold War tensions due to the radicalization of the Cuban Revolution

New mobilizations against price increases occurred in 1983. While a context of severe economic crisis fundamentally altered the nature of the protests, they drew on the mechanisms developed historically in the sector, especially the payment strike, while also introducing new action repertoires like street blockages. Yet, their discourse focused more on demanding accountability from the state monopoly than on nationalist themes, marking a significant change. The international rise in interest rates experienced in the aftermath of the OPEC oil embargoes severely impacted Costa Rica. Like other countries in the region, it had significantly increased its foreign borrowing during the 1970s, and the new conditions made servicing the debt impossible. The national currency devalued by 500% and inflation reached 100%, seriously curtailing the purchasing power of the citizenry and plunging millions into sudden poverty. This was a stark reversion of trends in the previous two decades, which had seen increases in the size of the middle class and average wages. There were frequent strikes demanding cost of living adjustments by doctors, teachers, government workers, and agricultural workers, much like other consumer protests that erupted throughout the region in the 1980s (Wickham-Crowley and Eckstein 2015, 32). But these groups unified with others into a single social movement in response to an increase in electricity rates of almost 100% by ICE.

The company argued it needed the higher rates to be able to service its own international debt, but there is also evidence that the government intended to reduce its fiscal chasm by using the rates as a concealed tax (Sojo 2004, 22). Yet the impact on the average household was such that, in the absence of corresponding salary increases, it was unpayable. Seeking to impose such a hike in a context of falling real wages was seen as high-handed and insensible on the part of ICE, and the response was swift (Alvarenga Venutolo 2005, Ch. 5). Communal organizations in neighborhoods organized marches that quickly spread to the provincial and regional level. Local *Comités de Lucha* (Struggle Committees) elected a national coordinating committee, the *Comisión Coordinadora Nacional Contra el Alza de los Servicios Eléctricos* (National Coordinating Commission Against the Increase in Electricity Rates), representing 52 unions and 140 communal committees. The Commission soon announced a national payment strike and a campaign of civil disobedience that included returning electricity bills to ICE or publicly burning them. Communal committees went house-to-house collecting the paper bills, convincing families to join the strike, so returning or destroying the bills was a symbolic display of the movement's strength. Local committees organized sentries in neighborhoods to spot and obstruct disconnection crews from ICE, and reconnection brigades to reestablish service when their preventive measures failed. The slogan *Yo no pago el recibo de la luz* ("I do not pay my electric bill") was broadly displayed on placards in marches and house windows across neighborhoods.

When ICE announced that it would respond with mass disconnections, the movement barricaded key streets around the city, grounding activity to a halt. This new action repertoire heightened the visibility of the struggle, but also raised its stakes. Since blocking streets is illegal, it legitimized repressive action by the authorities. However, the movement was growing national in scope and had widespread public support, so that action never came. After a majority of deputies in the legislature and municipalities expressed support for the movement, the national government ordered ICE to stand down and reverse the increase. While electricity prices would eventually increase, the movement was successful in assuring it would be at a graduated, manageable pace and in setting limits to the autonomy of ICE through the intervention of the central government.

Like Cartago in the 60s, this movement was not driven by institutional or ideological factors related to ownership of energy resources, but by perceptions of pricing injustice. Unlike Cartago, however, its denouement was not linked to local autonomy because the price increases originated in external factors and their scope was national. However, the crisis uncovered the potential arbitrariness with which a monopoly may act, even if it is a public one. It seems to mark an acknowledgment that state ownership is by itself insufficient to guarantee publicly interested actions in the energy sector, that blind trust in state institutions is therefore unwarranted, and that it is up to the citizenry to demand accountability and transparency. These themes would become relevant again in mobilizations against subsequent mega hydroelectric projects. However, they would remain latent as questions of sovereignty took over again in new mobilizations in the year 2000.

These mobilizations were in response to the “Combo”, a set of reform bills in the legislature that sought structural changes in telecommunications and electricity, two areas that had been the sole purview of ICE since the mid twentieth century.¹¹ The plan sought a gradual opening of ICE’s telecom monopoly, greater participation of the private sector in electricity generation, and a partial opening of ICE’s monopoly in electricity distribution (Sojo 2004, 27). The political elite argued the changes were essential for raising capital and promoting investment to secure the country’s energy needs and its competitiveness. Unions, academics, and other social actors objected to the reduction of ICE’s remit, setting up a struggle about the proper use of public capital accumulated in state enterprises (Alvarenga Venutolo 2005, 269). As we have seen, the idea that energy resources “belong to all citizens” was

¹¹ The bill that consolidated several ICE reform initiatives (hence Combo) was *Proyecto de ley de Mejoramiento de los Servicios Públicos de Electricidad y Telecomunicaciones y de la Participación del Estado*. These reforms had been under discussion since at least the mid 1990s, including in a national forum—*Concertación Nacional*—where their general components were established with inputs from, though not necessarily agreement by, all social sectors.

ingrained into ICE from its founding. The company had come to be seen as a repository of national talent that had risen above foreign interests and conquered developmental challenges and therefore a source of collective pride (Solís 2002, 43). By the 21st century ICE had become central to the national identity, a key factor in achieving what the country saw as its unique model of development, centered on human solidarity.¹² As stated by its founding director, Jorge Manuel Dengo, ICE “overcame the skepticism about the ability of Costa Ricans to complete great works which before were considered the exclusive realm of foreign companies” (Dengo 2004, 77). It had achieved virtually universal coverage, reaching even the remotest areas—which would have been unlikely in a competitive market—and had successfully developed large-scale and technologically challenging projects (Chavez and Cortés Ramos 2013, 77). While sometimes at odds with the citizenry, it had done all this while simultaneously providing energy security at competitive prices.¹³ To many, ICE, while not flawless, was a national patrimony, the result of sacrifices made by several generations of Costa Ricans. Polls showed that 72% of the citizenry opposed its privatization at the time (Chavez and Cortés Ramos 2013, 85).

