CHAPTER THREE

A Floating Power Plant

Provisional Energy Infrastructure and Afro-Asian Connections

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In addressing urgent electricity demands, many countries in the Global South are looking toward quick power generation systems. One emerging system is powerships: floating power plants that anchor in a harbor, plug into a national grid, and generate electricity with heavy fuel oil or natural gas.

The Turkish company Karadeniz Holding—or Karpower, as it is known to many of its customers—has become an increasingly prominent producer of powerships in the past decade. A family-owned business, Karpower builds the ships on spec in various shipyards in Istanbul and leases them to places with high energy demands. Its barge, *Ayşegül Sultan*, anchored in the Tema Fishing Harbor in Ghana and produced power for the country's grid between December 2015 and September 2017, initiating the company's operations in Africa (figure 3.1).[1] At a time when Ghana's electricity production capacity amounted to about 2,500 megawatts in total, the barge produced 235 megawatts of power, constituting about 10 percent of Ghana's electricity.[2] The larger powership *Osman Khan* replaced *Ayşegül Sultan* in late 2017, providing 450 megawatts and thus almost doubling Karpower's production volume. In an effort to switch its fuel source from heavy fuel oil to natural gas (a less expensive and more environmentally friendly fuel), *Osman Khan* moved in late 2019 from Tema to Takoradi, a port much closer to Ghana's natural gas reservoirs.

Powerships illustrate a shift from what energy companies have called permanent power to temporary power, although this binary admittedly does not reflect the complexities of the transformation. A 2014 article in *POWER,* the go-to trade periodical that has been published in North America since 1882, asked: "When 'temporary power' supplies nearly a quarter of a grid's demand, is it still temporary power? How about when a project lasts 10 years?" The article continued: "Calling power service temporary doesn't quite capture all of its distinguishing attributes. It's temporary rather than permanent, rented rather than owned, and mobile rather than fixed. It's also modular and easily scalable" (Reitenbach 2014). Others in the industry have argued that temporary power stations are compelling due to their low up-front capital requirements and rapid installation.

Figure 3.1. *Ayşegül Sultan* moored at Ghana's Tema fishing harbor. (Photograph by Gökçe Günel.)

While the shift from permanent power to temporary power flattens some aspects of power generation, it still signals scalar transformations for producers and consumers of energy, challenging existing categories of spatial and temporal relations to achieve particular political and economic ends. As pragmatic projects, powerships seek to institutionalize this seemingly novel way of seeing energy production and consumption, bringing forth a scalar perspective that does not necessarily reflect the social and political ideals of lessee countries, but that might for a liminal period provide infrastructural relief.

Drawing on fieldwork in Turkey and Ghana between 2016 and 2020, this chapter analyzes the operations of the Karpower floating power plant in Ghana and makes three main points.[3] First, it argues that temporary power structures such as the powership capitalize on the potential for long-term development and linear progress in the places where they are put to use. Their producers frame them as liminal devices whose presence demarcates a phase of planning and incubation, and whose eventual demise will engender a new era of modernization. In Ghana, the provisional status of the powership denoted a period of transition, to be followed by various kinds of renewable energy infrastructure. Decision-makers in Ghana—

such as members of the Energy Commission, executives at solar power companies such as Beijing Xiaocheng Company and Meinergy, and green finance professionals at banks such as Cal Bank or Stanbic Bank—employed a range of technological models and business solutions to precipitate that new era (Günel 2021).

Second, the chapter shows how temporary power producers are financially and politically invested in extending and prolonging the liminal period they generate as far into the future as possible, absorbing the country's resources and suspending the arrival of an age beyond their obsolescence. In early 2020, even when Ghana no longer suffered from electricity shortages and no longer needed temporary power from a floating power plant, the powership continued to produce electricity there. "We can extend this 10-year deal by another 10 years. We can even sell electricity to neighboring countries through Ghana," one executive with the company said about the initial phase of its Ghana operations (quoted in Ergin 2014). Despite ambiguities regarding how long the powership would remain, development goals for the period beyond the ship's use remained intact.

Third, the chapter argues that the seemingly simple, makeshift qualities of temporary power infrastructure such as floating power plants are made possible by close and long-term geopolitical and geoeconomic connections (in this case, between Turkey and various countries in Africa). Turkish foreign investment in Africa has grown over the past decade, due mainly to the country's interest in diversifying away from the Middle East, as well as an attempt to influence Africa's large Muslim population at a time when Turkey's European Union integration has stalled (Baird 2016; Güner 2020; Langan 2017; Shinn 2015). Turkish investment in Ghana's energy sector followed closely behind the arrival of services provided by Turkish Airlines, which has direct flights and cargo services from Istanbul to more than fifty cities across Africa. Since 2002, Turkey has also expanded its governmental presence in Africa, and it currently has embassies in forty-four countries.

