

Nation or Industry: The Non-Electrification of Nablus

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This article highlights one component of the historical conjuncture that generated the two most salient facts of the Arab-Israeli conflict: that in the nationalist struggle over Palestine, Jews achieved statehood and Palestinians did not. Since what is at issue here is as much why something did *not* happen as why something did, this paper approaches the topic from the perspective of a non-event, namely the fact that the Palestinian town of Nablus, located in what is today the Israeli-occupied West Bank, was never connected to Mandate Palestine's electric grid.

Our built environment is not just a social construct in the sense that it is built through collective effort; an element of *ideology* is always present in the design. Infrastructures serve as material expressions of the forces that built them. The influence, moreover, runs in the other direction, too. Infrastructures never fully obey their makers' designs, but act back on the designs and the designers.¹ These insights, central to Science and Technology Studies, have been taken up by a number of Middle East scholars in recent years, giving birth to rich new lines of inquiry. The following teases out a strand of my recent book, *Electrical Palestine*, in order to shed light on a critical component in the process that drove a wedge between Jews and Arabs in Palestine, securing a state for the former and dispossessing the latter.

Following the growth – and non-growth – of the grid does not just provide a new perspective on other things. It also makes it obvious that the grid itself played an important role in shaping the course of events. As the power system reached critical mass in the early 1930s, it obtained

a momentum by which it propelled not just itself, but also the ideas, ideologies, and institutions from which it had grown. By virtue of its technological momentum, the power system continued to expand through the Arab Revolt and redirect its oppositional force toward a definitive social and economic break between Jews and Arabs. The grid also shaped resource pathways, channeling resources toward the Jewish sector, and away from the Arab, priming the outcome of the 1948 War.

Nablus and Electricity

In 1921, the British mandatory government granted an exclusive countrywide electrification contract to the Russian-Jewish engineer and Zionist Pinhas Rutenberg. The concession included an exclusivity clause, according to which Rutenberg was the only person legally permitted to generate electricity for commercial purposes anywhere within the borders of the Palestine Mandate.² By the early 1930s, the Palestine Electric Corporation (PEC), the company Rutenberg founded and to which he transferred his statutory rights, was operating four power stations and an electric grid that reached most of the Jewish settlements and towns along the Mediterranean coastal plain. The power system was comfortably ensconced in the land, both in a physical sense, as a massive material structure, and in the sense of being firmly embedded within the land's legal and institutional apparatus. In other words, it had achieved what the historian of technology Thomas Hughes refers to as “technological momentum,” making it increasingly resistant to diversions from its charted path.³

The picture on the Palestinian Arab side was starkly different. Few communities were connected to the grid, in large part because of the widespread opposition to doing business with “the Zionist Rutenberg company.”⁴ By the mid-1930s, opinion was widespread that “the electricity concession stole British policy from the sons of the country [*abna' al-balad*] and gave it to a Zionist Jew who works with all his might to turn this country into a Jewish national home.”⁵ Nevertheless, a significant proportion of Palestinians, especially among economic elites, was anxious to have access to the large quantities of cheap electricity that only a large power system could provide. They were confronted with a serious obstacle in the form of strong political opposition to making a deal with a company that was explicitly supporting the creation of a Jewish state in Palestine.

This was especially so in Nablus, a town widely regarded throughout the country as a Palestinian nationalist stronghold. *Al-Jami'a al-'Arabiyya* claimed that most Nabulsi “would rather light their homes and stores with Arab oil than to light them with foreign electricity.”⁶ According to an editorial in *Mir'at al-Sharq*, “Lighting Nablus with Rutenberg electricity is considered the first step toward settlement by Jews in Nablus.”⁷ This, of course, made those in favor of doing so, as *al-Jami'a al-Islamiyya* put it, “traitors to their city and their homeland.”⁸ *Al-Karmil* urged that Arabs in favor of accepting “Rutenberg” should “wake up before it is too late” and realize that the

linemen, surveyors, and engineers that had recently visited Nablus were “the soldiers of the future Jewish state.”⁹

In the face of this opposition, those who favored connecting Nablus to the grid were forced to find a work-around. Starting in the late 1920s, they repeatedly approached the power company with various proposals to set up a company, owned jointly by the municipality and the PEC, that would serve as a buffer between the members of the municipal council and Rutenberg’s operation. Municipal representatives insisted that while it would not be possible to submit a formal request to the power company because of its Zionist character, virtually all of the town’s inhabitants supported extending the grid to Nablus.¹⁰ Given the fraught politics surrounding the PEC, mediating between the town and the company left the PEC’s Nabulsi interlocutors in a vulnerable position. “You should not disclose our name to anybody,” one of them insisted in a meeting with the company, “before the definite settlement of the matter between us.”¹¹

The power company, for its part, had no interest in a face-saving work-around. If the municipality could not make a deal publicly, the risk of sabotage was too high. As the power company explained over and over to those who approached it, whether businessmen hoping to make money or newspapermen hoping to make headlines, it was not interested in undertaking electrification in any way other than “officially and openly”: “Under no circumstances will we [electrify] against the wish of the population.”¹²

