SPATIAL EXPERIENCES OF ENERGY IN TURKEY IN THE 1930S

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ABSTRACT

SPATIAL EXPERIENCES OF ENERGY IN TURKEY IN THE 1930S

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This dissertation examines the spatial experiences of energy in Turkey during the 1930s by approaching coal and electricity as socio-material forces that reorganized territory, reshaped everyday life, and mediated the reciprocal transformation of state and society. Rather than treating energy as a technical backdrop to modernization, the study positions energy infrastructures as active agents in the production of space. Through a scalar analysis spanning national, urban, and domestic spheres, it demonstrates how coal basins, railways, electric factories, distribution networks, street illumination, and household appliances formed an uneven yet continuous chain connecting extraction zones to interiors. Drawing on the conceptual lenses of socio-natures and energo-power, the dissertation defines energy as a relational process embedded in environmental conditions, institutional arrangements, political economy, and material practices. It argues that modernization in the early Republican period was neither linear nor uniformly experienced, but negotiated through infrastructural expansion, administrative coordination, market mechanisms, and lived adaptation. Environmental burdens, pricing disputes, uneven distribution, and differentiated access to energy technologies reveal that infrastructural governance operated as a fragmented and contested field rather than a seamless instrument of control.

Methodologically, the study expands architectural historiography by treating newspapers, caricatures, advertisements, and public debates as architectural evidence. Writing architectural history through energy makes visible the infrastructural processes that shaped territorial integration, domestic routines, environmental transformation, and the differentiated experiences of modernity in 1930s Turkey.

Keywords: energy, electricity, spatial experiences, Turkey, 1930s

ÖZ

1930'LARDA TÜRKİYE'DE ENERJİNİN MEKÂNSAL DENEYİMLERİ

GÜR, Zeynep
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Bu doktora tezi, 1930'lar Türkiye'sinde enerjinin mekânsal deneyimlerini kömür ve elektriği yalnızca teknik unsurlar olarak değil, mekânı yeniden örgütleyen, gündelik yaşamı dönüştüren ve devlet ile toplum arasındaki karşılıklı dönüşüme aracılık eden sosyo-maddi güçler olarak ele alarak incelemektedir. Çalışma, enerjiyi modernleşmenin teknik bir arka planı olarak görmek yerine, enerji altyapılarını mekânın üretiminde etkin aktörler olarak konumlandırır. Ulusal, kentsel ve konut ölçeklerini kapsayan ölçekler arası bir analiz aracılığıyla, kömür havzaları, demiryolları, elektrik fabrikaları, dağıtım ağları, sokak aydınlatmaları ve ev içi elektrikli aletlerin, çıkarım alanlarından iç mekânlara uzanan eşitsiz fakat süreklilik gösteren bir zincir oluşturduğunu göstermektedir. Sosyo-doğalar *(socio-natures)* ve *energo-power* kavramsal çerçevelerinden yararlanan tez, enerjiyi çevresel koşullar, kurumsal düzenlemeler, politik ekonomi ve maddi pratikler içine gömülü ilişkisel bir süreç olarak tanımlar. Çalışma, erken Cumhuriyet dönemindeki modernleşmenin doğrusal ya da homojen biçimde deneyimlenen bir süreç olmadığını; aksine altyapıların genişlemesi, idari koordinasyon, piyasa mekanizmaları ve gündelik

uyarlamalar aracılığıyla müzakere edildiğini ileri sürer. Çevresel yükler, fiyat tartışmaları, eşitsiz dağılım ve enerji teknolojilerine farklı düzeylerde erişim gibi unsurlar, altyapısal yönetişimin kesintisiz ve bütüncül bir kontrol aracı olmaktan ziyade parçalı ve çatışmalı bir alan olarak işlediğini ortaya koymaktadır. Yöntemsel olarak çalışma, gazeteleri, karikatürleri, reklamları ve kamusal tartışmaları mimari kanıt olarak değerlendirerek mimarlık tarih yazımını genişletir. Enerji üzerinden mimarlık tarihi yazmak, 1930'lar Türkiye'sinde mekânsal bütünleşmeyi, gündelik yaşam pratiklerini, çevresel dönüşümleri ve modernliğin farklılaşan deneyimlerini şekillendiren altyapısal süreçleri görünür kılar.

Anahtar Kelimeler: enerji, elektrik, mekansal deneyimler, Türkiye, 1930'lar

To perseverance

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TABLE OF CONTENTS

PLAGIARISM....iii

ABSTRACT....iv

ÖZ....vi

ACKNOWLEDGMENTS....ix

TABLE OF CONTENTS....x

LIST OF FIGURES....xii

LIST OF ABBREVIATIONS....xx

CHAPTERS

1. INTRODUCTION....1

1.1. Aim, Scope, and Research Questions....4

1.2. Methodology, Sources, and Archival Approach....6

1.3. Literature Review....10

1.4. Structure of the Dissertation....17

2. ENERGY AS AN ARCHITECTURAL HISTORIOGRAPHIC FRAMEWORK 20

2.1. Defining Energy....23

2.2. Socio-Natures, Governmentality, and Political Economy....26

2.3. Energo-Power and the State as Environmental Actor....30

3. SITUATING ENERGY WITHIN HISTORICAL TRANSFORMATIONS....42

3.1. Global Energy Regimes in the 1930s....43

3.2. Energy in the Late Ottoman Context....47

3.3. Energy, State-Building, and Modernity in Early Republican Turkey....50

3.3.1. Official Energy Modernity: Institutions, Laws, and Planning....58

3.3.2. Territory-Making through Energy Infrastructure....61

3.3.3. Representation and Consent-building 63
3.3.3.1. Display of National Energy: International Coal Exhibition..... 70
4. LIVED EXPERIENCES OF ENERGY 88
4.1. Access, Pricing and Uneven Distribution of Energy 93
4.2. Urban Experiences of Energy 108
4.2.1. Environmental Concerns: Case of Kuruçeşme Coal Depots..... 110
4.2.2. Street Lighting and Urban Conditions 118
4.2.3. Urban Nodes of Energy in Istanbul..... 126
4.2.3.1. Metro Han 127
4.2.3.2. Kadıköy and Beyazıt Electric Houses..... 132
4.2.3.3. Fındıklı Electric Company Depot 138
4.2.3.4. Taksim Permanent Electricity Exhibition 141
4.3. Domestic Experiences of Energy 146
4.3.1. Accidents, Warnings, and Bodily Pedagogies 149
4.3.2 Interior Comfort, Hygiene, and Appliances..... 154
4.3.3. Gendered Use of Energy and Fractioned Modernity 159
5. CONCLUSION 175
BIBLIOGRAPHY 181
APPENDICES
A. CURRICULUM VITAE 201
B. TURKISH SUMMARY / TÜRKÇE ÖZET..... 204
C. THESIS PERMISSION FORM / TEZ İZİN FORMU..... 217

LIST OF FIGURES

Figure 1 Kozlu coal mines discovery map (*MTA Journal*, 1939, no.17) 29

Figure 2 Çaydamar coal seams discovery map (*MTA Journal,* 1937, no.7) 30

Figure 3 The electrification project between Adana-Tarsus-Mersin (*Kadro,* 1933, no.15, p.42)..... 30

Figure 4 The courage of the bigots was associated with the darkness (*Akbaba,* 1931, no.819)..... 52

Figure 5 The five-year developmental plan was seen as a gear that scares the Great Depression (*Akbaba*, 1934, no.2) 55

Figure 6 Map of the factories and railways connecting them through the country (*Ulus,* 29.10.1938)..... 62

Figure 7 Color map of mining operations in Asia Minor. Shows salt, coal and chromium production and location of mines. https://archive.org/details/dr_turque-d-asie-dressee-par-z-khanzadian-exploitations-minieres-graved-p-13321040, last accessed 09.12.2025)..... 64

Figure 8 Coal basins map, (*La Turquie Kemaliste*, 1937, no.19, p.15)..... 64

Figure 9 Color map of mines and mineral resources in the eastern provinces of Turkey and Republic of Caucasus, https://archive.org/details/dr_richesses-minerales-dans-les-provinces-orientales-de-turquie-republiques-s-13321039, last access 09.12.2025)..... 65

Figure 10 Graphics depicting the coal exports in 1934 and 1938 (*MTA Journal,* 1936, no.1; *MTA Journal*, 1939, no.16) 65

Figure 11 Charts depicting the use of electricity in street lighting, in households, and in the industry (*Hakimiyet-i Milliye*, 29.10.1933) 66

Figure 12 The 10-year increase in the electric power (*Hakimiyet-i Milliye*, 29.10.1933) 66

Figure 13 Graphs depicting the consumption and production of coal between 1923-1937 (*Ulus*, 29.10.1938) 67

Figure 14 Coal worker juxtaposed to the six arrows (*Zonguldak Karaelmas Halkevi Dergisi*, 1938, no. 105. 68