In this context, the Combo was perceived as a stealth privatization effort that was likely to benefit the same political elites that were promoting it (Alvarenga Venutolo 2005, 277, Chavez and Cortés Ramos 2013, 88, Solís 2002, 40).¹⁴ One of its provisions purportedly opened up national parks for energy projects, a highly unpopular prospect (Cartagena 2010, 53). The bill sparked anger in many sectors and unleashed a massive social movement that was unprecedented in its scale (Solís 2002, 33, Chavez and Cortés Ramos 2013, 89). While the various labor unions within ICE had a central role, this movement lacked a centralized coordinating mechanism and its main actors were no longer community based organizations. At its core was a loose coalition of actors with differing but not necessarily contradictory demands, including ecological, feminist, and religious organizations, unions, agricultural workers, taxi drivers, and students. These diverse organizations articulated different goals. Some marched to protest privatization, while others marched to protest what they saw as self-interested and

¹² In ICE’s specific case, profits from more lucrative areas, like telecommunications, subsidized electricity rates and costly networks that serviced fewer users in remote rural areas (Sojo 2004).

¹³ How reasonable prices are, is a matter of constant dispute. Industrialists claim they are high and ICE, and its defenders, that they are low. Both provide alternative data bolstering their claims. Some evidence suggests electricity prices are lower than the regional average in the residential market, but higher than average in the industrial market (Sojo 2004, 30). As discussed below, more recent evidence suggests prices have lost their competitiveness, partly as a result of cost overruns and inefficiencies in mega projects (see *La Nación*, August 6, 2017, “Ataques Infundados Contra el Grupo ICE Pretenden Destruir Modelo Eléctrico Costarricense”; January 5, 2018, “Competitividad Energética se Apaga”). Debate also rages regarding the comparability of prices between ICW and private generators (see (Castro 2008, Alvarado 2009, Durán 2009)).

¹⁴ The two traditional parties that had alternated in power since the end of the 1948 civil conflict had entered into a “pact” to advance the reform, seen by many as a suspicious form of collusion.

corrupt political elites. Still others marched to demand specific concessions including higher salaries (unions), the repeal of specific taxes (taxi drivers), or the payment of special compensations (stevedores). In this way, the movement drew strength from numbers as it gave voice to different groups to vent their anger and frustration against the state, whatever its source, with the perception that a cherished public asset was falling prey to obscure designs serving as an amalgamating factor (Solís 2002, 39, Sojo 2004, 25).

The Combo protesters drew on the memory of 1983 and adopted street blockages and marches as their main repertoire of action. After weeks of virtually paralyzing the country, the government relented, scrapping the proposed reforms, even though they had been approved by the legislature.¹⁵ This was a significant turning point in the history of the electricity sector: an elite-driven liberalization effort that was several years in the making and that could have fundamentally altered its structure was stopped short. The anti-Combo movement therefore resulted in a significant direct policy impact by keeping ICE under public ownership and preserving its role as a privileged actor in the electricity sector. This meant the continuation of ICE as a dominant, vertically integrated entity that plans, designs, constructs, generates, transmits, and distributes the bulk of electricity in the country (Portolés 2011).

As we have seen, the municipal concessions granted to Heredia and Cartago,¹⁶ in which social movements played a significant role, were two exceptions to ICE's monopoly. However, being concessions to local governments they did not alter or challenge the concept of energy sovereignty, as electrical power remained, in some way or another, in the hands of the state. We now turn to consider two other exceptions: rural electrification coops established in the 1960s, and a limited opening to small-scale generation by the private sector in the 1990s.

Cooperativas

By the 1960s only about 50% of the population had access to electricity. ICE struggled with the task of expanding electric coverage due to a shortage of capital and the highly fragmented network it inherited. It was therefore receptive to assistance offered by the U.S. under Kennedy's *Alliance for Progress*, for the development of rural electrification projects using the coop model, where rural coops purchase bulk-power from ICE and distribute electricity for off-grid settlements and agricultural businesses (Barnes 2011, 262). While technically private, coops are considered a form of "social

¹⁵ As a final blow, the Constitutional Court eventually declared the new law unconstitutional on procedural grounds.

¹⁶ Alajuela received a concession also, but it was later absorbed by ICE.

enterprise”, given their widely distributed ownership, where no individual can exercise a controlling interest, and their direct ties to the community. This analogizes their role to that of the state as purveying to the public good. As a result, did not incite any form of opposition and were seen as compatible with the state’s energy sovereignty.

Four rural electric coops were created in remote areas between 1965 and 1972: *Coopeguanacaste*, *Coopesantos*, *Coopesca*, and *Coopealfaroruiz* (Madriz-Vargas et al. 2016, 2). They operate to date under special concession areas which can be substantial. For example, *Coopeguanacaste* covers an area of 3,915 Km², almost 8% of the national territory, and today has over 70,000 members, reaching over 100,000 people with electricity provision. In 1989 the rural coops created *Conelectricas*, a consortium to develop renewable energy generation under new provisions enabling private actors (see below).