On a discursive level, the anti-Western propaganda of Recep Tayyip Erdoğan, Turkey's president, has found supporters in Africa. In addressing African audiences, Erdoğan falls back on Turkey's Ottoman roots, tells his listeners that Ottomans never colonized Africa or enslaved its peoples, criticizes the development strategies implemented by the International Monetary Fund and the World Bank across the continent, and overall seeks to offer an alternative to the West.[4] In doing so, he attempts to practice what the historian Ayşe Çavdar (2013) labels "imperialism by anti-imperialists." Beyond just supporting a belief in the possibility of advancement to clean energy use, powerships invoke a potential for linear development by facilitating relationships between Turkey and Africa.

Potential for Progress

Powerships promise temporary power, constituting contingent networks that meet the basic electricity needs of a society for a predetermined amount of time. In a context where various forms of temporary power are gaining popularity, powerships differentiate themselves from competitors through their formal qualities—namely, by being capable of moving from sites of production to sites of consumption using a seascape, and thus being relatively independent of logistics networks.[5] Unlike other systems of power generation, the construction of powerships is undertaken in a completely different environment than the one in which the floating plant will function. By centralizing production in shipyards in Istanbul, Karpower controls its operations efficiently.

Powerships do not require large swaths of land, making the projects especially desirable for lessees.[6] Once a powership arrives at a harbor, the only supplement it needs is high-frequency cables that connect it to the nearest substation. At Tema in Ghana, for instance, this substation was nine kilometers away (figure 3.2). Finally, since their only connection to the land is through these high-frequency cables, powerships seem more tenuous than land-based plants, giving the appearance that the ship could leave at any time—especially if and when their presence in lessee countries no longer makes financial or political sense.[7]

As a temporary and market-based system, powerships do not offer teleological narratives about progress. In contrast, the historian Stephan Miescher (2014, 341) shows how Ghana's Akosombo Dam hydroelectric power station (also known as the Volta Dam) "produced different temporalities of an industrialized future that would transform the country's rural past and create new cities, factories, and infrastructures during the 1950s and 1960s." At the dam's inauguration ceremony in January 1966, Kwame Nkrumah (the first president of independent Ghana and a pan-African statesman) announced: "It is in this spirit of fruitful collaboration for a better world for all that I . . . inaugurate the Volta River Project. Let us dedicate it to Africa's progress and prosperity. Only in this way will Africa play its full part in the achievement of world peace and for the advancement of the happiness of mankind" (quoted in Ayensu 2013, 19). Nkrumah was overthrown by a military coup a few months after this ceremony. "The future envisioned by Nkrumah, in which each would give according to his ability and receive according to his needs," as the literary scholar and cultural historian Saidiya Hartman (2007, 177) observed, "had been eclipsed."

In the decades following the coup, inadequate rainfall and rising temperatures associated with climate change have negatively impacted Akosombo (Silver 2015; Yarrow 2017). As power demand increases across Ghana, the dam is no longer able

Figure 3.2. Tema fishing harbor, twenty-five kilometers east of Accra, Ghana. (Photograph by Gökçe Günel.)

to meet national electricity needs. While modernization through technology and investment in centralized infrastructure seemed plausible in the 1960s, these ideas have increasingly lost credibility and relevance (Ferguson 1999; De Boeck 2011; Simone 2004). Despite connotations of progress, stability, and permanence, infrastructure projects often embody such oscillations (Carse 2014; Anand, Gupta, and Appel 2018) and increasingly confront environmental challenges borne from climate change.

Yet the powership's temporary presence in Ghana signifies a prolonged period of liminality (a state of in-betweenness with particular temporal and spatial qualities) that could eventually lead to a renewable energy future. According to Serkan, the director of Karpower's Ghana office since 2016, "While they rely on powerships, countries like Ghana could invest in renewables."[8] He echoed a common opinion, seeing temporary power systems as interim solutions enabling Ghana to leapfrog to renewable energy infrastructure such as rooftop solar panels and small on-the-grid power stations (Pinkus 2016; Weszkalnys 2015; Günel 2019). Serkan's

comment implies that temporary power has made planning for the future possible, which in some ways makes up for what the anthropologist Brenda Chalfin (2014, 93) describes as "an incapacitated developmental state."