Figure 15 Uzun Mehmet Monument in Zonguldak (Oral, 2017, p.131)..... 69

Figure 16 Aerial photo of the Exhibition House and the pavilions (*Beynelmilel Kömür Sergisi,* 07.05.1937) 73

Figure 17 International Exhibition of Coal-Burning Equipment and Heating Appliances and Installations booklet, cover and first pages 73

Figure 18 Exhibition Diagram and Site Plan, International Exhibition of Coal-Burning Equipment and Heating Appliances and Installations Booklet, 1937. 73

Figure 19 Exhibition Ground Floor Plan, International Exhibition of Coal-Burning Equipment and Heating Appliances and Installations Booklet, 1937. 74

Figure 20 Exhibition First Floor Plan, International Exhibition of Coal-Burning Equipment and Heating Appliances and Installations Booklet, 1937..... 74

Figure 21 Eti mangal carried by four coal workers and the mural on the exhibition wall (*Ulus*, 23.04.1937)..... 76

Figure 22 Display halls (*Arkitekt,* 1937, no.5) 76

Figure 23 Several halls of the exhibition (*Yedigün,* 1937, no.217) 77

Figure 24 Hall of graphics and models (*Yedigün,* 1937, no.217) 79

Figure 25 Life-size model of a coal mine and workers, (*Yedigün,* 1937, no.217) 79

Figure 26 A life-sized model of a coal mine (*Beynelmilel Kömür Sergisi,* 07.05.1937) 79

Figure 27 Display room (*Arkitekt,* 1937, no.5) 80

Figure 28 Advertisement for several appliances (*Akbaba*, 1935, no.74) 93

Figure 29 About electric prices (*Akbaba*, 1931, no.51; *Akbaba*, 1932, no.58; *Akbaba*, 1932, no.52) 95

Figure 30 People posing with electric posts and news about constructions around the country (*Akşam,* 05.04.1936; *Ulus,* 13.06.1938) 99

Figure 31 Two men freezing outdoors comment that someone dead is lucky because he is warm in hell, and scholar warming himself by burning books in the log burner (*Akbaba,* 1933, no.72; *Akbaba*, 1935, no.60) ... 101

Figure 32 Malatya gaining the illumination back (*Akşam,* 1932) 103

Figure 33 Satiric depiction of coal prices (*Amel-i Elektrik,* 1932, no.52) 105

Figure 34 Coal prices in discussion on a street Economic concerns and street safety (*Akbaba,* 1934, no.48; *Akbaba*, 1937, no.170) 105

Figure 35 Power cut in houses in Erzurum (*Son Posta,* 23.12.1937) 106

Figure 36 Kozlu Electricity Factory (*Son Posta*, 30.09.1936) 107

Figure 37 Map of Kuruçeşme and the depots on the island (https://katalog.ibb.gov.tr/kutuphane3/haritalar/Hrt_010043.pdf) 111

Figure 38 Coal depots on Kuruçeşme shore and on the island (https://www.eskiistanbul.net/2235/kurucesme-komur-depolari, last access: 15.04.2026) 112

Figure 39 Aerial view of Kuruçeşme coal depots (https://www.eskiistanbul.net/6156/tepeden-kurucesme, last Access:18.04.2026) 115

Figure 40 Complaint about the depots in Kuruçeşme, Istanbul (*Cumhuriyet,* 07.09.1929; *Akşam,* 18.08.1934) 116

Figure 41 The removal of the coal depots from Kuruçeşme was seen as a relief from that disgrace. (*Akbaba*, 1936, no.27) 117

Figure 42 Newspaper column headline "Lights of the City" with urban silhouette (*Cumhuriyet,* 31.01.1937) 119

Figure 43 Newspaper advertisement on the illumination of parks and gardens (*Yeni Adam,* 23.07.1934) 120

Figure 44 Electric casualties caused by the tramways (*Cumhuriyet,* 13.02.1929; *Akbaba*, 1933, no.37) 121

Figure 46 Street lighting expectations and critiques alongside other municipal services (*Akbaba*, 1935, no.56; *Akbaba* 1936, no.62; *Akbaba,* 1938, no.237) 122

Figure 45 Urban representation with minarets, trees, electric posts, and a beggar, and drunk men and streetlights (*Akbaba*, 1936, no.140; *Akbaba*, 1938, no.188) 122

Figure 47 The critics over urban conditions of the city (*Akbaba*, 1931, no.869) ... 123

Figure 48 Visualization of electric consumption of Istanbul in 1931 (*Amel-i Elektrik*, 1932, no.54) 124

Figure 49 Schemes of illumination devices (*Amel-i Elektrik,* 1929, no.32; *Amel-i Elektrik,* 1928, no.31) 125

Figure 50 Propoganda of lighting for better sales and illumination of the shops (*Cumhuriyet,* 06.04.1935; Son Posta, 05.02.1932) 126

Figure 51 Metro Han in Beyoğlu urban plan (Jacques Pervititch Insurance Plan, 1932, SALT Archive) 128

Figure 52 Metro Han and Tunnel positioned in the urban networks and tramway lines (*Amel-i Elektrik*, January 1927, no.14; *Amel-i Elektrik*, 1927, no.16) 129

Figure 53 Various illustrations of Metro Han (*Amel-i Elektrik*, 1926, no.12; *Amel-i Elektrik*, 1927, no.22) 130

Figure 54 Announcement of educational service in Metro Han (*Amel-i Elektrik*, 1932, no.53) 130

Figure 55 The confusion over the SATIE company by traditionally dressed men (*Akbaba*, 1935, no.54) 131

Figure 56 Kadıköy Port and Electric House plan (Jacques Pervititch Insurance Plan, 1938, SALT Archive) 132

Figure 57 Kadıköy Electric House on the left (https://www.eskiistanbul.net/1772/kadikoy, last access: 15.04.2026) . 133

Figure 58 Electric House in Kadıköy, the facades from the street (*Arkitekt,* 1937, no.73) 133

Figure 59 Electric House, Kadıköy, floor plans and an elevation (*Arkitekt,* 1937, no.73) 134

Figure 60 Electric House in Kadıköy, interior views (*Arkitekt*, 1937, no.73) 135

Figure 61 Cooking class announcement (*Cumhuriyet,* 09.06.1930) 135

Figure 62 Elevation of the planned Electric Company branch in Beyazıt (*Amel-i Elektrik*, November, 1928, no.31) 136

Figure 63 Announcement of services of the electric company (*Amel-i Elektrik*, February 1932) 137

Figure 64 Shop entrance and facade (*Arkitekt,* 1934, no.42) 138

Figure 65 Shop entrance and the showcases (*Arkitekt,* 1934, no.42) 139

Figure 66 Shop entrance elevation and the floor plans (*Arkitekt*, 1934, no.42) 139

Figure 67 Water heater advertisement for Fındıklı branch (*Akşam*, 01.05.1935) ... 140

Figure 69 Night illumination of the facade (*Yedigün,* 1935, no.123) 140

Figure 68 Electric oven advertisement for Fındıklı branch (*Haber,* 01.07.1935) ... 141

Figure 70 Exhibition building in the Taksim Square, https://www.eskiistanbul.net/205/taksim-aniti-1934, https://www.eskiistanbul.net/1233/taksim-meydani-ve-topcu-kislasi, last access: 18.04.2026) 142

Figure 71 Aerial images of Taksim Square, 1935 and 1933 (https://www.eskiistanbul.net/422/taksim-bolgesi-hava-fotografi-1935, https://www.eskiistanbul.net/159/taksim-cumhuriyet-aniti-1933, last access: 18.04.2026) 142

Figure 72 Exhibition announcements (*Amel-i Elektrik,* 1933, no.6, https://www.instagram.com/p/DQejtP5iMq-/?igsh=bWl0Nzg0OGplNjRp , Last Access: 17.04.2026) 144

Figure 74 Schedule and places of the cooking classes in Istanbul, (Amel-i Elektrik, 1934, no.66) 144

Figure 73 Announcement of the exposition and the kitchen display (*Amel-i Elektrik,* 1934, no.65; *Amel-i Elektrik,* 1934, no.66) 145

Figure 75 Warnings about the electricity wiring (*Akşam,* 02.08.1932) and the brochure by the Ministry of Public Works about electricity safety 150

Figure 76 Electric bulb and radio advertisement (*Amel-i Elektrik*, 1928, no.23)....151

Figure 77 Newspaper clip depicting electric shock and fire (*Cumhuriyet*, 05.08.1929).....152

Figure 78 Newspaper clip depicting a coal poisoning (*Cumhuriyet*, 06.02.1929; *Cumhuriyet,* 03.02.1929).....153

Figure 79 Illustration of proper reading light (*Cumhuriyet Çocuğu,* 12.10.1938; *Yedigün*, 1937, no.207.....153