While the power company thus kept Nablus and other Arab towns at arm’s length, the importance of electricity for economic growth increased. A few years into the 1930s, as the Jewish sector was booming and the Arab sector contracting, many were concerned with the issues confronting commercial life in Palestine, and especially in Nablus – a long-standing commercial hub. The town’s main industry, soap production, was facing difficulties. It had just lost its main export market in Egypt because of new import tariffs; its second-largest market, in Syria and Lebanon, saw growing competition from domestic production. Even domestic markets in Palestine were beleaguered, as new Jewish-run ventures in Haifa and Tel Aviv claimed a growing share. Economic development, observers noted in the press, was sorely needed, and economic development depended on the supply of electricity at the low rates that only became possible with a large system, enabled by economies of scale to keep the unit price low. (A handful of electric generators were in operation across the town, including one powering a modest street lighting system, but the diminutive scale ruled out industrial use.)¹³ As *Filastin* concluded in an article on the topic, “the Arabs of Nablus prefer to be poor and faithful over being rich and unfaithful.”¹⁴

This was not exactly true, of course, and as the 1930s wore on the divide between the choices outlined by *Filastin* – faithful and poor or faithless and rich – grew starker. A few years into the decade, most major Arab population centers had been connected to the grid through direct agreements with the power company. Not so Nablus. To those in favor of connecting the PEC grid, it had now become clear that a direct agreement was the only available option. As a result, their advocacy turned public. Tensions quickly rose. Nablus’s mayor, Sulayman Tuqan, was physically assaulted during a visit to the

mosque over his pro-Rutenberg advocacy. Undeterred, Tuqan along with other members of the local council, the chairman of the chamber of commerce, and other merchants, industrialists, and landowners continued their efforts to negotiate an agreement with the power company. They made their case at public meetings and in mosques and circulated a petition that received many signatures.¹⁵ The issue also became a magnet for other political concerns, such as the long-standing division between the *majlisi* faction supporting Hajj Amin al-Husayni, and the *mu'arada* (opposition) faction.¹⁶ Outside observers, however, failed to grasp the complex political context in which the municipality was operating, and instead lambasted it for, as the *Palestine Post* put it, "setting its face resolutely against modernization."¹⁷ In part, the failure to reckon with these complexities was deliberate, as the simpler interpretation played into the hands of a longstanding Zionist narrative portraying Arabs as anti-modern.

Throughout the first half of the 1930s, talks continued fruitlessly between the company and representatives of the municipality. Soon the tension rose in the town and in the country as a whole. This was not entirely electricity's doing.

The Great Arab Revolt versus Technological Momentum

The Arab Revolt of 1936–39 began with the announcement of a general strike on 19 April 1936. Over the course of the summer, it turned increasingly violent, on the part of both the British and the Arabs. The revolt had two distinct phases, the first lasting until October 1936, when the general strike ended. The second phase began with the assassination of the district commissioner of the Galilee, Lewis Andrews, on 26 September of the following year.¹⁸

The grid emerged as a major target of the Arab rebels. This should not surprise us. Sabotaging the grid had been a tactic, both formal and spontaneous, of the Palestinian national movement and its supporters from the first.¹⁹ In 1936, there were repeated attacks on the coastal high-tension lines between Haifa and Jaffa, and twice the whole south lost power.²⁰ The cost of a single damaged pole, including repair and loss of income, was about seventy-five Palestine pounds. To that must be added the cost of the repairmen's armed escort of as many as ten soldiers in some places. Nevertheless, the power company had learned its lesson from earlier instances of sabotage and put several contingencies in place in order to handle the risk of interrupted circuits.

When the revolt entered its second stage in the fall of 1937, sabotage of the power lines intensified, and all work related to the power company's operations became vastly more difficult and took on an increasingly military character. The most vulnerable section of the grid, as well as the railway, telephone, and telegraph lines, was located between Hadera and Kfar Saba, which ran past the Palestinian towns of Tulkarm and Qalqiliya, a stretch of about twenty-five miles that was part of the area the British nicknamed the "Triangle of Terror."²¹ At the height of the revolt in 1938, the company had to increase its staff of supernumerary policemen accompanying the repair squads. After several supernumeraries were killed and wounded on the job, Rutenberg appealed

to the government and the company was allowed to acquire their own armored cars and Lewis guns, and the British even provided military training for the company's employees.²² The controversial counterinsurgency officer Captain Orde Wingate was commissioned to train a special company unit in the tactics from which he and his men had recently garnered such notoriety. Two "night squads" of twenty-five men and two officers were taught how to prepare ambushes along the power lines from Zichron Ya'akov to Rosh Ha'ayin.²³

On the whole, however, the grid prevailed. Service interruptions were brief and local. At no point during the revolt was there a real threat of widespread system failure, mostly because the system was designed to be able to absorb Palestinian violence. If sabotage had been a constant from the start, it soon became a routine feature of grid maintenance. Even on the far larger scale of the Great Revolt, sabotage was not as much of a problem in 1936–39 as it had been in the initial phase of electrification in the early 1920s, when the company had had to contend with widespread, and occasionally violent, opposition.²⁴ The experiences of the 1920s had taught the company about the importance of a thick electric grid. It had absorbed the lesson with such fervor that by the mid-1930s, the areas most densely populated by Arabs were clearly discernable on the power company's technical blueprints because of their densely engridded borders. Indeed, the "Triangle of Terror" appeared on the maps of the PEC as an area demarcated by thick borders of wire along each side, and blank within – wires and violence implying each other. Thanks to these measures, the grid continued to grow through the revolt years.²⁵