Fikri, a mechanical engineer in his late forties with a strong interest in nautical design, collaborated with a small team to plan and build the initial floating power plants in 2008 and 2009. In March 2018, as we circuited the Sedef Shipyard—the largest private shipyard in Turkey, situated among forty others in the Tuzla neighborhood of Istanbul—he told me about these first ships. "Between 2000 and 2005, everyone was building ships here in Tuzla. There was such a boom that design units couldn't handle production," he recalled. "But then the 2008 crisis hit, and the shipping industry still hasn't recovered from that shock."[9]

Karpower executives saw the 2008 financial crisis as an opportunity, and started purchasing large ships from owners around the world at low prices.[10] The company already had a wide variety of investments in the energy sector, which was a flourishing industry during the privatization of Turkish electricity markets in the early 2000s. It had also been providing power to Iraq for some time through a land-based plant. After the financial crisis, company executives wondered if it would be possible to place electricity production facilities on a ship that would anchor at Iraq's Basra harbor. Refurbishing inexpensive ships as floating power plants would be a marketable solution for countries with affordable fuel, crumbling infrastructure, and access to rivers or an ocean. However, if the countries where Karpower worked stopped compensating it for its services, then the powerships would simply leave. This business plan would work especially well in places like Africa, where it was difficult to receive financing for permanent, large-scale energy projects.[11]

Complete with tall and orderly exhaust stacks whose gleam can be seen far away, powerships combine elements of thermal power plants with those of large ships. Moored in ports deeper than five meters, the ships look sturdy, substantial, and functional. Fatma, a third-generation board member who represents the company's stakes abroad and in the media, emphasized to me that powerships are not high-tech items: Their use "is not rocket science," she said. Fatma has a degree in economics and philosophy from a college in upstate New York, and we met through a friend who had studied with her there. Her maternal grandfather started Karadeniz Holding Company in the late 1940s, and the company had done well over the years. However, it had never before garnered the attention it was receiving due to its powerships. Fatma regularly gives interviews to newspapers about powerships, and she is adept at talking about them with various stakeholders. According to Fatma, powerships basically consist of multiple engines that burn heavy fuel oil or natural gas. She reiterated to me that this was old technology, which has not

changed much for the past hundred years. Rather than building these power stations on land, Karpower simply chooses to place them on used ships, rendering them more mobile and easier to manufacture.

Thus, the producers of powerships argue that they enable a state of liminality, a brief pause in which Ghanaian and other authorities are able to make plans for a future fueled by renewable energy. Representatives from the Electricity Company of Ghana, Ghana Environmental Protection Agency, and Ghana Grid Company (GridCo) support this imagination of a renewable energy future. "Have you seen the solar map of Ghana?," Raymond, a legal advisor to GridCo, asked me enthusiastically during a meeting in July 2018. "We are missing opportunities by not building solar here." While powerships remain in use, such infrastructure could be built incrementally, but these projects are often deferred (Ahmann 2018).

Liminal Devices

Powerships postpone progress toward an era that would commence only upon their departure. Temporary energy infrastructure such as powerships generates electricity for the grid on a day-to-day basis, and it pragmatically addresses routine consumer demand until it can eventually be replaced by clean and sustainable energy generation. Salih, a Turkish ship engineer in Ghana, defines temporary power infrastructure as "short-lived (*ömürlü*) items." According to him, manufacturers specify a life span for such items: "In terms of time, a thousand hours for example, or usage, a hundred thousand miles for example." He believes that hydrogen energy will eventually satisfy global energy demand, and he hopes that it will also supply Ghana's needs in an abstract future beyond the era of powerships. As an employee of a thermal power plant, Salih understands temporary power infrastructure as a stop-gap solution, which eventually needs to be replaced by a substitute.

As businesses that operate according to market logic, temporary power producers are financially and politically invested in extending this in-between period as far into the future as possible, thus suspending their obsolescence indefinitely. In Ghana, powerships helped alleviate the persistent power outages that Ghanaians had christened *dumsor*, meaning "off and on." During the final *dumsor* period between 2012 and 2015, power for industries and homes would routinely be out for twenty-four hours, and then turned back on for only twelve hours (Ahlijah 2017). The electricity crisis prompted protests against the incumbent National Democratic Congress government, earning John Mahama, then president of Ghana, the nickname "Mr. Dumsor." Its impacts on daily life were publicized in major media outlets around the world, putting Ghana's position as a lower-middle-income country at risk. Forced to diversify the country's energy portfolio, Ghanaian

decision-makers (officials at the Ministry of Energy, the Volta River Authority, the Electricity Company of Ghana, and GridCo) initially imported diesel generators. They later switched to power stations operated by heavy fuel oil, a much less expensive resource than diesel, and eventually to leasing a powership.

In explaining their success in ending *dumsor*, Kartal, a senior member of Karpower's board, told me that discussions on energy tend to be fixated on the future, proposing solutions for forthcoming problems associated with climate change and impending energy scarcity, rather than focusing on significant issues that impact many people around the world in the present. For him, the crucial question was how to turn the lights on today: "What *now*," he concluded in English. As we spoke, Kartal played with a silver bracelet he wore that had a stamped inscription: "ELECTRIC MAN."

"It takes four years plus to build a conventional power plant," Joseph, an operational director at GridCo told me during a meeting in his office in July 2018, "so the arrival of the ship has been key" to ending *dumsor*. By putting an end to the electricity crisis, the powerships filled up the near future with productive activity. However, complying with the logic of the market, the executives who run the powerships wish to move that near future as far as possible.