Figure 80 Newspaper advertisement of Satie ventilator and vacuum cleaners (*Cumhuriyet,* 08.05.1929; *Cumhuriyet,* 09.07.1929) 156

Figure 81 Water heating advertisement and woman in house (*Haber,* 06.06.1935) 156

Figure 83 The coal burning stove and a woman with a book and a man with a newspaper are praising the comforts of the Turkish hard coal (*Cumhuriyet*,11.12.1936) 157

Figure 82 The smell of the coal was a health and hygiene concern, also the Turkish coal emphasis (*Akbaba,* 1936, no.112; *Akbaba*, 1936, no.115) 157

Figure 84 Infographic about "good illumination" (*Amel-i Elektrik*, 1928, no. 25) .161

Figure 85 Illumination of the living room, study room, and laundry drying room (*Amel-i Elektrik*, no.51).....163

Figure 86 Illumination of the bathroom, kitchen and laundry room (*Amel-i Elektrik*, no.51).....164

Figure 87 Contemporary kitchen images (*Amel-i Elektrik*, 1931, no.51; *Amel-i Elektrik,* 1933, no.61) 165

Figure 88 Bedrooms and children's rooms (*Amel-i Elektrik*, no.51) 165

Figure 89 Illumination of the garage, courtyard, and the doorway (*Amel-i Elektrik*, no.51) 166

Figure 90 Juxtaposition of a "cubic" modern house exterior and a backwards interior without contemporary furniture and appliances (*Akbaba*, 1935, no.375) 168

Figure 91 Caricature depicting an alternative use of antenna (*Akbaba*, 1935, no.70). 168

Figure 92 Domestic space depiction with a cooking mother, children and mangal (*Akbaba,* 1935, no.56) 170

Figure 93 Simultaneous yet contradicting domestic scenes (*Akbaba*, 1938, no.253; *Amel-i Elektrik*, 1932, no.53) 170

Figure 94 Old and younger women in domestic scenes (Akbaba, 1934, no.140; Akbaba, 1936, no.116) 173

Figure 95 The contradiction of the "inner face" and "outer face" (Akbaba, 1934) 173

LIST OF ABBREVIATIONS

BCA- *Başbakanlık Cumhuriyet Arşivi* (Prime Ministry Republican Archives)

İETT- *İstanbul Elektrik Tramvay ve Tünel İşletmeleri* (Istanbul Electric Tramway and Tunnel Establishments)

MTA - *Maden Tetkik ve Arama Genel Müdürlüğü* (General Directorate of Mineral Research and Exploration)

PTT- *Posta, Telgraf ve Telefon Genel Müdürlüğü* (General Directorate of Postal Services)

SATIE- *Tesisat-ı Elektrikiye Türk Anonim Şirketi* (Société Anonyme Turque d'Installations Électriques)

TCDD- *Türkiye Cumhuriyeti Devlet Demiryolları* (Turkish State Railways)

CHAPTER 1

INTRODUCTION

The ways architecture and nature are co-produced, architecture's relationship with environment through the political, economic, and cultural dimensions and challenging the assumptions of modernization is a recent way of thinking in the architectural historiography.[1] This historiographic shift corresponds to what may be described as an infrastructural and ecological turn within the discipline, in which architecture is no longer treated as an autonomous formal practice but as a node within wider metabolic, territorial, and political systems. As such, it reflects a broader disciplinary reconsideration of what counts as architectural evidence, expanding the field beyond buildings and designers to include infrastructures, landscapes, and material systems as primary historical agents. With this shift in mind, this study examines the spatial experiences of energy in Turkey in the 1930s for their material, physical, institutional, representational, and sensory aspects through different scales. Framing energy as an analytical category rather than a contextual backdrop positions this study within recent scholarship that treats infrastructures as epistemic objects capable of reorganizing historical interpretation. Such an approach situates energy not simply as a background condition but as a constitutive force that participates in shaping spatial practices, architectural forms, and everyday life.

The study aims to create an extended architectural history which does not directly look at the physicality of the architectural space but rather discusses how the social and human practices create the space. This methodological expansion resonates with spatial theory traditions that conceptualize space as socially produced, relational, and processual rather than static or container-like. By foregrounding processes rather than objects, and relations rather than forms, the study aligns itself with historiographical

[1] Kim Förster, "Undisciplined Knowing: Writing Architectural History through the Environment," in *Environmental Histories of Architecture* (Canadian Centre for Architecture, 2023).

approaches that emphasize spatial production as an ongoing, dynamic activity rather than a finished artifact. Uğur Tanyeli claims that every human activity construct space: speaking, affection, literature, historiography, political acts, moral judgements, family relationships, and architectural and construction activities.[2] He also offers a way of historiography where the events are not discussed as enclosed rooms but rather as stairs that travel across different chronologic or thematic stages.[3] His metaphor implicitly rejects linear teleology of modernization and instead privileges transversal readings attentive to simultaneity, overlap, and contradiction. As such, it underscores the methodological ambition of tracing continuities, overlaps, and interruptions across temporal and thematic boundaries instead of isolating historical phenomena within rigid categories. This framework enables the dissertation to analyze energy history as overlapping temporalities rather than a linear technological progression.

Bringing together the micro and macro components of the social entities to examine the assemblages created by the interaction among those entities is another contemporary approach in the social sciences.[4] Such perspectives challenge scalar hierarchies that privilege either structural or individual explanations, proposing instead that social reality emerges through interactions among heterogeneous actors, institutions, and materials. The assemblages can be in the form of interpersonal networks, institutional organizations, environmental justice movements, or central authorities as well as the physical existence of cities, buildings, and the infrastructure of material and energy flows.[5] This study, also, sees the macro and micro as the same energy regime operating through two inseparable registers, allowing infrastructural power to be traced simultaneously across policy, representation, and embodiment. On the programmable and governmental register, it examines how energy is planned, narrated, standardized, visualized, financed, and territorialized through the concepts of political economy, statism, legibility, national imaginaries and infrastructure as governance. On the experiential and practical register, it focuses on how energy is

[2] Uğur Tanyeli, *Korku metropolü İstanbul: 18. yüzyıldan bugüne* (Metis, 2022), 13.

[3] Tanyeli, *Korku metropolü İstanbul: 18. yüzyıldan bugüne*, 22.

[4] A Manuel de Landa, "New Philosophy of Society: Assemblage Theory and SocialComplexity (New York," *Continuum* 28 (2006): 14.

[5] Manuel de Landa, "New Philosophy of Society: Assemblage Theory and SocialComplexity (New York," 14.

encountered, negotiated, feared, desired, used and improvised through the domestic routines, affective atmospheres, hazards, price anxieties, comfort, gendered labor. Treating these registers as co-constitutive rather than hierarchical resists analytic binaries between structure and agency. In other words, conceptualizing these registers as coexisting rather than opposed enables a more nuanced account of how state power and everyday practice mutually constitute one another. In this framework, coal constitutes the material base of the energy regime while electricity manifests as the spatial output that reconfigures daily life. The narrative between the macro and micro scales carries the risk of lacking a comprehensive set of examples yet aims to examine representative samples without emphasizing a certain location, case, or actor.[6] Such a strategy prioritizes interpretive depth and relational insight over exhaustive documentation.

This dissertation ultimately argues that energy infrastructures in early Republican Turkey did not merely enable modernization but actively reorganized spatial perception, social hierarchy, and political belonging. They produced moral geographies, disciplined bodies, structured domestic routines, and shaped affective relations to space, revealing energy as a cultural, spatial, and governmental regime rather than a neutral technical resource. By tracing how energy was imagined, distributed, experienced, feared, and contested, the study demonstrates that infrastructures are among the primary media through which modernity becomes materially and sensorially real.

Beyond its empirical focus, the stakes of this dissertation are historiographic and methodological. By demonstrating that energy infrastructures function as spatial, political, and experiential agents, the study challenges object-centered definitions of architecture and argues for a reconceptualization of the field itself. Such a reframing matters not only for the historiography of early Republican Turkey but for architectural history more broadly, because it proposes that infrastructures, resource regimes, and sensory environments are not peripheral contexts but constitutive elements of architectural production. In this sense, the project intervenes in ongoing disciplinary debates about scale, evidence, and method, suggesting that the future of architectural

[6] Manuel de Landa, "New Philosophy of Society: Assemblage Theory and SocialComplexity (New York," 16.

history lies in integrating material systems, lived experience, and territorial governance.