Private Generation

A more fundamental alteration of the electrical regime came with the passage of Law 7200 in 1990, and four years later law 7508, which allowed the participation, albeit limited, of private generators in the sector. The laws passed without significant opposition despite their obvious impact on ICE’s monopoly and their implications for the notion of energy sovereignty. If state stewardship of the sector was as important as has been described, why were these laws unopposed? A potential explanation lies in the limiting conditions imposed by economic crisis and the need to supply the country with the electricity it needed.¹⁷

As discussed above, severe economic crisis in the early 1980s ushered in a period of structural reforms and fiscal stringency. The relative autonomy enjoyed by decentralized state institutions was seriously curtailed. Where there were financial surpluses, they were collected to help reduce the government’s overall deficit. Consequently, investment budgets were constrained, raising questions about ICE’s ability to meet future energy demand (Jiménez Gómez 2009, 186). The large lead times of hydroelectric projects, which were also increasingly questioned by environmental groups, pointed to thermal back-ups as inevitable to guarantee energy security. The rising cost of oil in international markets made this an onerous burden for the state.¹⁸ Under the circumstances, the notion that the

¹⁷ Some authors argue that collusion between political elites with interests in the sector was a driver of the reforms (González O and Solís Avendaño 2001, Solís Avendaño 2006). However, that does not explain the absence of opposition.

¹⁸ Weather variability would be added to these factors in the mid 2000s as a drought in 2007 seriously curtailed hydroelectricity supplies.

state had reached its natural limits and should consider ceding space to private actors began to gain credence, possibly blunting opposition to the approval of the two new laws. Movement concerns and formation can be contingent on shifting political and economic conditions (Wickham-Crowley and Eckstein 2015, 39).

Law 7200 authorized generation by coops and private firms but only from renewable sources not exceeding 20,000 KW per project. The law required at least 65% of the ownership stakes to be Costa Rican, and capped total energy generated by all new registered entrants at 15% of the national electrical system's total installed capacity. The new producers could only sell their energy to ICE, and it in turn was obligated to purchase it. Law 7508 expanded the limit per project to 50,000 KW, and the cap on overall generation by an additional 15% of installed capacity, for competitive public bid contracts under the "Build, Operate, Transfer" (BOT) modality, where ICE buys the electricity generated during the life of the contract, but the physical plant is transferred to ICE at its conclusion. All private projects would require a state concession for water use which would be limited in duration to twenty years¹⁹, but could be renewed. Hence by purposely limiting the opening through capital requirements, individual and aggregate capacity limits, and market restrictions, policymakers could claim the mantle of pragmatism, solving the problem of electricity procurement, while still protecting the general goal of energy sovereignty.

Private actors moved quickly to capitalize on the opportunities created by these laws. The momentum produced by the reforms led the administration of José María Figueres to propose a more integral restructuring of ICE in 1996. Some of the changes were implemented administratively, leading to what has been called the "corporatization" of ICE (Chavez and Cortés Ramos 2013, 90). Essentially, they sought the functional separation of the company's key businesses—electricity and telecommunications—and the introduction of managerial structures akin to those found in modern corporations. More ambitious changes involving privatization of telecommunications and a broadening of the private sector's role in the electricity sector, would have to be tackled by new legislation. The latter set of reforms, ultimately taken up by the administration of Miguel Ángel Rodríguez, led to the chain of events culminating in the "Combo", as recounted above, and did not advance in the electric sector.²⁰

¹⁹ Expanded to 25 years in 2009 by Law 8723.

²⁰ The telecommunications sector was opened to competition, albeit with ICE retaining its role as a key player, as a result of CAFTA and ensuing reforms.

By 2014 private sector generators had reached the 15% limit established in law 7200 and there were 81 projects waiting to qualify under the BOT quota (Sancho 2014, Fornaguera 2014). With recent capacity additions by ICE, the proportion of private generation dropped slightly to about 12.2% in directly operated and 12.6% in BOT plants in 2016 (Alvarado 2017). Numerous bills in the legislature have sought to raise or eliminate this limit to expand private participation, but they have not prospered (Fornaguera 2014). The view that electricity should be treated as a public service is still entrenched, and there are many who view the partial opening of the sector as a regrettable betrayal of the Costa Rican model that should be reversed (Álvarez 2005, Durán 2005). Environmental organizations are among the most ardent advocates of this view, but their critique also focuses on ICE. They accuse the organization of opaqueness and unaccountability, but also of having relinquished its stewardship of the electrical sector. Some blame this on the venality of its top executives who they accuse of colluding with politicians and private generators to exploit the sector for their own benefit (Durán 2005, 12), echoing the critiques of social movements during the COMBO. They call for re-centering the organization on its original charge, emphasizing the notions of energy nationalism, that energy resources belong to the citizenry and should therefore never be exploited for private gain. When it is, such an appropriation of public wealth calls for mobilization.

Social protests against Hydroelectric Projects

The partial opening of the electric sector to private generators increased the number of hydroelectric plants, and this resulted in social mobilizations at the national and local levels (Álvarez 2005, 8). Resistance was not exclusively against private operators. It also extended to ICE. And it drew upon the notions of sovereignty expressed historically in the sector, which held that water and its derived energy should not be subject to private appropriation yet reinterpreting it by assigning the sovereign rights to the communities where the resources were located, not the state. This claim was justified by the notion that communities are co-located with the resource and hence have a first right to it, but also that they suffer the immediate consequences from its exploitation. Such consequences range from the exhaustion of water flows, to environmental impacts, and sometimes the displacement of entire communities.