By May 1939, the revolt had been suppressed, having drained treasuries and ruined lives. The overall defense expenditures in Palestine rose ten times with the outbreak of the revolt, totaling PP 1.5 million. Sabotage of citrus and other trees and the destruction of crops covering an area of over seventeen thousand dunams amounted to additional losses of several hundred thousand pounds.²⁶ The biggest loss, however, was sustained by the Arab community, measured in Palestine pounds and, especially, in lives: five thousand Palestinians killed and ten thousand wounded.²⁷

The fortune of the power company stands in sharp relief to these grim facts. For the PEC, the revolt was probably a windfall, primarily due to the way it deepened and broadened the gap between the Jewish and Arab sectors, especially in the agricultural domain. Except for land sales, foodstuffs trade was by far the biggest economic interaction between Arabs and Jews.²⁸ Before the revolt, the Jewish sector consumed Arab produce at an estimated value of six hundred thousand to seven hundred thousand Palestine pounds a year.²⁹ But as Arabs ceased selling produce to Jews, Jewish agriculture had to become the main supplier. The price of produce increased, both on account of the higher wage levels of Jewish workers and as a result of the reduced supply. This put a strain on the urban quarters of the Jewish community. But in practice, the increased cost of living that resulted in the cities merely amounted to a wealth redistribution from the Jewish city to the Jewish countryside.³⁰ "As time goes on," one report assessing the impact on the Yishuv predicted, "Jewish agriculture will be increasingly more able to supply the Jewish requirements of those products formerly purchased from the Arabs,

namely, fruits and vegetables, eggs and poultry, milk, cattle, fish, etc.”³¹ And because the increasingly mechanized Jewish agriculture was a far larger consumer of electricity – Arab farms by and large not being connected to the grid – increased productivity in the Jewish agricultural sector meant a further rise in electricity consumption. From the end of 1935 until the end of the Arab Revolt in 1939, the yearly amount of electricity consumed for irrigation almost doubled, from about 16 million to 28.5 million kilowatt hours (see table 1).

Clearly, the power company had grown in the revolt years and so too had the economic gap between Arabs and Jews, a dynamic reinforced by and reinforcing of the differential impact of the grid. By the end of the 1930s, the most intense period of industrialization and grid expansion, the PEC generated and sold more than one hundred million kilowatts annually, producing a value of about one million Palestine pounds. The government-produced statistical abstract of Palestine for 1940 noted that “the development of electric power production in Palestine in the past decade has been remarkable.”³²

In sum, the Great Arab Revolt not only failed in its goals to arrest Zionism’s advance in Palestine; thanks in part to the technological momentum of the power system, the oppositional force of the rebels was redirected toward developments that deepened preexisting trends and disparities, not least on the political and economic levels. The revolt deepened the ethno-national differentiation that the grid, at an earlier stage, had been instrumental in producing.³³ In the starkest indication of the uneven development that had taken place over the course of the decade, over 90 percent of the electricity was now consumed by Jews.³⁴ Per capita consumption among Jews grew from 164 kilowatt hours in 1936 to 232.4 kilowatt hours in 1942. By contrast, the Arab per capita consumption of electricity was 11.5 kilowatt hours in 1942.³⁵

Table 1: The Palestine Electric Corporation

Year	No. of PEC Consumers Connected	Units Sold by PEC (in kWh)	Gross Revenue (in PP until June 1952; then IP)	Length of Transmission and Distribution Network in km
1923	700	n/a	n/a	n/a
1924	1617	478,824	13,755	n/a
1925	3326	1,847,225	34,354	n/a
1926	6,550	2,343,764	66,791	83
1927	7,477	2,527,126	71,315	n/a
1928	8,582	2,973,701	79,900	n/a
1929	9,303	3,634,838	90,847	n/a
1930	10,620	6,168,198	125,582	n/a
1931	12,029	8,707,917	139,673	633
1932	15,113	11,590,350	145,512	762

1933	21,934	20,136,839	221,128	1,051
1934	35,397	34,385,515	363,900	1,435
1935	53,246	50,362,193	488,443	1,759
1936	66,537	65,495,957	582,765	1,952
1937	75,805	71,265,889	611,051	2,198
1938	80,384	72,253,610	611,364	2,378
1939	85,526	84,077,141	675,375	n/a
1940	86,190	98,873,482	689,932	n/a
1941	83,337	103,031,247	846,503	2,497
1942	88,288	123,105,000	1,055,964	2,539
1943	85,546	149,540,000	1,285,630	2,603
1944	90,319	173,636,900	1,519,106	2,649
1945	94,910	199,125,538	1,804,870	2,688
1946	107,474	233,058,000	2,127,451	2,806
1947	124,320	281,341,000	2,557,716	3,074
1948	128,563	246,247,651	2,663,751	3,202
1949	150,769	315,007,523	4,008,000	3,394