It is important to note that the powership did not leave even when it was no longer necessary for ensuring Ghana's energy supply, demonstrating that long-term political, financial, and contractual relations at times outstrip practical necessities. Representatives of the Energy Commission, the Electricity Company of Ghana, and GridCo emphasize that the government had had limited bargaining power when the powership first arrived, since they were navigating an ongoing electricity crisis. Therefore, they had agreed to pay high prices, hoping to renegotiate them later. Beyond obtaining emergency power from the floating power plant, the Electricity Company of Ghana signed forty-three power purchase agreements with various vendors during *dumsor*, altering Ghana's energy production portfolio significantly for years to come (figure 3.3). Independent power producers from countries such as China and the United Arab Emirates began generating electricity, mainly in power stations in Tema and Takoradi. One energy professional who had been a junior member of a team at the Energy Commission reflected back on the crisis in an interview with me in early 2020: "We oversolved the problem." In 2020, five years after the end of *dumsor*, Ghana had an excess of electricity on its grid.

In seeking to explain how Ghana's energy portfolio radically shifted from a condition of scarcity to one of excess, energy professionals in Accra point to power contracts that have not only allowed but also incentivized independent power producers such as Karpower to remain in the country. Many independent power

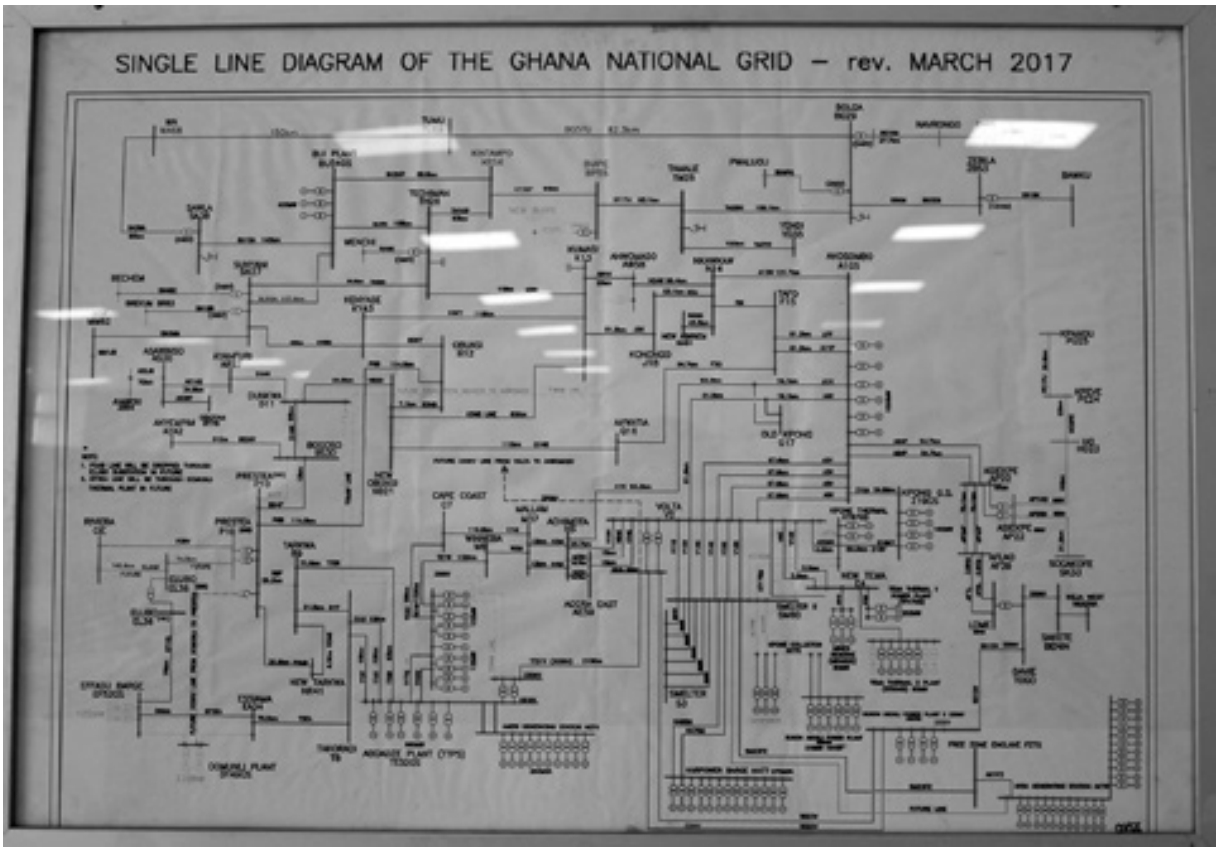

Figure 3.3. Ghana's national electricity grid. (Photograph by Gökçe Günel.)

producers entered the Ghanaian market on take-or-pay contracts, according to which the Electricity Company of Ghana would either buy electricity from a producer or pay that producer a penalty for unused power.[12] As of January 2020, even though peak demand rarely exceeds 2,800 megawatts, the country had an installed power generation capacity of about 5,000 megawatts. According to Chalfin (2014, 106), "the state appears a patchwork of shadows and surfaces, flimsy contracts, false promises, and financial tolls asserted amidst other agencies and authorities, none holding a solid grip on the direction of political life."