1.1. Aim, Scope, and Research Questions

The early decades of the Turkish Republic were marked by an intense drive toward modernization and industrialization, in which energy that fueled those processes played a foundational yet often underexamined role within architectural historiography. This neglect reflects a broader disciplinary tendency to privilege visible architectural production over the invisible infrastructures that condition it. Factories, power plants, railways, ports, and electrified cities were not only technical achievements but also central instruments through which the state sought to reorganize territory, production, and everyday life, demonstrating that infrastructure functioned as a spatial technology of governance. They operated simultaneously as infrastructures of material transformation and as symbols of political legitimacy and national progress. While architectural historiography has traditionally approached this period through stylistic developments, institutional actors, or ideological narratives, the material and experiential role of energy infrastructures has remained comparatively marginal despite the parallel developments in environmental history and science and technology studies, where infrastructures have long been treated as primary analytical objects. This relative absence is striking given that the very possibility of modern architectural production depended upon energy systems capable of sustaining new forms of construction, circulation, and habitation

This thesis takes energy as its primary analytical lens to reconsider architectural and urban history in 1930s Turkey. By doing so, it challenges the persistent historiographic tendency to treat energy as a neutral backdrop to architectural production rather than as a structuring force that actively shapes spatial form, territorial organization, and social hierarchy. Methodologically, treating energy as lens rather than topic transforms it into a structuring epistemic device. Rather than treating coal and electricity as background conditions enabling architectural production, it approaches them as active forces that shaped space across multiple scales, from

national territorial imaginaries to urban environments and domestic interiors.[7] Energy is therefore understood as both a material resource and a structuring logic that reorganizes spatial relations. This formulation positions energy as a historical actor rather than passive substrate. In this period, energy infrastructures did not merely support modernization; they structured social relations, rhythms of daily life, and moral and affective experiences of space. They functioned not only as technical systems but as disciplinary environments that produced trained, cautious, and governable subjects.

The thesis focuses on the 1930s, a decade marked by intensified state intervention, economic planning, and infrastructural expansion under statist policies. It is also the period when the implementation of statism and the national energy policies go hand in hand with the nation-building, state-building, and citizen-building projects of the Republic.[8] The long-lasting effects of the Great Depression of 1929, and the continuing issues around the relationship between the energy and the state power extends the period towards the outbreak of the Second World War in late 1939.[9] This was a period when the state sought to project itself as a modernizing force capable of mastering both nature and society through technology. Nationalized energy institutions, state-led investment in mining and electricity generation, and the symbolic deployment of infrastructure in public discourse all framed energy as a foundation of sovereignty. Seen from this perspective, infrastructure emerges not simply as an outcome of modernization but as one of its primary instruments, through which the state materialized authority, standardized territory, and disciplined populations. On the

[7]Aleksandr Michael. Bierig, "The Ashes of the City: Architecture, Environment, and the Spatial Economy of Coal in Britain (1700–1849)" (Harvard University 2022).

[8] See: Caglar Keyder, "The political economy of Turkish democracy," *New Left Review*, no. 115 (1979)., Çağlar Keyder, "The Definition of a Peripheral Economy: Turkey, 1923-1929," *(No Title)* (1981)., Basak Kus, "Weak States, Unruly Capitalists, and the Rise of Étatism in Late Developers: The Case of Turkey," *British Journal of Middle Eastern Studies* 42, no. 3 (2015), http://www.jstor.org/stable/43917137., William Hale, "Ideology and economic development in Turkey 1930–1945," *British Society for Middle Eastern Studies. Bulletin* 7, no. 2 (1980/01/01 1980), https://doi.org/10.1080/13530198008705293, https://doi.org/10.1080/13530198008705293., Emrence Cem, "Turkey in Economic Crisis (1927-1930): A Panoramic Vision," *Middle Eastern Studies* 39, no. 4 (2003), http://www.jstor.org/stable/4284328., Fikret Yücel, "CUMHURİYET TÜRKİYESİNİN SANAYİLEŞMEDE İLK ÖNEMLİ ADIMI: BİRİNCİ BEŞ YILLIK SANAYİ PLANI 1934-1938," (2014).

[9] Korel Göymen, "STAGES OF ETATIST DEVELOPMENT IN TURKEY: The interaction of Single-Party Politics and Economic Policy in the'Etatlst Decade', 1930-1939," (1976).

other hand, the daily experience of energy by the ordinary people of the country, and the friction, improvisations, and simultaneities outside of the agenda of the state but on the streets and in the homes constitute the part of the study. Access to energy infrastructures operated as a spatial marker of citizenship and inclusion within the modernizing nation-state. These everyday negotiations reveal how modernization was not simply implemented but interpreted, adapted, and sometimes resisted at the level of lived practice.

The central aim of this thesis is to examine how energy infrastructures participated in the production of space in early Republican Turkey, both as state-led projects of modernization and as lived, negotiated, and uneven experiences of ordinary people. The study concentrates on coal and electricity as the dominant energy materials and forms of the period, examining their planned, intended, promoted and more top-down experiences, as well as the lived, contested, and daily experiences. By bringing together institutional histories, legal frameworks, visual and discursive representations, and everyday practices documented in the printed press, newspapers and periodicals, the study seeks to bridge the gap between macro-level political ambitions and micro-level spatial experiences. In doing so, it proposes that architectural history can serve as a critical site for analyzing how infrastructures mediate between abstract political visions and concrete spatial realities.

Within this framework, the thesis addresses the following research questions:

- How did the early Republican state use energy infrastructures as tools of modernization, governance, and state-building?
- How were coal and electricity represented, imagined, and legitimized through institutions, laws, exhibitions, and visual culture?
- In what ways did everyday experiences of energy, marked by shortages, uneven access, domestic practices, and sensory conditions, align with or diverge from official narratives of progress?

1.2. Methodology, Sources, and Archival Approach

Methodologically, the dissertation adopts an interdisciplinary approach situated at the intersection of architectural history, environmental history, and energy humanities. It particularly draws methodological inspiration from Joel Migdal's "state-in-society"

approach, which understands the state not as a monolithic entity but as a set of relational practices embedded within social life.[10] Rather than treating state and society as oppositional forces, the thesis examines how energy infrastructures became sites through which they co-produced spatial order and everyday experience. At the same time, the study is informed by the insight that energy is not merely a technical resource but an architectural condition, as suggested by Sandy Isenstadt's work on electric light as a formative spatial and experiential medium.[11] Together, these perspectives allow energy to be approached simultaneously as a political instrument and as a material force shaping the built environment. This dual emphasis strengthens the analytical capacity of the study to account for both symbolic representation and material practice.

The thesis also engages critically with concepts of state-making, legibility and territory-making to examine how energy infrastructures functioned as tools for rendering territory governable and visible.[12] Coal basins, power plants, grids, and transport networks were mechanisms through which the state sought to order space, yet these efforts were frequently challenged by material constraints, breakdowns, local practices, and uneven implementation. Attention is therefore given not only to infrastructural success but also to moments of failure, scarcity, and improvisation. Infrastructure often recedes from perception when functioning smoothly, appearing as a naturalized background to everyday life. Moments of scarcity, blackout, and shortage reveal infrastructure most clearly, exposing the fragility beneath narratives of seamless modernization. These disruptions therefore serve as key analytical sites through which the political, social, and spatial dimensions of energy become legible. Such moments are analytically productive because they reveal the limits of centralized planning and highlight the agency of local actors within infrastructural systems.

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[10] Joel S Migdal, "The state in society," in *New directions in comparative politics* (Routledge, 2018).

[11] Sandy Isenstadt, *Electric Light: An Architectural History* (MIT Press, 2018).

[12] António Ferraz de Oliveira, "Territory beyond Terra: Kimberley Peters, Philip Steinberg and Elaine Stratford, eds. New York, NY: Rowman & Littlefield, 2018. ," (Taylor & Francis, 2020); Stuart Elden, *The birth of territory* (University of Chicago Press, 2019).Also, see: Elden, *The birth of territory*., Ragnar Björk and Thomas Lundén, *Territory, state and nation: The geopolitics of Rudolf Kjellén*, vol. 41 (Berghahn Books, 2021)., Joe Painter, "Territory-network" (paper presented at the Association of American Geographers Annual Meeting, 2006).

Crucially, the study expands the notion of space beyond physical architecture to include atmospheres, sensory conditions, and affective experiences.[13] Energy is approached as something that produced light and darkness, warmth and cold, smoke and cleanliness, qualities that shaped how spaces were perceived, inhabited, and morally evaluated. This allows for an analysis of architecture and urban space that accounts for emotions, narratives, and embodied experience alongside material form.[14] In this sense, space is understood as both a physical arrangement and a lived condition structured by sensory and energetic environments. Within this framework, architectural evidence is defined not only as buildings, plans, and stylistic forms but also as infrastructures, material flows, media representations, regulatory documents, and embodied spatial practices. This expanded evidentiary definition challenges object-centered conventions of the field and asserts that architecture is legible wherever spatial relations are organized, contested, or experienced. In this sense, the dissertation proposes not only a new empirical account of energy in early Republican Turkey but also a methodological argument for architectural history: that infrastructures and resource regimes must be treated as central analytical categories if the discipline is to adequately account for how space is historically produced.