Table 2: Electricity Consumption in Palestine in kWh

Year	Units Sold by PEC	Irrigation	Industry	Other Purposes
1925	1,847,225	0	n/a	n/a
1926	2,343,764	0	1,427,000	n/a
1927	2,527,126	n/a	1,509,180	n/a
1928	2,973,701	n/a	1,870,886	n/a
1929	3,634,838	n/a	2,426,953	n/a
1930	6,168,198	1,727,132	2,190,464	n/a
1931	8,707,917	3,075,748	3,239,258	3,132,000
1932	11,590,350	4,399,533	4,058,629	4,532,000
1933	20,136,839	9,029,436	6,575,526	10,248,000
1934	34,385,515	14,281,892	9,855,466	17,061,000
1935	50,362,193	16,134,366	17,166,602	22,664,000
1936	65,495,957	24,122,151	18,710,245	25,617,000
1937	71,265,889	25,334,888	20,314,114	26,571,149
1938	72,253,610	25,502,139	20,180,322	30,468,000
1939	84,077,141	28,505,454	25,104,000	29,948,000
1940	98,873,482	28,234,000	35,692,000	36,868,000

1941	103,031,247	33,298,000	32,865,000	44,197,000
1942	123,105,000	37,411,000	41,497,000	54,272,000
1943	149,540,000	45,767,000	49,501,000	67,272,000
1944	173,636,900	49,965,000	56,401,000	78,871,000
1945	199,125,538	53,954,000	66,301,000	94,298,000
1946	233,058,000	64,228,000	74,532,000	122,149,000
1947	281,341,000	n/a	86,109,000	119,000,000
1948	246,247,651	57,000,000	70,000,000	154,000,000
1949	315,007,523	66,000,000	95,000,000	221,000,000

The Non-Electrification of Nablus Continues

A few months after the end of the Arab Revolt, interests to connect Nablus to the grid again announced themselves and rekindled the tension between commerce and nation. In January 1940, Robert Newton, the assistant district commissioner in Nablus, approached the power company with a request for a connection to Nablus. Shortly after receiving Newton’s letter, the power company received a message from a group calling itself the Arab Association of Nablus. The letter stated that “the traitors” who had been interested in bringing the company to the city were “afraid” and could be “counted on one hand.” The letter went on:

Director Rutenberg, we are not interested in you nor your people or in the power of your rule or your distinction or your money, for our organization is able to set upon you and your workers and your works regardless of your strength. To not consider entering Nablus would be safer for your life and the lives of your workers.³⁶

The Arab Association of Nablus could have spared themselves the effort. A new conflict, in the form of world war, hung over the renewed initiative, and the PEC was generally loath to commit to further extensions.³⁷ In any event, as Rutenberg noted, Nablus was a “peculiar case,” best avoided.³⁸

Toward the end of World War II, negotiations between the municipality and the PEC resumed and the particularities of Nablus’s politics remained prominent. At a meeting on 28 January 1945, representatives of the Nablus municipality made their opening bid to the power company. They again proposed forming a company, 51 percent of which would be owned by Nablus and 49 by the PEC. The new company would install a small diesel generator, operated outside the PEC grid. It would power the water supply system, a small street lighting scheme, and a few houses. They justified the arrangements in two ways. First, the scheme would be compatible with the generator currently pumping water from a nearby spring and in which there were strong “vested interests” by certain

residents of the town. The second reason was that “the special psychology of the people of Nablus has to be taken into consideration, which has caused it to remain, unlike all other Arab towns, without an organized supply of electricity for nationalist reasons.” The separate company would function as a “device” that little by little would acclimate nationalists to the idea of accepting the PEC’s open involvement in Nablus, ultimately enabling it to take full ownership of the works. The power company was reluctant, as always, to agree to any scheme that did not involve an open and direct agreement between the municipality and the company, and during a phone conversation the following week, the PEC secretary, Yaktuieil Baharaw, rejected the proposal.³⁹

Yet the Nabulsi representatives continued to press their case, marshaling technical arguments about costs and benefits to justify their place outside of the countrywide grid. During a follow-up meeting on 11 February 1945, they made use of the nous of the electrical engineer and Nablus resident Dawud ‘Arafat to bolster their case. ‘Arafat elaborated on the reasons why a smaller, separate scheme would be preferable to connection to the grid. Most important, he said, there was not enough demand in the town to meet the minimum consumption normally stipulated in the municipal contracts. Thus, extending the high-tension line from Tulkarm to Nablus and connecting the town to the countrywide system would be uneconomical. Only when the town had undergone considerable economic development would such a scheme make sense. For the moment, however, a local solution that could be incorporated into the existing local system and run on diesel would be preferable both politically and economically. The power company, as expected, rejected the proposal. Nevertheless, the young engineer seems to have left an impression on Secretary Baharaw, who noted in his report that ‘Arafat “was clearly very smart.”⁴⁰

Indeed, ‘Arafat had put his finger on a critical element of the power system’s impact on Palestine. The kind of large-scale electrification that the power company was engaged in was not well suited to many Arab towns, which would have been better served by a smaller system, requiring more modest front-end capital expenditure and obviating the need to commit to relatively high minimum levels of consumption demanded by the standard PEC contract, with reference to justifying the expense of extending the high-tension lines and constructing a transformer station. But the exclusivity clause of the power company’s concession prevented any alternative undertakings, while the considerable opposition to the power company made it even more difficult to make the kind of full-throated commitment that would have been required to make the power company connection profitable.