A key action to stop five hydroelectric projects (one of which was ICE's) in 1998 was a legal challenge raised by the communities of Rivas and General Viejo, in Pérez Zeledón, questioning their constitutionality. The somewhat unexpected result was that, in examining the claim, the Constitutional Court concluded that the legal reforms that had enabled private generation (laws 7200 and 7508) had,

in the process, created a legal void with regard to the regulation of water concessions. As we have seen, the Servicio Nacional de Electricidad (SNE) was established in 1941 to regulate hydraulic concessions for electricity generation. The new laws abolished SNE and created a new regulatory entity, the *Autoridad Reguladora de Servicios Públicos* (ARESEP, Regulatory Authority for Public Services). While the attributes of this new agency pertaining regulation of electricity generation, transportation, and distribution of electricity were clear, the Court ruled that the new laws did not provide an adequate legal framework to substitute the SNE's previous role regulating water concessions for electricity generation. Interestingly, the Court added that even the previous SNE framework had been superseded by developments in the ensuing decades, most notably the addition of the right to a healthy and ecologically balanced environment to the Constitution.²¹ In such a context, regulating concessions would require more than simply determining the hydrological capacity of a basin: it would also have to ensure the preservation for future generations of the water itself as well as related, constitutionally protected resources like the local fauna, ecosystems, climate, navigability of water bodies, and aesthetic and scenic enjoyment (Sala Constitucional de la Corte Suprema de Justicia 2000).²² By declaring the absence of such a framework the Court effectively created a legal void with no public body empowered to regulate concessions. This stopped the new projects, but also affected those already in existence that would at various points in time require a renewal of their water concessions.

The situation was not resolved definitively until 2009 (eleven years later!) when the national legislature adopted the *Ley Marco de Concesión Para el Aprovechamiento de las Fuerzas Hidráulicas Para la Generación Hidroeléctrica* (Framework Law for Concessions to Utilize Hydraulic Forces for Hydroelectric Generation), law 8723. Its promulgation can be seen as a policy effect of the social mobilization that led to the pronouncement of the Constitutional Court. While the movement's aim was to stop the hydro projects in its immediate community, in its lawsuit it expressly alleged the absence of a competent authority to regulate concessions due to the elimination of SNE, the key point acknowledged by the Court (Sala Constitucional de la Corte Suprema de Justicia 2000). The resultant new law empowered the Ministry of the Environment and Energy to regulate concessions, and modernized the legal framework by incorporating references to environmental and biodiversity laws as well as to those regulating the electrical sector.²³

²¹ In 1994, Article 50.

²² The ruling references the 1992 Río Declaration on sustainable development for emphasis.

²³ Article 7, law 8723.

Another key instance of resistance was the drive by community organizations in the Sarapiquí basin to oppose a 30,000 KW hydroelectric project proposed by the ESPH (the public generator of the Heredia province, described above). Using a highly innovative strategy, sixteen organizations pushed for a municipal plebiscite in 2000 proposing that the basin be elevated to the status of “natural historical monument” and therefore off limits to development (Vázquez 2000). While participation was low (13% of eligible voters) it passed by a large majority (Cordero Ulate 2007, Loaiza and Vázquez 2000). This was unprecedented not only in itself but also because it was the first plebiscite of its kind to be held in any of the country’s 81 municipalities since they were made possible in 1970.²⁴ While not binding with regard to national-level legislation, it represented a strong assertion by the community of its position against public and private developers, politically legitimated. The results of the plebiscite would be used to challenge ICE’s *Cariblanco* hydroelectric project as well as three others by private developers in the ensuing months.

The plebiscite strategy was soon adopted by other communities. In 2001 community organizations in Guácimo proposed a plebiscite on a rule to ban any profit-driven use of its aquifers. It passed with the support of over 97% of voters, effectively banning the intended hydroelectric developments planned for the region. A third plebiscite occurred in 2005 in Turrialba, organized by community, indigenous and environmental organizations in response to ICE’s longstanding and highly controversial mega-project on the Pacuare river. The vote came down against the hydroelectric project by 97% and ICE desisted from it (La Nación 2005). However, this appeared to be merely a tactical retreat. The company’s leadership, following upon its historic success and accumulated know-how in hydroelectricity, was convinced that mega-projects were the only technically viable alternative to fulfill the country’s long-term energy needs, and that it had to proceed despite community resistance, if not by force then by guile (Durán 2008, 11). Given the limited number of potential sites, they continued to promote Pacuare’s advancement. In response, the movement opposing the project, which included communal, environmental, and indigenous organizations remained organized and vigilant. Since the local plebiscite results could be overridden by national legislation, they mobilized to secure a decree from the national government that would commit to respecting that outcome. They also “nationalized” the issue by linking it to other socio-environmental conflicts surrounding water, mining, real estate development, and petroleum extraction (Foro Nacional 2009). Although it took a decade, a direct policy

²⁴ Only two other plebiscites were held at the municipal level, both to deal with political boundaries.

impact eventually came in the form of an Executive Decree officially excluding the Pacuare and Savegre rivers from hydroelectric projects for 25 years (EFE 2015).

As ICE coexists with a number of small private generators the electricity market has some measure of competition, but it is monopsonistic, with ICE remaining the sole buyer, and monopolistic in the areas of transmission and export. Prices are not market-determined but set by a regulatory authority (ARESEP). The main policy question going forward is thus whether to revert to a fully public system or broaden the remit of the market to those areas currently directed by the state (Vargas 2009). The main political cleavage is in determining the relative roles that will be played by the competing actors.

While ICE continues to enjoy considerable popularity, it has also come up against charges of high-handedness and insularity²⁵, and its insistence on mega-projects has faced resistance from social movements. However, those movements continue to advocate for water and electricity as constitutionally protected rights and are therefore also resistant to private generators. These generators have become well established and are a powerful interest in their own right that enjoys the support of industry and some political sectors. They advocate for greater competition in the sector as the way forward to greater efficiency and lower energy prices, and a more diversified mix of renewable sources as the route to energy security.