The primary sources of the thesis consist largely of print media from the period, including newspapers, magazines, advertisements, public notices, complaints, and caricatures. The study treats print media not as illustrative documentation but as an archive of spatial practices through which infrastructures became legible, contested, and emotionally experienced. These materials offer access to both official discourse and popular perception, allowing the study to trace how energy circulated not only through infrastructures but also through language, imagery, and everyday conversation. Some of the printed sources examined and used are including but not limited to the *Cumhuriyet, Akşam, Ulus* and *Tan* newspapers, *Bulletin of the Mineral Research and Exploration, Karaelmas, Amel-i Elektrik, Kadro, Akbaba* and *Arkitekt* journals, the State Archives, the Istanbul Metropolitan Municipality Atatürk Library Archives, SALT Archives, VEKAM Archives, and Ministry of Culture and Tourism

[13] Ben Anderson, "Affective atmospheres," *Emotion, space and society* 2, no. 2 (2009).

[14] Katie Barclay and Jade Riddle, "Urban Emotions and the Making of the City," *Urban Emotions and the Making of the City; Routledge: Oxford, UK* (2021).

Movie Archive. These materials are treated not merely as discursive texts or illustrations but as spatial evidence that documents how energy entered everyday life and public imagination. In addition, legal texts, institutional reports, development plans, and visual materials such as maps, exhibitions, and films are used to trace official frameworks and representations. Given the scale and heterogeneity of available archival material, the research employs a selective archival strategy rather than exhaustive coverage. The emphasis is placed on analytical depth over total completeness, enabling the identification of recurring themes, tensions, and spatial patterns across the decade. The chosen case studies are drawn from different scales and regions, and are intentionally non-canonical, aiming to challenge established narratives within the architectural historiography of the period. At the same time, the archive itself is uneven, fragmented, and institutionally biased. Such incompleteness is not treated as a methodological weakness but as a constitutive condition of working with historical material. Archives are never neutral repositories; they are structured by power, omission, and selective preservation. The preexisting "grand narratives," while more comprehensive in appearance, often reproduce state-led, institutional, and top-down perspectives, thereby obscuring the everyday, the ordinary, and the bottom-up experiences of social actors. Despite carrying the risks of inconsistency and partiality, the selected corpus of primary sources enables an alternative mode of narration that is attentive to gaps, silences, and dispersed traces. Rather than seeking archival totality, this study embraces the fragment as an analytical entry point, allowing the reconstruction of socio-spatial and experiential dynamics that might otherwise remain invisible within official accounts.[15] This methodological stance aligns with recent historiographical approaches that treat absence not as lack but as evidence in its own right.

[15] On archives and evidence: John Shiga, "Tranlsations: Artifacts from an Actor-Network Perspective," *ARTIFACT-ROUTLEDGE*- 1, no. 7 (2006); Dana Arnold, "Facts or Fragments? Visual Histories in the Age of Mechanical Reproduction," *Art History* 25, no. 4 (2003)., Andrew Leach, *What is architectural history?* (John Wiley & Sons, 2013).

1.3.Literature Review

The historiography of early Republican Turkey has extensively examined processes of nation-building, statism, and modernization, with significant attention to architecture, planning, and institutional reform. More recent scholarship has expanded these narratives by incorporating perspectives from labor history, environmental history, and political economy, revealing the uneven and contested nature of state projects. Concepts such as energo-power and socio-natures have offered productive ways to think about the entanglement of energy, governance, and everyday life. Rather than adopting these frameworks as totalizing theories, this dissertation uses them selectively to illuminate how energy infrastructures mediated relations between state ambitions and lived experience. In doing so, it identifies a gap in architectural historiography regarding the experiential and spatial dimensions of energy in early Republican Turkey.

Dominic and Boyer, in their comprehensive book on environmental humanities state that "Energy is in our minds as never before", concerning the anxieties about the long-term availability of energy sources, and the growing environmental challenges.[16] Their observation underscores the contemporary relevance of studying historical energy regimes, since present concerns about climate, sustainability, and resource scarcity are deeply rooted in earlier infrastructural transformations. Energy, especially the fossil fuels, also has one of the most significant impacts on the condition of the planet today.[17] In 1875, John Ruskin and other scholars pointed out the unprecedented changes of the world was undergoing, especially in Europe and North America, in terms of both progress and decline[18]. Besides the longer lives, better health conditions, advances in science and technology, and economic growth, there appears to be an unparalleled level of pollution, destruction of natural landscapes caused by the urbanization, agriculture, mining, infrastructural constructions and so forth.[19] The shift from a relatively renewable source, the forests, to non-renewable fossil fuels also had

[16] Imre Szeman and Dominic Boyer, *Energy humanities: An anthology* (JHU Press, 2017), 14.

[17] Szeman and Boyer, *Energy humanities: An anthology*.

[18] Hans Ibelings, *Modern Architecture: A Planetary Warming History* (Architecture Observer, 2023), 245.

[19] Ibelings, *Modern Architecture: A Planetary Warming History*, 246.

dual effects: while the deforestation decreased, the air pollution accelerated, and with the all future prospects, use of energy sources become a critical subject to the environmental history studies.[20] The environmental lens helps to challenge assumptions of modernization with narratives of decline and destruction, while broadening our understanding of contemporary history by adding cultural, social, and scientific dimensions to deeply political issues.[21] Although architectural history had an awareness of contemporary environmental issues and debates since the 1970s, architecture's complex historical relationship to nature and the environment needs to be reconsidered in its political, economic, and cultural dimensions, and the introduction of concepts of energy and climate; materials and toxicity; and more-than-human and entangled histories is needed.[22] All growth requires energy, and demand for energy also grows as the urbanization advances.[23] The steam transport fueled by coal also served the coal mining and transportation of coal. With that, large urban and industrial populations could accumulate in further sites than the nearby sources of energy.[24] Such switch to coal in the last two centuries enabled the people to reside in cities since they did not need the adjacent pastures and woods.[25] In the early 20th century, coal was a dominant energy source in many countries.[26] Although natural gas has decreased the use of coal today in the domestic realm, coal has been an important resource that still dominates the fuel markets for electric power, steel making, and cement production.[27] These continuities highlight the enduring infrastructural and geopolitical significance of fossil fuels.

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[20] J Donald Hughes, *What is environmental history?* (Polity Press, 2006), 108.

[21] Sverker Sörlin, "The Contemporaneity of Environmental History: Negotiating Scholarship, Useful History, and the New Human Condition," *Journal of Contemporary History* 46, no. 3 (2011): 611.

[22] Förster, "Undisciplined Knowing: Writing Architectural History through the Environment."

[23] Sinan Erensü, "Fragile Energy: Power, Nature, and the Politics of Infrastructure in the'New Turkey'" (University of Minnesota, 2016), 39.

[24] Timothy Mitchell, "Carbon democracy," *Economy and Society* 38, no. 3 (2009): 403.

[25] Mitchell, "Carbon democracy," 402.

[26] Mehmet Eroğlu, "Coal, state, and society: Resource-making and state formation in early republican Turkey," *Journal of Historical Geography* 87 (2025): 73.

[27] Arif Hepbaşlı, "Coal as an Energy Source in Turkey," *Energy Sources* 26, no. 1 (2004): 64.

Early Republican period (1923-1950) involved many top-down, modernizing reforms -serving to the break from the Ottoman past and the creation of the contemporary nation and country. Nature has been a part of these ambitions with its different aspects, the control of the water, forests, land and the sources beneath the soil. It was also parallel to the official ideology of the state in the 1930s, statism, as one of the six tenets of the Kemalism[28]. Construction of dams, power plants and various factories, and the "weaving an iron web across the country" ideology can be seen as expressions of national ambition and the control over nature.[29] As discussed by Anderson, nations and the modern state are not natural, ancient phenomena but rather "cultural artefacts" meticulously constructed and continuously reinforced through specific historical processes, ideologies, and technologies.[30] Kezer also uses the concepts of "imaginability" and "legibility" and examine the infrastructural interventions of the state, yet energy and its use are not mentioned among them.[31] Also, the prioritization or marginalization of certain regions, how the state governed differently across the country in relation to the class, region, ethnicity differences which took shape as exclusion and uneven access. Kezer, in another study of her, states the spatial strategies to achieve national integration and the use of built environment as a key instrument of nation building ideals.[32] It was stated within Bozdoğan's book that "transformation of the physical landscape is closely related to the implementation of official notions of identity, order, and authority".[33]Yet, the energy infrastructure, neither of the coal, gas, or electricity has found a place to itself within this volume. This absence points to a broader disciplinary tendency to

[28] Eroğlu, "Coal, state, and society: Resource-making and state formation in early republican Turkey."

[29] Zeynep Kezer, *Building modern Turkey: State, space, and ideology in the early republic*, vol. 13 (University of Pittsburgh Press, 2015), 160.

[30] Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, 3rd ed. (Verso Books, 1983, rev. ed. 2006), 7.