In other words, ‘Arafat had identified another element of how technological momentum can deepen ethno-national segregation. The power supply system and the Jewish economy had created and molded each other; power supply spurred the growth of energy-intensive irrigation and energy-intensive irrigation spurred the growth of power supply. But these technologies, and thus too the synergies of technology and economic growth that obtained in the Yishuv, remained absent from much of the Arab economy. Especially in the wake of the devastation wrought by the Arab Revolt, Nablus had neither the power infrastructure nor the mechanized agriculture to justify committing to the high energy consumption

that the standard PEC contract required. That in combination with the power company's statutory monopoly meant that Nablus was left without power.

Looking globally, this is not the usual order of things. To this day, electricity is first introduced in a society not as a commercial systems technology, but for subsistence use. Individual generators are set up to supply small amounts of electricity for lighting and modest motive force (powering a water pump, say). Large electric power systems, like the one operated by the PEC, usually come into being when electricity consumption has grown to the point that there is a sufficiently large number of small stand-alone generators that economies of scale conduce to interconnecting them into a larger system. And even as such systems become increasingly common, people not in a position to enjoy the benefits of the scale economies continue operating stand-alone generators, either in place of or in addition to relying on the power system.⁴¹

In any event, negotiations between the PEC and Nablus lumbered on for another two years, reflecting the commercial logic of large-scale systems electrification versus a small-scale stand-alone system. The same political tensions as before were manifest in the Palestinian press, and provoked new threats against the power company and the managing director personally.⁴² One letter to the PEC signed by the Arab League Committee to Boycott Zionist Goods asserted that Mayor Tuqan, in his negotiations with the PEC, "does not represent anybody but himself." The letter promised that "any worker, engineer or surveyor entering Nablus will die. Each pole will be torn down." The letter ended by addressing the director directly: "You should know that you too shall die in your own house . . . You have been warned."⁴³

By the fall of 1947, Nablus and the PEC made an agreement whereby the town would borrow sixty thousand Palestine pounds from the mandatory government and lend that money in turn to the power company to cover the cost of the power connection. The arrangement was justified by the fact that Nablus was incapable of giving adequate guarantees for minimum consumption levels. In fact, however, the power company's invocation of this logic was selective; on numerous occasions, the aspirational dimension of power supply had overridden concerns about actual consumption levels. The scheme was approved by Government House in Jerusalem and by the Colonial Office in London, and on 10 February 1948, the supply agreement between the PEC and Nablus was signed.⁴⁴ The agreement, however, was never implemented. Large-scale violence between Jews and Arabs erupted in Palestine in late 1947, shortly after the adoption of the UN General Assembly resolution 181 for the partition of Palestine, and by May 1948 it would expand into a full-blown regional war.

In the event, Nablus was never electrified by the PEC. By the end of the 1948 war, Nablus found itself in the territory occupied by Jordan. In the 1950s, no longer hamstrung by the exclusivity clause of Rutenberg's concession, the town built its own electric supply system. When, in June 1967, Israel captured the West Bank, the then-mayor of Nablus immediately brought a suit against what had then become the Israel Electric Corporation for breach of contract and demanded repayment of the sixty thousand Palestine pounds that the municipality had paid the company in late 1947 for a connection, along with 9 percent annual interest.⁴⁵

Conclusion: Electricity and Partition

“Palestine,” wrote the liberal journalist Herbert Sidebotham in 1937, “jumped from a medieval into a modern economy with one leap.”⁴⁶ Like so many observers at the time, the first concrete expression of that leap that Sidebotham went on to name was electrification, which he referred to as “one of the most significant aspects of Palestine’s industrial development.”⁴⁷ Before World War I, Sidebotham remarked, the poor majority was lucky if it had an oil-soaked rag to light; the wealthy few if they had kerosene. Now, he noted, electricity was used for lighting and powering household appliances and industrial machinery, and much else besides, and therefore, “the current consumed is a very useful barometer of the modernization of its industries and its social life.”⁴⁸

By the time Sidebotham wrote those words, over 90 percent of electricity in Palestine was consumed by Jews, whereas four-fifths of Arab lighting needs were met with charcoal and kerosene. It is easy to imagine the conclusions drawn by those using Sidebotham’s metrics. Indeed, the grid figured prominently in discussions over how to draw the borders between the Jewish and Arab entities in deliberations over partition in the last decade of the Mandate. For instance, the British partition commission that followed up on the Peel Report’s proposal for partition argued that since “only a small part of the electric energy produced by the Palestine Electric Corporation is sold to consumers in the Arab State outlined,” the borders of the Jewish State “should be modified so as to include” vital points of the power system, including the hydroelectrical station on the Jordan River.⁴⁹ In fact, every partition proposal after this one included the PEC’s hydroelectrical power station on the Jordan River as well as the entirety of the company’s high-tension network in the area proposed for the Jewish state. Even the Morrison-Grady plan from 1946, which recommended allocating only 17 percent of the land to the Jewish state, nevertheless supported the inclusion of the area around the hydroelectrical works, as well as all high-tension transmission lines.⁵⁰