The campaign against Diquís

The Diquís hydroelectric project has become the focal point for the debate about the future of the energy sector in Costa Rica. It is the largest hydroelectric project in Central America with a planned capacity of 650MW and an estimated cost of \$2.6 billion. Its dam would be 173 meters high with a reservoir covering over 7,000 hectares, 915 of which would be in indigenous reservations (ICE Undated-b). Stretching back as far as to 2005 it has been the object of multiple lawsuits and protests. Opponents object to the extractivist nature of the project and its environmental impacts but also what they claim has been an arbitrary, high-handed and even illegal approach on the part of ICE. The government decreed the project to be “of national interest” in 2008, but the company had already been onsite for three years. Its footprint was sizeable, with camps for heavy machinery and large worker crews, and tunnels excavated to extract materials, all ostensibly as part of preliminary feasibility studies. To be in

²⁵ Jokingly referred to as “república soberana” (sovereign republic) in some circles, as declared by former president and Nobel Peace Prize Oscar Arias to *La Prensa Libre*, August 23, 2016, “Óscar Arias: ‘Somos un montón de imbéciles...’”; and as stated to me by the Minister of Environment in a personal interview.

compliance with the law, however, those works should have been preceded by the decree, not the other way around. Moreover, the decree itself should have drawn evidence from an environmental impact study, an environmental strategic study, an evaluation of the convenience of changing the land use, a consultation process with the local community, and a consultation process with any impacted indigenous communities (Sagot 2012). The latter stemmed from obligations acquired through Costa Rica's ratification of the 1989 ILO Convention on Indigenous and Tribal Peoples (#169), but for which no protocol existed at the time of the decree.²⁶ The absence of these requirements suggests the decree was in violation of national and international law. The government of Oscar Arias seemingly treated it as a cursory step in a process whose outcome it had predetermined in favor of ICE.²⁷

Aside from the questionable legality of these actions, the way in which ICE proceeded also generated a backlash. Its conduct was seen as disrespectful and dismissive of local interests and concerns. Durán (2012, 8, 12) describes ICE as entitled and condescending, believing itself able to "enter any place, at any time" without being required to "stop the country's progress for any small group of people" and acting as if "rivers, communities, and the country belonged to it so that it could impose on them without any qualms." As stated by Mayid Halabi, president of SIICE, a union representing ICE engineers and professionals, this stems from an institutional ethos developed throughout the company's longstanding and undisputed regency of the energy sector.²⁸ While grounded in its technical and organizational successes it has now become dated. Its reliance on hydropower has inhibited the growth of alternative energy sources, with the exception of geothermal, which is itself limited by the fact that most unexploited sources are in protected areas.²⁹ It has also blinded the organization to the growing societal opposition to mega hydropower projects.

Organizations mobilized to oppose the project at the local level and were joined by environmental organizations, both national and international. Indigenous groups like the *Frente de Defensa de los Derechos Indígenas de Térraba FDIT* (Térraba Indigenous Rights Defense Front), the *Asociación de Mujeres Mano de Tigre* (Hand of the Tiger Women's Association) and the *Asociación Cultural Indígena Teribe* (Teribe Cultural Indigenous Association) led the local opposition, and received support from broader indigenous groups like the *Mesa Nacional Indígena de Costa Rica* (Costa Rican

²⁶ It would not be created by the government until 2018.

²⁷ See Rose Spalding's study of the mining sector in Costa Rica for irregularities surrounding the Crucitas decree issued by the same administration.

²⁸ Personal interview, June 28, 2017.

²⁹ The Minister of Environment and Energy referred to ICE as a "hydrocephalic organization" during our personal interview, also highlighting this point.

National Indigenous Table), national environmental groups like *Fundación Neotrópica*, PRETOMA, and APREFLOFAS, national social organizations like *Asociación de Iniciativas Populares Ditsö* (Popular Initiative Association Ditsö), public universities, and transnational organizations like REDLAR (Cordero Ulate 2015).³⁰

However, a local community organization, the *Asociación de Desarrollo Integral de Térraba ADIT* (Térraba Development Association), did not oppose the project and authorized ICE to conduct studies on the right bank of the Térraba river in 2009, creating the appearance that the project had the endorsement of the community (Cordero Ulate 2015, 16). This was loudly denounced by opposing groups, opening a struggle to define who were the legitimate representatives of the community. Underlying the struggle was the fact that a majority of the land within Costa Rica's indigenous territories is held by non-indigenous persons, mostly as a result of squatter settlements.³¹ These territories are inalienable, and the state is obligated to rectify these de facto holdings but for many years has failed to do so. The indigenous minority, at risk of being silenced and sidelined from the process, organized a Council of Elders to represent it and challenge the legitimacy of ADIT, working in conjunction with FDIT and other organizations to request the intervention of James Anaya, United Nations special rapporteur for indigenous rights. Meeting with government representatives in Geneva Anaya arranged a site visit and published a full report with his findings in May of 2011. The report noted how land tenure violated the rights of indigenous peoples and questioned the legitimacy of representation by organizations like ADIT. More significantly, it clearly stated that no project could go forward legally that did not satisfy the right of previous consultation of the affected indigenous communities. Since no mechanism existed for that purpose this was enough to stop the project in its tracks, and it has remained in suspense since. Social movements, coalesced around the rights of indigenous groups, thus managed to temporarily stop the megaproject by appealing to international law and multilateral agencies. This direct impact would also lead to an indirect policy effect, seven years later, as the government was forced to issue a statute regulating and establishing the procedures for a mechanism of previous consultation of indigenous peoples in instances where their territories are impacted by development projects.