[31] Kezer, *Building modern Turkey: State, space, and ideology in the early republic*, 13.

[32] Zeynep Kezer, "An Imaginable Community: The Material Culture of Nation-Building in Early Republican Turkey," *Environment and Planning D: Society and Space* 27, no. 3 (2009): 508.

[33] Bülent Batuman, "Zeynep Kezer. Building Modern Turkey: State, Space and Ideology in the Early Republic. Pittsburgh: University of Pittsburgh Press, 2015, xii+ 330 pages," *New Perspectives on Turkey* 57 (2017): 159.

foreground symbolic architectural forms while overlooking the infrastructural systems that make such forms possible.

The existing historiography of early Republican architecture often privileges stylistic analysis, nationalist narratives, and the modernist rhetoric of progress, while energy infrastructures and their material, environmental, and symbolic aspects remain in the background.[34] Yet, the highly symbolic and representational aspects of an infrastructural project of the Çubuk Dam, besides Youth Park, Atatürk Model Farm and Forest projects realized in the new capital of the Republic is emphasized by Bozdoğan and Akcan.[35] Described as "high modernist" projects of taming the wilderness and mastering the forces of nature, these projects were interventions of the state for the creation of a nationalized landscape rather than being mere utilitarian objects of engineering.[36] Their significance lies not only in their physical presence but also in their role as pedagogical and ideological devices that communicated visions of modern citizenship. Recent decades have witnessed a growing interest in energy as a historical and cultural category, particularly within environmental history and energy humanities. Scholars have demonstrated how energy systems shape social relations, political power, and everyday practices, challenging purely technological or economic accounts. Within architectural history, this has translated into increasing attention to infrastructure, environment, and material flows as constitutive elements of the built environment. İnal, in their recent article also examines how hydraulic infrastructures such as the dams, reservoirs, drainage and water canals, became an effective apparatus for cultural propaganda by the state.[37] Another recent book, edited by Nurçin İleri, examines different aspects of electricity from the Ottoman Empire to the Republican

[34] Sibel Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," (2001). Also, see: Sibel Bozdoğan and Reşat Kasaba, *Rethinking modernity and national identity in Turkey*, vol. 7 (University of Washington Press, 1997).

[35] Sibel Bozdogan and Esra Akcan, *Turkey: Modern architectures in history* (Reaktion books, 2013), 32.

[36] Bozdogan and Akcan, *Turkey: Modern architectures in history*, 35.

[37] Onur Inal, "Tabiat, Tahayyül ve Tahakküm: Erken Cumhuriyet Döneminde İdeoloji, Su ve Ulus İnşası," *Toplumsal Tarih Akademi*, no. 2 (2023).

period in the context of Istanbul.[38]Directing attention to the technological affairs that contain the texture of economic principles, technical matters, political forces and social concerns is a central approach today as the nation-building has been before.[39]

Some prominent works challenge the conventional distinctions between "human history" and "natural history" and separation of the historical trajectory of homo sapiens from the timelines of other species while exploring how humanist practices of historiography might respond to the geological recognition of the Anthropocene.[40]Although the history of infrastructures such as dams, roads or airports captured attention of researchers of different fields for many years, what distinguishes the recent works in case of Turkey is that the analytical effort where the infrastructure is brought to the foreground rather than being treated as a background to other human activities.[41] The period either coined as the Early Republican or the Single-Party Period requires a re-reading that transcends the dualities, that allows the inconsistencies, ambiguities, unexpected results and multi-actor interactions while discussing the ideology, and modernization ideals besides the state-people relationships.[42] In the introduction of their book *"Tek-Parti Dönemini Yeniden Düşünmek",* the authors aim to reevaluate the state and the nation in relation to each other without losing the analytical distinction between them.[43] This balanced perspective informs the present study's attempt to analyze energy infrastructures as both instruments of authority and sites of negotiation.

In the book called *İlk Yüzyılı Biterken Cumhuriyet*, the authors aim to investigate how the regime affected the lives of the ordinary people, and how it shaped

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[38] Nurçin İleri, ed., *BİR CEREYAN HÂSIL OLDU: OSMANLI'DAN CUMHURİYET'E İSTANBUL'DA ELEKTRİKLİ YAŞAM* (Türk Tarih Vakfı Yurt Yayınları, 2024)., Nurçin İleri, "Ambitious yet Ambivalent: Electrical Infrastructure and Inequality in Early Republican Turkey," *TRAFO: Blog for Transregional Research* (2021); Nurçin İleri and Cansu Degirmencioglu, "Erken Cumhuriyet Dönemi Türkiyesi'nde Asri Ev Tartışmaları ve Elektrikli Tenvirat," *ViraVerita E-Dergi*, no. 12 (November 2020), https://doi.org/10.47124/viraverita.780888, https://doi.org/10.47124/viraverita.780888.

[39] Thomas Parke Hughes, *Networks of power: electrification in Western society, 1880-1930* (JHU press, 1993), 1.

[40] Dipesh Chakrabarty, "The climate of history: Four theses," *Critical inquiry* 35, no. 2 (2009).

[41] Erensü, "Fragile Energy: Power, Nature, and the Politics of Infrastructure in the'New Turkey'," 84.

[42] Sevgi Adak and Alexandros Lamprou, "Giriş: Tek Parti Dönemini Yeniden Düşünmek," in *Tek-Parti Dönemini Yeniden Düşünmek: Devlet, Toplum ve Siyaset*, ed. Sevgi Adak and Alexandros Lamprou (2022), 18.

[43] Adak and Lamprou, "Giriş: Tek Parti Dönemini Yeniden Düşünmek," 18.

the frames around the rights through macro-issues but micro-subjects, and while looking at the general conditions of the period with samples of specific events or places.[44] The notion of nationalism is generally state-led and aims redefining ethnic, religious, and ideologic basis. An important consequence of economic nationalism is the exclusion of the non-Muslim people from the state bureaucracy, business life, and employment market.[45]The attitude that excludes the non-Muslims from the "Turkish" identity, and leaves it ambiguous who is considered as "Turkish" also affected the nation-building policies of the state.[46] In a different vein, Erol Ülker examines the bottom-up implications of nationalism through the experiences of workers in Silahtarağa Power Plant.[47] These studies collectively demonstrate that large-scale political projects acquire their historical significance through their effects on everyday life.

One of the most recent works that tackle the interplay between the natural energy resources and nation-building processes was created by Eroğlu, where he discusses the dialectic relationship between Zonguldak coal reserves, its material and discursive employment by the state as a tool of the Early Republican State formation.[48] Despite these numbered examples, it can be said that energy has received little attention in the spatial historiography. Studies on coal, electricity, and infrastructure have highlighted how energy systems produce specific spatial arrangements, temporal rhythms, and sensory conditions. However, architectural historiography has only partially integrated these insights, often treating energy as an external context rather

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[44] Ömer Turan Gencer Özcan, Büke Boşnak, Tuğçe Erçetin, ed., *İlk Yüzyılı Biterken Cumhuriyet: Demokratikleşme Momentleri, Sıradan İnsanlar ve Siyaset* (İstanbul Bilgi Üniversitesi Yayınları, 2024), xxiv.

[45] Erol Ülker, "Aşağıdan Milliyetçilik, Emek Süreçleri ve Türkleştirme: Silahtarağa'dan Cumhuriyet'e Bakmak," in *İlk Yüzyılı Biterken Cumhuriyet: Demokratikleşme Momentleri, Sıradan İnsanlar ve Siyasset*, ed. Ömer Turan Gencer Özcan, Büke Boşnak, Tuğçe Erçetin (İstanbul Bilgi Üniversitesi Yayınları, 2024), 3.

[46] Ülker, "Aşağıdan Milliyetçilik, Emek Süreçleri ve Türkleştirme: Silahtarağa'dan Cumhuriyet'e Bakmak," 11. Also, see: Nurçin İleri, "Nationalism on the Shop Floor: The Silahtarağa Electric Power Plant in the Early 1920s," *TRAFO–Blog for Transregional Research, http://trafo. hypotheses. org/28794 Son Erişim Tarihi* 10 (2023).

[47] Ülker, "Aşağıdan Milliyetçilik, Emek Süreçleri ve Türkleştirme: Silahtarağa'dan Cumhuriyet'e Bakmak."

[48] Eroğlu, "Coal, state, and society: Resource-making and state formation in early republican Turkey." Also,see: Duygu Kaşdoğan, Ekin Kurtiç, and Mehmet Ekinci, eds., *On Materiality and Politics in Turkey: Infrastructure, Science, and Expertise* (Bloomsbury Publishing, 2025).

than an internal analytical category. This thesis builds on these discussions by positioning energy as central to architectural and urban history, particularly in contexts of state-led modernization.