Of course, in the end, none of the numerous partition proposals that were presented in the decade from 1937 to 1947 ended up deciding the borders. It was troop placement and armistice negotiations that decided the shape of the future Jewish state. Nevertheless, the obvious importance of industry and infrastructure in considering the border proposals demonstrates the central role they occupied in the minds of colonial officials and the international community at the time. And the fog of war notwithstanding, it is hardly a coincidence that the transmission network remained wholly within the borders of Israel by the end of hostilities in 1949. What is more, the high-tension line that ran between the Jordan powerhouse and Tel Aviv and had been built more than a decade before the 1948 War, clearly traces out the border between Israel and the West Bank, which since 1967 has been under Israeli occupation. Almost all of the Arab towns that the powerline passed – Kawkab al-Hawa, Danna, Kafra, Sirin, Lajjun, and so forth – were depopulated in 1948.⁵¹

The rapid expansion of the electric supply system was critical to allowing the continued growth of the Yishuv, enabling it to go on taking in large amounts of immigrants every year. This further increased demand, which allowed the company to

continue growing, and so on, in a virtuous circle of exponential growth of the system and the Jewish population. The number of Jews in Palestine jumped from about 175,000 in 1931 to 474,000 in 1939. With the immigrants came capital; an estimated fifty million Palestine pounds arrived with the immigrants of those years, four-fifths of which was private.⁵² During the same period, the size of the grid more than doubled and electricity consumption grew by a factor of ten.

The Palestinian Arab experience was starkly different. To begin with, the Mandate period witnessed a mass exodus of Arabs from the Jewish labor market. In 1922, Arabs made up 13.6 percent of the labor in Jewish-run enterprises; by 1935, that figure had declined to 8.5, and the following year, with the outbreak of the Arab Revolt, it underwent another precipitous drop to 3.7 percent. The trend held through the Mandate period, and by 1945 it was down to 1.7 percent. Thus, the decline predated the revolt, which lasted until 1939, and continued steadily after it.

During the period of the Yishuv's exponential growth, the Arab economy raised almost no new capital at all.⁵³ Thus, as Amos Nadan has argued, the different strategies of Arabs and Jews – in which, to most outside observers, the Arabs compared unfavorably – was a function on each side of rational responses to widely differing circumstances, especially with respect to the relative cost of labor and capital. Whereas in the Jewish sector, capital was easily come by and labor dear, the opposite obtained in the Arab sector. For the Jews, it made sense to invest in capital-intensive cultivation methods and industry. In the Arab sector, by contrast, where labor was cheap and credit largely unavailable, it made sense to employ people for the tasks that fell on machines in “modern” agriculture.⁵⁴ (Of course, conditions in the Arab sector were no less products of “modernity” than the Jewish sector.) The same conditions explain why Arab agriculture did not transition into specialization; the sizable investment required in the short-to-medium term made such a move prohibitive.⁵⁵

The same dynamic obtained in the domain of electrification, where in the Arab community the benefits of electrification did not, by and large, justify the initial capital outlay required. Moreover, as we have seen through the case of Nablus's non-



“Partition proposals and the grid at the end of the mandate,” *Electrical Palestine: Capital and Technology from Empire to Nation* (Oakland: University of California Press, 2019), 212.

electrification, the electricity market was keyed to the Jewish economy, thus making less capital-intensive, slower, and more gradual growth impossible, while the exclusive rights of the power company under the concession prevented the Arabs from undertaking any alternative electrification schemes. What is more, as a result of the nature of the power system, to Zionists industry and nation evolved together in a mutually supportive way. To the Palestinians, the opposite was true. As we saw in Nablus, connecting to the PEC's power system was seen as a threat to national aspirations. Not nation *and* industry, as was the case for the Zionists; nation *or* industry.