"A hungry man does not need a table full of rice," Joseph from GridCo explained during an interview in his Tema office in December 2019. "One plate is enough. Why build 5,000 megawatts when you can't consume it?" Of this total, 2,300 megawatts were being produced on a take-or-pay basis. As a result, Ghana paid over USD 500 million per year for electricity it did not consume, putting a major strain on the country's economy. "The energy sector can sink Ghana's economy," commented a foreign aid worker who has been in charge of electricity projects in the country for the past three years. He celebrated the 11.17 percent tariff

increases that the Public Utilities Regulatory Commission had announced in July 2019, putting pressure on consumers while generating more liquidity for the country. Recognizing the disproportionate burden of electricity on the economy, a midlevel energy executive at a thermal power plant in Tema quipped that the Ghanaian government neglected other infrastructure because it was unable to pay for anything besides power production. He blamed the traffic that paralyzes transport between Accra and Tema on badly negotiated power contracts. The new power producers triggered gridlock that seeps beyond the boundaries of electricity networks, precluding teleological thinking about progress. By remaining on the grid, independent power producers such as powerships inadvertently contribute to the suspension of any visions of future renewable energy development.

A devoted member of one of the leading charismatic churches in West Africa, Joseph from GridCo summarized his relationship to *dumsor* by using an analogy: "Can you kill the devil? The world would be a very beautiful place if you could kill the devil. But you can't kill it. You have to stay away from its control. It's the same with *dumsor*. You can't kill *dumsor*. You can only stay away from it." According to Joseph, power cuts will continue to characterize the Ghanaian grid for years to come. Regardless of the countless complications, he hopes that new power producers will manage to keep the devil away until they are replaced by renewable energy power stations in an abstract future.

Solution Partners

Karpower seeks to construct a sense of familiarity with the countries where it works, as evidenced by its slogan, "The Power of Friendship." Named after family members, the powerships are explicitly presented as visitors to lessee countries. These corporate strategies are supplemented by the ways in which the company's employees approach their counterparts. For instance, Serkan from Karpower told me that Turkey shares many customs with Ghana, such as certain marriage rituals. "Just like us, Ghanaian young men have to ask for their girlfriends' hands by paying a visit to the family," he said. During informal meetings, many Turkish energy professionals I met in Accra and Tema made essentializing remarks regarding Ghanaian people, foregrounding differences between them and Turks. Yet the corporate emphasis on shared customs is designed to focus on the possibility of shaping common developmental trajectories for Turkey and Ghana.

In a 2019 interview with the Turkish newspaper *Hürriyet*, Fatma, the Karpower board member, commented: "Our biggest secret is becoming companions in misfortune with the countries where we provide electricity. The trust we have generated

by being troubled by the troubles of, especially, African countries opens the doors for new projects."[13] A Ghanaian businessman explained that he enjoyed working with companies such as Karpower for precisely this reason: Their employees did not position Turkey as better than Ghana. Rather, they focused on the common problems the countries had experienced on the path toward development. "They are not patronizing or condescending, like American or French companies," he concluded. Given this emphasis on trust and familiarity, Karpower executives define themselves as solution partners—working in collaboration with the countries where they operate, aspiring to solve shared problems—rather than as evasive providers of temporary energy infrastructure who could leave at any time.

This does not mean that relations between Karpower and its counterparts are free from tensions and controversy. In practice, the discourse of familiarity and trust is combined with a particular contractualism, wherein take-or-pay contracts remain in use regardless of how they impact a government's interests. For instance, in examining the Lebanese electricity market where powerships have been producing electricity since June 2012, a World Bank report (ESMAP 2020, 28) suggested, "With hindsight, it would likely have been cheaper to have invested in permanent capacity, rather than keep paying high take-or-pay charges." In their investigative reporting on Karpower, reporters from South Africa's nonprofit news service *AmaBhungane* claimed that when a powership entered a market, it remained there for the entirety of the twenty-year contract, regardless of whether or not it produced electricity for the grid. The reporters highlighted the problems with powership contracts, arguing "it appeared that Karpowership had a practice of entering new markets by paying large facilitation fees to politically exposed persons which could be construed as bribery" (*AmaBhungane* 2021). All in all, the rhetoric of friendship paralleled extractive practices that ensured corporate benefits.