The field of architectural history has been undergoing fundamental transformations alongside with the other social sciences and humanities. The book Rethinking Architectural Historiography (2006), efficiently discusses the new subject matters, new methodologies employed, new paradigms introduced, and new perspectives framed as well as the evidence, boundaries, and framings of the field since the 1990s to the mid-2000s.[49] The objects of study that are canonized, the ambiguity of the evidence, the subjectivity and biases of the historian, and the absences within the narratives get questioned.[50] In the two decades since the publishing of this book, the field kept expanding and new perspectives and approaches were implemented. These developments have opened the possibility of writing architectural histories that foreground infrastructures, environments, and experiences alongside buildings and designers.

This study aims to bring a new perspective to an oeuvre of studies that examined the period from modernization, nation-building, and stylistic frameworks.[51] The historical study of architecture involves the aesthetic, utilitarian, and social aspects of the built space as a setting of the social performance.[52] The narrative of this study aims to employ an inclusive approach that reveal multiple and underrepresented identities rather than the reductive ideological discourses.[53] It rather focuses on what is missing in this mostly canonic, and when not, still building and urban focused approaches, and looks at a more abstract yet transformative component of the period: energy. Both with its material processes and physicality, and its conceptual and experiential aspects

[49] Dana Arnold, Elvan Altan Ergut, and Belgin Turan Özkaya, *Rethinking architectural historiography*, vol. 15 (Routledge London, 2006), 7.

[50] Arnold, Ergut, and Özkaya, *Rethinking architectural historiography*, 15, 8.

[51] Bozdogan and Akcan, *Turkey: Modern architectures in history*., Zeynep Kezer, "The making of a nationalist capital: Socio-spatial practices in early Republican Ankara," *Built Environment (1978-)* (1996)., Zeynep Kezer, *Building modern Turkey: State, space, and ideology in the early republic* (University of Pittsburgh Press, 2016).

[52] Arnold, Ergut, and Özkaya, *Rethinking architectural historiography*, 15, 5.

[53] Arnold, Ergut, and Özkaya, *Rethinking architectural historiography*, 15, 9.

opens a new window to examine architecture, and its history in relation with the very context of the 1930s when all the modernization, industrialization and identity-building processes required fuel, energy, and stimuli. In this sense, energy becomes not simply a topic but a methodological lens through which familiar historical narratives can be reinterpreted.

While benefiting from the preexisting literature for their themes, methodology, and approaches, this dissertation prioritizes employing the "energy perspective" where the modernity, materiality, and spatiality of energy, namely coal as the material and electricity as the spatial aspects that fueled all the developments of the period. It also prefers an "extended" historiography of architecture where the narratives, senses, affections, and daily experiences constitute the history in contrast to the long-known scope of monumental, canonic, and ideologic accounts.[54] Such an approach ultimately seeks to demonstrate that infrastructures and experiences are as historically consequential as monuments and plans.

1.4. Structure of the Dissertation

The dissertation is organized into five chapters that move conceptually and spatially from framework to history, and from planned modernity to lived experience. This progression reflects the methodological commitment to linking abstraction with empirical observation and policy with practice. It traces energy across nested scales—from national policy to urban form, domestic interiors, bodily practice, and affective atmosphere. Following the introduction, Chapter 2 establishes energy as an analytical framework within architectural historiography. It introduces key concepts, such as energo-power, socio-natures, infrastructural nationalism, and territorialization, and positions energy as a spatial and political force rather than a purely technical one. Rather than treating these concepts as abstract theoretical imports, the chapter operationalizes them as methodological tools for interpreting architectural and spatial history, demonstrating how each illuminate distinct dimensions of the relationship between energy, governance, and built form. In doing so, it situates the dissertation within a growing interdisciplinary body of scholarship that understands infrastructures

[54] Tanyeli, *Korku metropolü İstanbul: 18. yüzyıldan bugüne*.

as historically active systems that organize territory, perception, and social relations. The chapter argues that energy must be understood simultaneously as matter, medium, and mechanism: a material resource, a spatial condition, and a governing logic. By foregrounding conceptual vocabulary at the outset, it clarifies the analytical lens through which subsequent chapters read historical evidence and establishes a theoretical foundation that redefines architectural history as inseparable from the material systems that sustain it.

Chapter 3 situates Turkey's energy transformations within both a longue durée historical trajectory and a global interwar context. It traces the late Ottoman foundations of coal use and electrification, examines international energy dynamics of the 1930s, and analyzes early Republican energy policies, institutions, and representational strategies. This chapter functions as a scalar and conceptual bridge between abstract frameworks and everyday experience. Rather than treating national development as an isolated process, the chapter situates Turkey within transnational circuits of technology, capital, expertise, and geopolitical competition, demonstrating how energy infrastructures emerged through entanglements that exceeded national boundaries. By reconstructing these overlapping temporal and spatial layers, the chapter shows that early Republican energy policies were shaped simultaneously by inherited imperial systems, global industrial paradigms, and domestic state-building imperatives. In methodological terms, this chapter functions as a scalar and conceptual bridge between abstract frameworks and everyday experience, linking macro-level geopolitical and institutional formations to the spatial conditions that structured daily life. It establishes the historical architecture of the energy regime that later chapters encounter at the level of perception, practice, and embodiment.

Chapter 4 shifts the focus to the lived experience of energy. Through newspapers, advertisements, anecdotes, and visual material, the chapter explores energy access, inequality, moral geographies, affective atmospheres, and domestic practices. Focusing on how energy was encountered, interpreted, and negotiated in everyday life and experiences, it reveals tensions between official modernization narratives and everyday realities. By foregrounding access, inequality, moral geographies, affective atmospheres, and household practices, the chapter demonstrates that energy regimes were experienced unevenly across class, gender, and urban space, producing differentiated forms of comfort, risk, and belonging. Rather than treating

experience as anecdotal supplement to institutional history, it treats it as a primary analytical archive through which infrastructural power becomes visible. Such experiential emphasis aligns with recent historiography that treats affect and sensation as historical evidence rather than anecdotal supplement. This perspective exposes tensions between official modernization narratives and lived realities, showing how citizens navigated shortages, hazards, interruptions, and improvisations that complicated state visions of seamless technological progress. In doing so, the chapter reveals that infrastructures acquire historical meaning only when they intersect with perception, emotion, and practice, and that the history of energy must therefore be written not only at the level of policy and construction but also at the level of embodiment and sensation. It ultimately demonstrates that everyday encounters with energy constituted a crucial site where modernity was not simply implemented but experienced, interpreted, and contested.

The concluding chapter synthesizes these layers, reflecting on the contribution of an energy-centered architectural history and its implications for historiography, methodology, and future research. It argues that attending to energy as a spatial and cultural force not only enriches our understanding of early Republican Turkey but also offers a model for rethinking architectural history more broadly. Taken together, these chapters demonstrate that energy infrastructures were not merely technical supports of modernization but constituted one of its primary spatial, political, and experiential media, through which territory was organized, authority materialized, and modern life perceived, inhabited, and contested.

CHAPTER 2

ENERGY AS AN ARCHITECTURAL HISTORIOGRAPHIC FRAMEWORK

Architectural history has largely treated energy as background infrastructure rather than as a constitutive force of space, governance, and social life. This marginalization reflects a once-prevalent disciplinary bias toward visual form, authorship, and stylistic lineage, which had historically obscured the material substrates that enable architectural production in the first place. But the current age of the discipline requires a closer attention to the practices around the energy economies, as well as the state-building processes and the sovereignty over resources.[55] Such a reorientation aligns with recent historiographic shifts across environmental humanities, science and technology studies, and infrastructure studies, all of which treat technical systems as historically agentive rather than contextually inert. Electric power systems have been one of the most influential construction projects of the last century for its technical, economic, and scientific aspects as well as its social effects.[56] Extending simultaneously into industrial production, domestic life, military organization, and cultural representation, they also embody physical, symbolic, and intellectual aspects of the societies as their cultural artefacts, and similar to the other technologies they are intertwined with the social changes.[57]

The relationship of the states with the environmental governance has a changing and non-uniform character. Rather than a linear trajectory from exploitation to conservation, environmental governance historically oscillates between extraction, regulation, and preservation, depending on political economy, imperial ambition, and technological capacity. In the early twentieth century, the industrial states in Europe

[55] Daniela Russ and Thomas Turnbull, *Energy's History: Toward a Global Canon* (Stanford University Press, 2025), 2.

[56] Hughes, *Networks of power: electrification in Western society, 1880-1930*, 1.

[57] Hughes, *Networks of power: electrification in Western society, 1880-1930*, 2.

and North America used environmental policies to manage the natural sources and provide for the urban populations. These policies did not simply protect nature but reorganized it into administratively legible resources, rendering landscapes calculable, measurable, and governable. The resources of forests and minerals, and the infrastructures to provide drinking water or sanitation became a part of the organizations of these states.[58] Modern states do not govern just through laws or institutions but by organizing the space, population and infrastructure, also making the people govern themselves through norms and systems.[59] This understanding resonates with theories of governmentality that interpret infrastructure as a spatial technology of rule, operating not through coercion alone but through habit formation, environmental conditioning, and technical standardization.