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Endnotes

- 1 Wiebe Bijker, Thomas P. Hughes, and Trevor Pinch, eds., *The Social Construction of Technological Systems* (Cambridge, MA: MIT Press, 1987). Recent contributions are too numerous to list in full, but some notable works include *On Barak, On Time: Technology and Temporality in Modern Egypt* (Berkeley: University of California Press, 2013); Joanne Randa Nucho, *Everyday Sectarianism in Urban Lebanon: Infrastructures, Public Services and Power* (Princeton, NJ: Princeton University Press, 2016); and Katayoun Shafiee, *Machineries of Oil: An Infrastructural History of BP in Iran* (Cambridge, MA: MIT Press, 2018). For a fuller discussion of this literature, see Fredrik Meiton, *Electrical Palestine: Capital and Technology from Empire to Nation* (Oakland: University of California Press, 2019), 7–12.
- 2 Because of a prior concession granted by the Ottoman government in 1914, Jerusalem constituted an exception. Jerusalem will not be discussed here.
- 3 Thomas Parke Hughes, “Technological Momentum in History: Hydrogenation in Germany, 1898–1933,” *Past & Present* 44, no. 1 (August 1969): 106–132. On the PEC's achievement of technological momentum, see Fredrik Meiton, *Electrical Palestine*, chapters 1–4.
- 4 Letter from “the Arab Association” in Nablus to the PEC, 26 February 1940, Israel Electric Corporation Archives (hereafter IECA) 0429-1135.
- 5 *Al-Jami'a al-Islamiyya*, 7 September 1932.
- 6 “Nablus and the Rutenberg Electric Company,” *al-Jami'a al-'Arabiyya*, 12 December 1934.
- 7 Editorial, *Mira'at al-Sharq*, 19 December 1934.
- 8 “Rutenberg's Zionist Current,” *al-Jami'a al-Islamiyya*, 20 December 1934.
- 9 *Al-Karmil*, 9 December 1934; for other examples of this usage, see “Rutenberg's Zionist Current,” *al-Jami'a al-Islamiyya*, 20 December 1934; “Attempts Destined to Fail,” *al-Difa'*, 21 December 1934; Imil al-Ghuri, “The Crime in Nablus,” *al-Wahda al-'Arabiyya*, 1 January 1935.
- 10 Minutes of conversation between Shapira and the deputy mayor of Nablus, Afif Ashour, and the Nablus notable Hilmi al-Fotiani on 2 December 1934; report dated 31 December 1934, IECA 0429-1135. See also letter from A. Koch, 31 May 1934, and the PEC's reply, 4 June 1934, IECA 0429-1135.
- 11 Muhammad Saber Shanaar to PEC, 18 December 1933, IECA 0429-1135; Nur Match Company to PEC, 24 December 1933; Baharaw to Nur, 10 January 1934, IECA 0429-1135.
- 12 Unsigned and undated internal PEC memo, IECA 0429-1135.
- 13 Nur al-Din, 27 January 1925; Sulayman Tuqan, 6 September 1926, Nablus Municipal Library Archives (hereafter NMLA) 5/7.
- 14 “Arab Nablus,” *Filastin*, 24 June 1933.
- 15 M. Jakobson to PEC, 18 February 1934, IECA 0429-1135; “Attempt to Introduce Rutenberg in Nablus,” *al-Difa'*, 17 December

- 1934; editorial, *Mira'at al-Sharq*, 19 December 1934; "Attempts Destined to Fail," *al-Difa'*, 21 December 1934.
- 16 Nablus Mayor Tuqan was part of the opposition faction and was in favor of bringing electricity to Nablus. So were all the other members of the municipal council who supported the idea: Ahmad al-Shak'a, 'Abd al-Rahim al-Nabulsi, Taher Masri, Nimr al-Nabulsi, Rashid Masri. M. Jakobson to PEC, 18 February 1934, IECA 0429-1135; Imil al-Ghuri, "The Crime in Nablus," *al-Wahda al-'Arabiyya*, January 1, 1935; *Filastin*, whose editor 'Isa al-'Isa was also a member of the opposition, published a reply to Ghuri, rejecting his accusations: *Filastin*, 12 January 1935.
- 17 "Nablus Wants Electricity," *Palestine Post*, 16 December 1934.
- 18 Matthew Kraig Kelly, *The Crime of Nationalism: Britain, Palestine, and Nation-Building on the Fringe of Empire* (Berkeley: University of California Press, 2017); Jacob Norris, "Repression and Rebellion: Britain's Response to the Arab Revolt in Palestine of 1936–39," *Journal of Imperial and Commonwealth History* 36, no. 1 (March 2008), 28; Ted Swedenburg, *Memories of Revolt: The 1936–1939 Rebellion and the Palestinian National Past* (Fayetteville: University of Arkansas Press, 2003); and Weldon C. Matthews, *Confronting an Empire, Constructing a Nation: Arab Nationalists and Popular Politics in Mandate Palestine* (London: I. B. Tauris, 2006), 256–57.
- 19 Fredrik Meiton, "Electrifying Jaffa: Boundary-Work and the Origins of the Arab-Israeli Conflict," *Past & Present* 231, no. 1 (May 2016): 201–236.
- 20 Rutenberg to Board, 1938: Israel State Archives (hereafter ISA) M-301/8.
- 21 The triangle's three points were Tulkarm, Nablus, and Jenin. Kelly, *Crime of Nationalism*, 58.
- 22 Rutenberg to Board, 3 October 1938, IECA 2372-1.
- 23 Rutenberg to Board, 3 October 1938, IECA 2372-1; David Ben-Gurion, "Our Friend: What Wingate Did for Us," *Jewish Observer and Middle East Review*, 27 September 1963, in *From Haven to Conquest: Readings in Zionism and the Palestine Problem Until 1948*, ed. Walid Khalidi (Washington: Institute for Palestine Studies, 1971), 15–16.
- 24 Meiton, *Electrical Palestine*, 80–83.
- 25 It is true, however, that 1937 saw a marked slowdown as the growth rate fell to 14 percent, the slowest of the mandate period. 19 March 1938, IECA 2372-1.
- 26 *Palnews: Economic Annual of Palestine* 1937, 20, ISA M-5331/5.
- 27 Matthews, *Confronting*, 258.
- 28 Amos Nadan, *The Palestinian Peasant Economy Under the Mandate: A Story of Colonial Bungling* (Cambridge, MA: Harvard University Press, 2006), 25.
- 29 *Palnews*, 22, ISA M-5331/5.
- 30 Prices in the Jewish market were 21 percent higher on average. Nadan, *Palestinian Peasant Economy*, 24.
- 31 *Palnews*, 20–22, ISA M-5331/5.
- 32 *Statistical Abstract of Palestine 1940*, ISA M-4512.
- 33 Fredrik Meiton, "The Radiance of the Jewish National Home: Technocapitalism, Electrification, and the Making of Modern Palestine," *Comparative Studies in Society and History* 57, no. 4 (October 2015): 975–1006.
- 34 *Statistical Abstract of Palestine, 1943*, Seventh Edition, Government Department of Statistics.
- 35 "Jordan Valley Authority: A Plan for Irrigation and Hydro-Electric Development in Palestine," Memorandum submitted by Abel Wolman, Chariman, Engineering Consulting Board Commission on Palestine Surveys, 65–66.
- 36 Letter signed "Arab Association" in Nablus to PEC, 26 February 1940, IECA 0429-1135.
- 37 Newton to Shapiro, January 10, 1940; Shapiro to Newton, 31 January 1940, IECA 0429-1135.
- 38 Rutenberg's report to the Board, 21 May 1940, IECA 2372-1.
- 39 Minutes of meeting at the Haifa head office, 11 February 1945.
- 40 Minutes of meeting at the Haifa head office, 11 February 1945, IECA 0429-1135.
- 41 See for instance, Judith Tendler, *Electric Power in Brazil: Entrepreneurship in the Public Sector* (Cambridge, MA: Harvard University Press, 1968), 20–21.
- 42 See article giving a critical account of the Nablus Municipality's negotiations with the PEC, *Nida' al-Ard*, 11 August 1947; two days later in a letter to the editor, Mahmud Nabih al-Bitar, Nablus town clerk, defended the negotiations and the agreement that was about to be made between Nablus and the