Despite the seemingly elusive nature of powerships, Karpower's operations in Ghana demand long-term multiscalar relations, including those that happen at the level of the nation-state and that are cultivated constantly by company executives (Appel 2012; Chalfin 2010). In other words, the simple makeshift qualities of provisional power infrastructure are made possible by long-term geopolitical and geoeconomic connections between Turkey and Africa. During an official address at the Dakar International Conference Center in March 2018, Erdoğan emphasized: "Depleting Africa's resources and adopting a modern colonial system is not our style."[14] As I have found in interviews I conducted between 2016 and 2020, many members of Turkey's business community debate whether this populist propaganda is actually useful for business. Still, many of them claim that diplomatic trips to Africa have strengthened a sense of commitment to Africa on the part of

Turkish citizens and strengthened the notion that all Turkish companies could become solution partners.

Yet through such populist propaganda, Turkish exports such as floating power plants have been "harnessed to distinct ethical regimes and political projects," as the anthropologist Antina von Schnitzler (2016, 28) puts it in reference to prepaid electric meters. Turkish businesspeople's willingness to suffer together with African countries, their ability to showcase Turkey as a model for overcoming certain developmental challenges, and their desire to propose an alternative to companies from the West allow populist leaders such as Erdoğan to claim an imperial legacy, in both Turkey and Africa.

During conversations with Mauritanian businesspeople interested in working with Turkish companies, I heard over and over again that Erdoğan would win a national election in Mauritania if he wished to become president there. Some Turkish businesspeople hoping to collaborate with companies in Africa joined in the praise. One told me during the diplomatic trip: "Of course, here [in Africa] these men's self-confidence has been crushed for years, which is why it is hard for them to put themselves to work and to do business, it is hard for them to recover. We shared the same predicament, but thanks to Erdoğan we pulled ourselves together again."[15] A Turkish executive from a company that operated successfully all over Africa told me over coffee that Turkish businesspeople were "like monkeys," performing for the government and showcasing Turkey's business capacity. Turkish investments in Africa not only rely on what might be called nonimperialist imperialism, but they also sustain and augment it, and they enhance Erdoğan's popularity back home in Turkey.

Turkish foreign policy in Africa is especially clear in diplomatic trips (figure 3.4). I met Kartal, a senior member of Karpower's board, on one such trip to Senegal in February 2018, and I had stimulating conversations with him over lunches and dinners during four days. The Foreign Economic Relations Board of Turkey had organized this trip, and its press relations team had invited me to join the delegation of about 120 businesspeople and some journalists.[16] Our presence at the Dakar International Conference Center was significant, because Turkish construction companies had developed this building. In Senegal's new city, Diamniadio (under construction nearby, and intended to ease congestion in the seaside capital, Dakar), two Turkish construction companies had collaborated on building an airport after the Saudi Binladin Group had given up on the project. There will be even more large-scale construction projects, given that Macky Sall, the Senegalese president, intends the new city to include a new industrial park and university, and Turkish construction companies hope to beat their French and Chinese counterparts and

Figure 3.4. A Turkish business delegation visits Nouakchott, Mauritania. (Photograph by Gökçe Günel.)

win more contracts. Like these construction companies, power producers such as Karpower and Aksa exemplify Turkey's expansion into African markets, acting as what some have called a soft power mechanism to promote Turkish foreign policy.

Besides partaking in such national strategies, joining diplomatic trips is at times commercially valuable for representatives of Turkish businesses such as Kartal. When two representatives from the Senegalese government approached him outside the large hall where Erdoğan was scheduled to give an address, Kartal kindly asked me to stay and listen to their negotiations. The Senegalese men had heard good things about powerships from their contacts in Ghana, and they knew that the ships were now in use in Gambia and Sierra Leone as well. When a construction company representative from the Turkish delegation told them that Kartal was there at the Dakar International Conference Center and offered to arrange a meeting, they became very interested. They did not know much about electrical infrastructure, but they knew that use of powerships was becoming popular.

Without wasting too much time on pleasantries, the Senegalese representatives told us that they had been talking to some international companies that could provide electricity. They had been offered a rate of eleven cents per kilowatt-hour by these unnamed companies, and they asked if Kartal's company would be able to propose a better rate. But Kartal refrained from engaging with the representatives on their own terms. "Rather than talking about price, let's talk about delivery times," he said. "Our ships can be here in two weeks. Can the other company give you electricity in such a short time?" He proposed leasing *Ayşegül Sultan*, the ship that used to power Ghana's grid, to Senegal. When the men left, he turned to me and said, "Wouldn't it be very convenient if we did not have to move *Ayşegül Sultan* all the way back to Istanbul, and if we could use it in Dakar instead?"