³⁰ See also Environmental Justice Atlas, <http://bit.ly/2GDs867>

³¹ Some holders do have titles obtained in good faith, although their legality is questionable due to the statutory limitations imposed on property in indigenous reserves.

The resulting debate about the future of the sector: diversification, competition, oversight.

Yet the project remains at the core of ICE's development plans. Its most recent long-term electric generation plan states: "Our analyses show the development strategy with the Diquís hydroelectric project coming online in 2026 to be the most robust expansion plan to satisfy demand growth in the next two decades. The Diquís strategy provides optimal economic and environmental results in any demand scenario..." (ICE 2017, 2). The company's director for planning and electrical development, Javier Orozco, has made the case for Diquís in multiple interviews and op-ed articles.³² But the opposition from social movements has placed the project on the public agenda, generating an open debate about its convenience among various sectors—including the state itself—and bringing many of its elements into question.

The Ministry of Energy and the Environment (MINAE) supersedes ICE as the official state entity responsible for planning in the sector, but as previously mentioned, past ministers have been content to delegate that role to ICE, allowing it wide latitude. This changed under the Solís administration, with the minister acting expressly to recover that leadership role. In contrast to ICE's bet on mega-electricity, MINAE's National Energy Plan—developed through a broadly consultative process—openly embraces the goal of a more diversified energy matrix that capitalizes on "non-conventional renewables" such as biomass, wind, and solar, but also a diversified generation plan that capitalizes on distributed as well as centralized options (Ministerio de Ambiente y Energía MINAE 2015, 75, 71). As a result of this plan, the Minister has stated publicly that the construction of Diquís is "not written in stone"³³. This suggests a joint effect whereby the action of social movements influenced public opinion regarding the inadequacy of ICE's approach and the minister reacted to the perceived inadequacies. This was in turn compounded by the evidence put forward by independent parties that challenges the model that ICE insists upon. Two recent reports by the Inter-American Development Bank highlighted the large potential that exists in variable renewable sources (wind and solar) and distributed generation (Echevarría Barbero and Monge Guevara 2017, Ackerman et al. 2017). The studies estimate the existent transmission network can absorb an additional 400 MW in each of solar, wind, and distributed generation, which lessens the rationale to argue for a large capacity hydro project like Diquís.

In 2015 and 2016 Costa Rica generated almost 99% of its electricity from renewable sources. As has been reported—and celebrated—worldwide, the country totaled 904 days where electricity was

³² See, for example, *La Nación*, August 23, 2017, "La Importancia de El Diquís"; July 12, 2017, "Embalses Sustentan Diversidad de Matriz Eléctrica"; June 5, 2017, "ICE insiste en que Diquís es 'Esencial'").

³³ *La Nación*, July 22, 2017, "Costo de Planta Hidroeléctrica El Diquís se Duplicó en Cinco Años". This was reaffirmed to me in a private interview with the Minister June 26, 2017.

generated solely from renewable sources between 2015 and 2017, averaging over 300 days per year in the last three years. The percentage of electricity generated from renewable sources grew from 90% in 2014 to 99.7% in 2017.³⁴ The preponderance of this power (75%) came from hydro sources, with geothermal and wind providing an additional 13% and 10%, respectively. Biomass accounted for less than 1% and solar for a paltry 0.01% (Rojas Navarrete 2017, 34). This high level of reliance on hydro has been cited by MINAE as problematic given existent expectations of higher variability in rainfall patterns. At the same time, the country has large potential capacity in wind and solar. The northeastern region of Guanacaste has some of the best wind resources worldwide with average wind velocity of 12 m/s and capacity factors above 40%, and the potential of solar energy is high over the entire country (Ackerman et al. 2017, 3). These sources could be used to substitute thermal source generation during the dry season, and to avoid excessive drawdown of hydroelectric resources during the wet season. Ackerman et al. (2017, 10) highlight that, because wind and solar are modular systems, generation capacity can be increased quickly and gradually, in response to actual demand. This view is endorsed by private generators who consider themselves well-suited to provide these kinds of projects but are hindered from doing so by the restrictive legal framework currently in place.

In contrast, large hydro projects like Diquís have long lead times with heavy upfront investments dictated by uncertain estimations of energy demand. The evidence suggests that ICE has overestimated this demand over the past few years (ICE 2017, 44, Lara 2017, Monge Guevara 2017), overshooting the scale of electric generation capacity required. At the same time, the company has underestimated the cost of developing its projects, incurring serious cost overruns (Díaz 2018, Egloff 2018b).³⁵ The combination of both factors—overcapacity and runaway costs—has been blamed for driving electricity prices higher (Lara 2017, Egloff 2018a).³⁶ It has also contributed to the erosion of public confidence in the mega-project model championed by ICE, calling into question the need for Diquís (Echeverría Martín 2017) but also triggering inquiries by a special legislative commission, ARESEP, and the General Comptroller, and complaints about ICE's lack of transparency and accountability as well as its

³⁴ This significant achievement was due to installed renewable capacity, but also favorable weather conditions. Over the 2011-14 period renewables represented about 90% of generation which, while still significant, meant the country generated 983GWh from hydrocarbons. Climatic factors, especially the impact of *El Niño* on rain levels, remain a significant contingency.