- PEC, *Nida' al-Ard*, 19 August 1947. An article by special correspondent, Nablus, titled “The Lighting of Nablus by Motors Instead of Rutenberg,” *Filastin*, 26 August 1947, describes the group of “hidden hands” who are working against the negotiations with the PEC; another article by special correspondent, Nablus, titled “Electricity in Nablus and the Government’s Loan to the Municipality,” *Filastin*, 27 August 1947, contains, among other things, an interview with the mayor of Nablus, defending the negotiations.
- 43 Letter signed by the Arab League Committee to Boycott Zionist Goods to the PEC, 8 July 1946, IECA 0429-1132.
- 44 Proclamation of the Nablus Municipal Council (Authorisation of Loan) Order, 1947, *Palestine Gazette* 1617, Suppl. 2, 1491, 2 October 1947, IECA 0429-1132-88; resolution no. 179 of the Municipal Corporation of Nablus, 11 September 1947; resolution no. 201 of the Municipal Corporation of Nablus, 5 October 1947, IECA 0429-1132-85; Loan Agreement between the Municipal Corporation of Nablus and the PEC, 20 October 1947, witnessed by Nabih Zu’aytir and signed by Nabih Bitar, town clerk, for Nabus, and by George Bradlaw, secretary, and Abraham Rutenberg, managing director, for the PEC, IECA 0429-1132-77; and Supply Agreement between the PEC and Nablus, 10 February 1948, IECA 0429-1132-37.
- 45 Actually, this matter was first pursued through Jordanian courts in 1958–61; the suit was settled in Nablus’s favor, but no payments were made. PEC to counsel, Lifshitz and Associates, 28 December 1858, IECA 0429-1132-28; S. Horowitz and Co. to Israel Electric Corp., December 14, 1967, IECA 0429-1132-8; unsigned legal opinion, dated 10 January 1968, IECA 0429-1132-7; and “Schem tovaat mechev’ hacheshmal 60,000 lirot falastinit,” *Ma’ariv*, 25 March 1968, IECA 0429-1132.
- 46 Herbert Sidebotham, *Great Britain and Palestine* (London: MacMillan, 1937), 107.
- 47 Sidebotham, *Great Britain and Palestine*, 111.
- 48 Sidebotham, *Great Britain and Palestine*, 112.
- 49 Palestine Partition Commission Report, presented by S/SC to Parliament, October 1938 (London: 1938), 47.
- 50 Gideon Biger, *The Boundaries of Modern Palestine, 1840–1947* (London: Routledge, 2004), 212.
- 51 IECA 1177-6; and Walid Khalidi, *All That Remains: The Palestinian Villages Occupied and Depopulated by Israel in 1948* (Washington: Institute for Palestine Studies, 1992).
- 52 Anita Shapira, *Israel: A History* (Waltham, MA: Brandeis University Press, 2012), 115.
- 53 Nadan, *Palestinian Peasant Economy*, 7, 139; Jacob Metzger, *The Divided Economy of Mandatory Palestine* (New York: Cambridge University Press, 1998), 130–31.
- 54 Nadan, *Palestinian Peasant Economy*, 200.
- 55 Nadan, *Palestinian Peasant Economy*, 92.