Despite their makeshift qualities, the floating power plants are enmeshed in complex processes, which involve not only geopolitical relations between Turkey and Africa, but also various staff members and executives who make decades-long commitments. Although Kartal was scheduled to return to Istanbul with Erdoğan's delegation that evening, he asked for his suitcase to be retrieved from the plane, and he stayed in Dakar for a second, more comprehensive conversation with the Senegalese government. He always took a photograph of his suitcase with his iPhone, because he often found himself asking flight attendants to remove his luggage from the plane for an urgent meeting. His plans changed constantly. In cultivating closer and stronger relations with his clients, Kartal was always willing to revise his schedule. He believed that this flexibility gave him the upper hand in conducting business in Africa. "It's time for me to buy my own plane, so that I don't deal with this kind of thing," he said. "But once I buy a plane, I will also have to hire bodyguards. The nature of the business will completely transform." Several days later, he sent me a WhatsApp message to say that his conversations with the Senegalese authorities had gone well. There was a good chance that he would lease two ships to them, rather than one. In late 2019, *Ayşegül Sultan* began supplying electricity to Senegal.

Conclusion

Temporary power infrastructure continues to gain considerable prominence around the world. Yet so far, such infrastructure has received little attention from scholars who work on issues at the intersection of energy, climate change, and development. In producing a clearer understanding of how countries bridge the gap between a state of scarcity and electricity-related crisis, and a potential future where renewable energy supplies the grid, it is important to examine how temporary power infrastructure works.

In analyzing a Turkish floating power plant in Ghana, this chapter makes three main points. First, it points out that temporary power infrastructure enables a vision of linear development and future progress, mainly by serving as transitional projects that will eventually be replaced by renewable energy resources. Forms of temporary power infrastructure such as powerships are framed as liminal devices that come with the promise of their own obsolescence. Second, the chapter demonstrates how this liminal and transitional era may be stretched indefinitely to suit a wide range of financial and political interests. Even at a time of energy excess, for instance, the powership remained in Ghana, showing how the profit-making needs of independent power producers and the contractual relations between various decision-makers impact the Ghanaian grid. Still, the sense that a new era of modernization will commence when innovative renewable energy infrastructure replaces such temporary devices remains valid and intact.

Third, the chapter shows that close transnational relations between solution partners invoke developmental trajectories, as Turkish businesspeople and diplomats suggest that a country like Ghana could experience the same stages toward development that Turkey had undergone in the twentieth century. Implementing a certain grammar of capitalist relations that differentiates Turkey from other actors in the region has not only worked to extend Erdoğan's popularity, it has also helped create a context for encounters between Turkish businesspeople and their African counterparts where they make business decisions that foreground their flexibility. An examination of these multiscalar connections illustrates how the tenuous and makeshift qualities of temporary infrastructure belie the social and political relations that catalyze this seascape of power.

Notes

1. Named for a member of the Karadeniz family, *Ayşegül Sultan* had formerly been called *Sainty No 10*, and had been used for transporting components of bridges and offshore plants in the Netherlands. In 2015, Karpower engineers retrofitted the 140-meter-long vessel in the Sedef Shipyard in Tuzla, Istanbul. They worked with this particular shipyard because it was the only one that housed a 300-ton crane strong enough to lift the barge machinery. The new *Ayşegül Sultan* was fitted with twenty-four dual-fuel engines that were purchased directly from their Finnish manufacturer, Wärtsilä.

2. Such percentages are commonly used by decision-makers, but they are not always accurate. Every day, power producers in Ghana offer varying amounts of electricity to the grid, as predicated by a system of order dispatching and administered by the control room at GridCo, the national grid company. I use these percentages to illustrate the powership's impact, but I acknowledge that they are not precise indicators.

3. I conducted interviews with executives and staff members at Karpower in Turkey, Ghana, and Lebanon between 2016 and 2020, as well as with representatives of the Energy

Commission, GridCo, Electricity Company of Ghana, and Ghana Environmental Protection Agency, and representatives from other independent power producers in Ghana such as Aksa, Sunon Asogli, Meinergy, and Beijing Xiaocheng Company. As a US-based Turkish scholar with expertise in energy and climate change issues in diverse contexts, I could communicate with decision-makers using their professional vocabularies, and learn about different modes of electricity production by visiting a range of power stations. In February and March 2018, I also attended a diplomatic trip to Algeria, Senegal, and Mauritania with the Turkish president Recep Tayyip Erdoğan and his entourage. My attendance to the trip was made possible thanks to a press relations representative, who enjoyed the idea of having a female US-based Turkish scholar analyze the work that went into solidifying geopolitical and geoeconomic relations between Turkey and Africa. Complementing my research, this diplomatic trip offered opportunities to discuss floating power plants with businessmen and government representatives during four intensive days.