³⁵ Reventazón, the latest mega-project to come online, is estimated to have more than doubled in cost, from \$757 million at the outset to \$1.6 billion at completion. See the editorial to *La Nación*, August 21, 2017. See also *Diario Extra*, December 5, 2017, "Por omisiones del ICE y Jasec costo de Toro III subió \$90 mills."

³⁶ *La Nación*, January 11, "Urge bajar costo de energía"; *La Nación*, April 5, 2017, "Industriales acusan al ICE y CNFL de encarecer electricidad por ineficiencia".

administrative capabilities.³⁷ The shift in public perception was acknowledged by the company itself in a full-page ad in which it claimed that “media, political, and institutional pressures” were seeking “to dismantle Costa Rica’s successful electricity model.”³⁸

That model, reliant as it is on hydroelectric sources, has come under increasing scrutiny by environmental organizations and industry trade groups. The opposition from environmental organizations started with the Pacuare and Savegre campaigns, as described above, and has now generalized to opposing all use of dams due to their purported impacts on ecosystems and rural communities (Cordero Ulate 2007, 233, 2015, 11). The consensus among civil society seems to be for a moratorium to exploiting hydraulic sources (Esquivel Rodríguez 2014, 3, 22). Environmentalists have gone from viewing ICE as an ally focused on national and popular interests—which they staunchly defended during the mobilizations against the COMBO and later CAFTA—to denouncing it is a sellout. They accuse ICE of being “productivist, anti-ecological and anti-indigenous”, of wanting to “export energy without regard to the environmental and social impacts within its own country” and sacrificing “its touted social solidarity in favor of corporatist interests.”³⁹ On more pragmatic grounds, they point to the risks of relying so heavily on hydropower, which is expected to be negatively impacted by severe droughts in the context of a changing climate (Esquivel Rodríguez 2014), a claim echoed by private generators and others in the private sector (Alvarado 2017).

Industry trade groups, on the other hand, blame the model for the high costs of electricity in the country, which they claim makes them uncompetitive internationally (Díaz 2018, Egloff 2018a, b).⁴⁰ A recent report from CEPAL (Rojas Navarrete 2017) suggests that the country’s electricity rates are in fact the highest in Central America. The Costa Rican investment promotion agency, CINDE, claims that this has resulted in lost foreign direct investment and calls for opening the energy sector to increase competition and force ICE to reduce operation costs and avoid project cost overruns (Lara 2018). Finally, private generators also question the overreliance on hydro and suggest ICE resists alternative renewables not from technical reasons but entrenched interests. Mega plants are a secure source of employment for the large and specialized labor force that the company has developed over the years.

³⁷ *La Nación*, April 6, 2017, “Diputados piden cuentas a ICE y CNFL por impacto de inversiones en tarifas de luz”; *Crhoy.com*, January 29, 2018, “Diputados le reprochan ‘chambonadas’ a presidente del ICE”, <https://www.crhoy.com/nacionales/diputados-le-reprochan-chambonadas-a-presidente-del-ice/>

³⁸ *La Nación*, August 6, 2017, page 3A.

³⁹ *Ambientico*, September 2012, p. 2-3.

⁴⁰ See also *La Nación*, April 5, 2017, “Industriales acusan al ICE y CNFL de encarecer electricidad por ineficiencia”

Privileging them crowds out capacity in solar and wind, which private generators claim they could provide effectively and competitively.

In sum, there appears to be a joint effect operating, in which social movements have impacted the policy agenda by questioning ICE's extractive model, and state officials have responded to those impacts by modifying their approach to policies. As the Programa Estado de la Nación (2013, 210) has indicated, social mobilization has become a key factor affecting how the Costa Rican state approaches projects that impact the environment. At the same time, MINAE has recognized the need to give local groups greater voice and participation in decisions that affect them, through new methodologies for citizen participation, guaranteed access to information about hydroelectric projects, and consideration of community interests in the assessment of socio-environmental impacts and their mitigation (Ministerio de Ambiente y Energía MINAE 2015, 53-54, 87, Esquivel Rodríguez 2014, 3). It has also accepted that public regulatory entities such as SETENA—the entity charged with approving environmental impact evaluations—have been lax in their scrutiny of ICE, a legacy from decades of uncontested dominance by the state company in the energy sector, and an established practice of giving ICE considerable leeway in planning and executing major projects, setting energy prices, and self-regulating. But as we have seen, this autonomy was contested by social movements when it was believed to be used arbitrarily, whether because of its impact on energy prices or its threat to river basins and other prized environmental assets. As a result, the good will and public trust the company enjoyed has eroded and regulators have become more assertive. ARESEP, for instance has stopped rubber-stamping price increases proposed by ICE, limiting its ability to pass on to consumers project cost overruns. MINAE, for its part, has moved to take control of the energy planning process within a beefed-up planning department (Ministerio de Ambiente y Energía MINAE 2015, 84).⁴¹

Conclusions

The current resistance to large-scale hydroelectric projects in Costa Rica follows a long-established tradition of social mobilization within the electricity sector, dating back to the early twentieth century. I have argued that these mobilizations have produced multiple policy and institutional effects, both direct and indirect, as summarized in Table 1. I have also traced the evolution of the protest discourse that this history reflects, from an early focus on energy nationalism, to issues of

⁴¹ Within the energy subsector of the Ministry (“Dirección Sectorial de Energía”), the “Secretaría de Planificación”.

energy affordability, demands for openness and accountability from the state utility, and finally, a demand for environmental accountability and respect of local and, especially, indigenous autonomy.