4. The scholarship on African slavery in the Ottoman Empire demonstrates that Erdoğan's comments regarding slavery are inaccurate (Erdem 1996; Toledano 1998; Walz and Cuno 2010; Zilfi 2010). The Ottoman Empire relied heavily on the labor of enslaved people, mainly from North and East Africa, Eastern Europe, the Balkans, and the Caucasus. Still, his comments differentiate the Ottoman Empire and the Turkish Republic from the West, emphasizing that the Ottomans were not a dominant part of the Atlantic slave trade networks.

5. Other companies besides Karpower (such as Aggreko, APR Energy, Atlas Copco, Energyst, United Rentals, and Symbion) rent out temporary generation equipment to various countries around the world to meet the increasing demand for power. These generators are powered by diesel, heavy fuel oil, and natural gas. None of these companies currently provides a significant portion of Ghana's electricity.

6. For instance, compare Karpower's operations to those of Aggreko, a large temporary power company headquartered in the United Kingdom, which made a proposal to Ghana for a possible 100-megawatt power plant that required twenty-seven acres of land at Esiama for its generators. So far, that project has not been built (*Construction Review Online* 2015).

7. Karpower employees emphasize that powerships can leave if home countries do not compensate them on time or if there is a war. Yet this statement somewhat contradicts Karpower's experience, which shows that it is not always easy for powerships to depart. For instance, when the Pakistani government did not meet its payment obligations and unlawfully detained four ships, a major legal dispute erupted. In August 2017, after four years of controversy, the International Centre for Settlement of Investment Disputes (ICSID) awarded Karpower one of the highest settlements in ICSID's history. On November 4, 2019, Pakistan's Prime Minister Imran Khan tweeted that his government had resolved the dispute through an agreement facilitated by President Erdoğan and saved Pakistan from having to pay the imposed penalty of USD 1.2 billion (Ghumman 2020).

8. All names in the chapter are pseudonyms.

9. Labor practices in Tuzla shipyards since the early 1990s have been controversial, especially given numerous preventable workplace deaths and injuries (Güney 2016).

10. Nicky Gregson and coauthors have written about such translatability of ships in Bangladesh's shipbreaking sites. Their research points to how "the destructive labor of ship breaking on a beach at Sitakunda is shown to create a range of objects and differentiated streams of material which form the basis for secondary manufacturing, craft and retail activities" (Gregson et al. 2010, 847). Although Karpower retrofits ships without breaking them down in the way

that Bangladeshi ship breakers do, it demonstrates this translatability by benefiting from the afterlives of ships in other ways.

11. While many of my interlocutors repeated this perspective, there are empirical exceptions. For instance, Ghana invested heavily in the expansion of the Tema container port. Senegal supported the construction of a new city, Diamniadio. In seeking to understand why certain infrastructure projects might be favored over others, it is important to investigate the kinds of infrastructure financing available to Ghana and other countries where Karpower operates. Overall, the emergence of floating power plants should be contextualized within a changing landscape of infrastructure financing (Zeitz 2019).

12. Energy professionals from various Ghanaian institutions argue that Karpower was more efficient in its power production than other power producers which were responsible for this energy excess. Therefore, they did not consider Karpower to be underperforming in comparison to other power plants that also benefited from take-or-pay contracts.

13. Author's translation. In Turkish, the quote is: "En büyük sırrımız elektrik götürdüğümüz ülkelerin dert ortağı olmak. Özellikle Afrika ülkelerinin dertleriyle dertlenerek oluşturduğumuz güven bize yeni projelerin kapılarını açıyor" (Güler 2019).

14. Author's translation. In Turkish, the quote is: "Afrika'nın kaynaklarını tüketmek ve modern sömürü modellerini benimsemek, bizim için asla söz konusu değildir" Recep Tayyip Erdoğan. Official Address. March, 2018. For a recording of this speech, please see: https://twitter.com/tcbestepe/status/969863732003246081

15. Author's translation. In Turkish, the quote is: "Tabii burada adamların kendine güveni senelerce sarsılmış, ondan iş yapmaları zor, toparlanmaları zor. Biz de öyleydik ama Tayyip Bey sayesinde kendimize geldik."

16. The Foreign Economic Relations Board of Turkey (DEİK), founded in 1986 by Turgut Özal (then Turkey's prime minister) as part of the country's economic liberalization efforts, organizes such events for members of Turkey's business community to expand the country's foreign commercial operations. My companions in the delegation knew that I was an academic at a research university in the United States and that I was studying Turkey's Africa initiative. However, because I was the only woman in the business delegation, my presence attracted attention and led others to assume that I was an administrative assistant at DEİK. The fact that we all traveled together on a private plane, sharing meals and staying at the same hotels, meant that I was able to socialize easily with delegation members. During the trip, I also interacted with some Turkish ministers. I will analyze the details of this trip elsewhere. For an analysis of the Turkish business world, see Buğra and Savaşkan 2014; Buğra 1994.

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