The historical examination in this study suggests that mobilization has been continuous across time and that it has produced a legacy of repertoires on which movements have drawn repeatedly. The anti-dam movements starting in the late 1990s exemplify the relevance of sustained action to achieve movement goals, and how achieving such goals may require a diversity of policy impacts. While the Pacuare and Savegre communities, for example, were able to stop hydroelectric projects by changing policies at the local level, it took ten additional years to obtain an executive decree that excluded them at the national level. And that exclusion is still not permanent. In terms of the historical repertoire, ideational factors, such as the notion of energy sovereignty, have been used repeatedly to drive mobilization, for example in favor of the nationalization of electricity in the first half of the twentieth century, and then in defense of nationalization at the end of the century. At the same time, while nationalist sentiments have not disappeared, they did not drive opposition to a partial privatization of electricity generation in the late 1980s, suggesting their impact on mobilization may be contingent on shifting economic and political circumstances. Material grievances drove mobilizations in the 1950s, 1960s, and 1980s, with movements repeatedly drawing on such tactics as payment strikes and street blockages to oppose what they saw as pricing injustice. The assertion of local and indigenous autonomy to protect community resources against development drove mobilization against mega hydro projects from the late 1990s to the present day.

While ICE has a well-established reputation for technical excellency and has been a longstanding source of national pride, these mobilizations suggest that its power and autonomy have been, and remain, contested. Integrated utility monopolies have the advantage of a captive customer base and stable demand, which allows them to plan within a long-term horizon. They can build capacity to accommodate growth and respond to peak demand, while passing costs along to consumers, without risk. Yet, in the absence of strong regulation, this ability can reduce incentives to remain efficient and increase the propensity to spend on management and employee perks (Helm 2017, 207). Project cost overruns and high electricity prices suggest this may have occurred in Costa Rica, and social movements have mobilized in response. Their actions have resulted in direct policy shifts, as the suspension of Diquís shows most recently. But by placing these issues on the agenda, movements have also generated a broader conversation about ICE's role, pushing the state to exert a more proactive, but also more representative regulatory role.

The debate has also spilled over into a broader questioning of the large-scale extractive energy model predominant in the country. Movements have denounced the significant socio-environmental impacts of hydroelectric projects, ranging from the displacement of entire communities to alterations in river flows, sedimentation, the loss of forest cover, the destruction of wetlands, and numerous related environmental risks. Environmentalists have also pointed out that mega hydro plants have significant carbon footprints, and are not as low-emission as typically claimed (Astorga Gatgens 2012, 24). While ICE insists on the centrality of the extractive model, critics point to its high fixed costs and long lead-times while highlighting the modularity and flexibility, as well as the untapped availability, of variable renewable sources like sun and wind. The debate reflects a larger one taking place at the global level, driven by rapid technological change and decarbonization. It posits that the existing energy architecture, which is centralized, command-and-control oriented, and extractive, is being replaced by a new one, which “will be distributive, mobile, intelligent, and participatory” (Seba 2014, 3). This is an adverse scenario for centralized utilities like ICE: “building small-scale onshore and offshore wind and fitting solar panels are hardly skills that companies specializing in large-scale power stations are likely to have” (Helm 2017, 211). On the other hand, it dovetails with the interests of private generators clamoring for greater participation in the Costa Rican energy market.

While social movements have mobilized to keep ICE accountable they do not necessarily oppose the institution per se. Much less do they favor an expansion of private generation, which they see as an appropriation of water and energy, national and public resources they say belong to everyone. ICE remains popular, steeped in its identity as steward of the country’s energy sovereignty. But its adherence to a mega-extractive model seems likely to continue encountering resistance. Whether the organization responds adaptively, as it has done in the past, will be a key question for the future development of the electricity sector.

Table 1. Movement Policy and Institutional Impacts in the Costa Rica Energy Sector

Movement	Impact	Type
Liga Cívica, Comisión Obrera, Comité de Defensa de la Riqueza Nacional	Nationalization of electricity Creation of SNE Creation of ICE	Direct policy impact Direct institutional impact Indirect institutional impact
Asociación Nacional Defensa Consumidores Eléctricos (ANDCE) 1949, Cartago citizens 1962	Municipal electricity generation Creation of ESPH/JASEMH	Direct policy impact Direct institutional impact
Juntas Progresistas, ANDCE, Alianza de Mujeres Costarricenses anti-rate hike movement 1952, 1958	Calls for nationalization of CNFL, reinforces notion of energy sovereignty/nationalism	Agenda impact
Protest movement 1983, Comités de Lucha, Comisión Coordinadora Nacional Contra el Alza de los Servicios Eléctricos	Graduated rate adjustments Demands for accountability and transparency of ICE, dangers of monopoly actor	Direct policy impact Agenda impact
Anti-dam movement 1990s	Exposed regulatory void regarding water concessions, froze new projects and renewals for 11 years Empowered MINAE to regulate concessions and modernized legal framework	Direct policy impact Indirect policy impact
Anti-COMBO movement 2000	Stopped liberalization and opening of energy sector Reinforced notion of energy/water as sovereign resources	Direct policy impact Agenda impact
Local communities mobilized against hydroelectric projects	Use of municipal referendum for popular participation in extractive decisions Stopped projects: Sarapiquí 2000 Guácimo 2001 Turrialba 2005 Pacuare/Savegre Executive Decree 2015	Institutional impact Direct policy impacts Direct policy impact
Indigenous mobilization against Diquís, with environmental organizations	Recourse against United Nations, Special Rapporteur Report 2011 Statute for previous consultation of indigenous peoples 2018 Questioning of ICE's extractive model Portrayal of ICE as heavy-handed and unaccountable actor	Institutional impact Indirect policy impact Agenda impacts

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