In 1930s Turkey, energy was seen as a part of the national pride, and the discovery of the mines, extraction, distribution, and effective use of the Turkish coal were framed as a symbol of national self-sufficiency, the state's power over the nature, and an ultimate alignment with other modern civilizations. Such rhetoric reveals how energy functioned simultaneously as economic resource and ideological medium, binding questions of sovereignty, development, and identity into a single material project. The symbolic power of the energy also lied in the aesthetic codes of modernity and nationalism in the design of the power plants, civic building, and interiors. Infrastructure, in this sense, operated not only beneath architecture but also through it, shaping architectural language, representational strategies, and spatial hierarchies. Besides these, energy infrastructures act as techniques of governance and disciplinary tools, used by the state for reshaping habits, expectations, and routines of the citizens. Energy infrastructures functioned not only as technical systems but as disciplinary environments that produced trained, cautious, and governable subjects. Those physical systems helped extend the state presence into rural and peripheral areas via the mines, power plants, factories, and railroads, and carried the republican vision of modernization and rational planning to the further corners of the country. Their expansion can therefore be read as a territorial pedagogy through which the state

[58] Tom Perreault, "State of nature: on the co-constitution of resources, state and nation" (2020), 230.

[59] Michel Foucault, *Security, territory, population: lectures at the Collège de France, 1977-78* (Springer, 2007).

materialized its authority in regions previously distant from administrative reach. It also aims to integrate disconnected geographies and populations into a "centralized" national system. The standardization of the modern cities with the help of energy infrastructures also creates the feeling of "participation" in the modern nation and acts as a marker of citizenship.[60] Access to energy infrastructures operated as a spatial marker of citizenship and inclusion within the modernizing nation-state. Electrification of the cities also worked as an urban identity project that generated the feeling of unification for the nation. In the same period, the pursuit of national development was inseparably tied to a series of energetic, political, and spatial transformations. As the Republican state sought to consolidate its power and define a modern national identity, it turned to energy, both materially and symbolically, as a critical site of intervention. Energy thus became a mediating category through which questions of territory, population, and modernity could be simultaneously articulated and administered.

In the early Republican period, energy infrastructures functioned simultaneously as instruments of territorial governmentality and as mechanisms of political-economic consolidation; they ordered socio-natures while producing new forms of state power and dependency. Conceptualizing infrastructure as both ordering device and dependency generator foregrounds its ambivalent political character: it enables mobility and development while simultaneously embedding users within technical systems beyond their control. This chapter treats energy as a material infrastructure through which territory is organized, nature is governed, economic relations are restructured, and state–society interactions are negotiated. Such a framing shifts the analytic focus from architecture as object to architecture as effect — an outcome of material flows, regulatory frameworks, and environmental transformations. With this in mind, the chapter explores how energy, infrastructure, and the politics of nature became central tools in the project of building a modern, centralized state. Rather than treating energy solely as a technological resource, this chapter adopts a relational and interdisciplinary approach, drawing from political economy, environmental history,

[60] Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Also see: Gellner Ernest, "Nations and nationalism," *Paris, Payot* (1983)., Armand Sag, "Nation-Building And Historiography In Modern Turkey," *Utrecht: U2pi BV* (2015)., Eric J Hobsbawm, *Nations and nationalism since 1780: Programme, myth, reality* (Cambridge university press, 1992).

and architectural theory to examine how energy reshaped the spatial and ideological fabric of the Republic. This interdisciplinary positioning is not supplementary but necessary, since no single discipline possesses adequate conceptual tools to account for the multi-scalar operations of energy systems.

The discussion unfolds across four interconnected themes. First, it defines and situates energy within the scope of different disciplines, highlighting how spatial planning and monumental architecture, as well as economic centralization, are connected to the energy regimes. Second, it introduces the concept of "socio-natures," showing how natural landscapes were reimagined, reordered, and instrumentalized within the nation-building process. Here, nature is approached not as passive setting but as historically produced terrain shaped through policy, extraction, and representation. Then, the chapter delves into the concept of "energo-power," analyzing how infrastructure operated as a medium of state reach and spatial governmentality. The notion of energo-power extends biopolitical and territorial theories of power by foregrounding energy as the medium through which governance becomes materially operative. Throughout this chapter, an environmental historical lens is adopted to treat energy not merely as a neutral input but as a socio-material force that mediates relationships between state, society, and nature. Drawing on approaches that redefine the relationships between the state and societies, the concept of socio-natures, and the framework of political ecology, the analysis emphasizes the co-production of space, energy, and ideology. Co-production here signals not simple interaction but mutual constitution, in which spatial forms, political structures, and energy systems emerge together rather than sequentially. Rather than isolating coal, electricity, or specific technologies, the focus remains on how the collective infrastructural imaginary shaped subjectivities, spatial hierarchies, and environmental interventions in the early Republican period. This emphasis on imaginaries underscores that infrastructures operate simultaneously in material and symbolic registers, shaping not only environments but expectations, desires, and perceptions of modernity.

2.1.Defining Energy

Energy is a term that has connotations in many systems of thought from physics and engineering to political economy to moral concepts around social sciences. Its

conceptual elasticity is precisely what makes it analytically powerful yet historiographically unstable, requiring explicit methodological clarification. In a very broad sense, it is possible to define energy as the "ability of a given system to achieve work" or as the "resources from which such work is derived". To study the history of energy requires to focus on the capacity of energy, and sometimes the absence of it, in the shaping of other events.[61] Moments of scarcity, blackout, and shortage reveal infrastructure most clearly, exposing the fragility beneath narratives of seamless modernization. Energy in this study is seen as not merely a technical condition but more as a lens that gathers the work, nature, and historical changes together. Framing energy as lens rather than technical object shifts historical interpretation from descriptive cataloguing toward structural analysis. Since the 1990s, and in relation to the transformations of the planet in the form of global climate change, the agency of fossil fuels has gained more attention as evidence of the history of the industrialization period.[62] The rise of energy history as a field corresponds closely with the recognition that modernity itself is inseparable from fossil-fuel regimes, making energy not peripheral but foundational to historical explanation.

The global spread of fossil fuels has a prominent mark on the 20th century for the coal power played a role in the transformation of time and space through the land and the sea. Coal's significance lies not only in caloric output but in its logistical properties, which allowed energy to be stored, transported, and synchronized across distances, thereby reorganizing temporal regimes and spatial coordination. And despite its disadvantages as an energy resource when compared to water, coal was the source that helped to improve the control mechanisms of labor.[63] Because coal could be stockpiled and distributed on demand, it enabled industrial discipline by detaching production from seasonal and geographic constraints.

Architectural historiography has traditionally privileged visible, monumental, and formally legible objects, often sidelining infrastructural systems and environmental processes that make architecture possible but remain materially or visually peripheral. This visual bias reflects deeper epistemological commitments

[61] Russ and Turnbull, *Energy's History: Toward a Global Canon*, 4.

[62] Russ and Turnbull, *Energy's History: Toward a Global Canon*, 6.

[63] Russ and Turnbull, *Energy's History: Toward a Global Canon*, 8.

within the discipline, where aesthetic legibility has historically functioned as a criterion for historical relevance. Energy infrastructures such as power plants, grids, fuel depots, and heating systems have frequently been treated as technical background rather than as central historical actors. This dissertation challenges that separation by proposing energy as a historiographic lens through which architecture can be reinterpreted. Such a proposition effectively reframes architectural history as a history of conditions rather than solely a history of forms. Instead of expanding architectural history to include "more buildings," this approach aims to focus on how architectural space at different scales is produced, conditioned, and experienced through energy flows. Illumination, heating, ventilation, and industrial power are treated here not as auxiliary functions but rather as active agents that reorganize spatial hierarchies, temporal rhythms, and social relations (Isenstadt; Barber; Otero-Pailos). Treating environmental control systems as historical actors reveals architecture as a thermodynamic and atmospheric project as much as a compositional one. The dissertation also aims to situate the case of Turkey in the broader global energy historiography studies, which needs more studies outside of the canon of "Western" architectural histories. Expanding the geographic scope of energy historiography is methodologically crucial for destabilizing Eurocentric developmental narratives that present Western infrastructural trajectories as universal models.

Energy is used in this study as a way of connecting design intentions, state policies, and lived realities, while examining the discourse, materiality, and experience around it. This non-linear framing resists teleological modernization narratives and instead foregrounds unevenness, friction, and contradiction as constitutive historical forces. Rather than pursuing a linear narrative of stylistic or institutional progress, the study aims to bring a new perspective to the architectural history of early Republican Turkey through the examination of conditioned spaces, uneven modernization, and negotiated everyday life by using the concepts of socio-natures, governmentality, territory-making, and the tools of energo-power, and political economy.

In this chapter, the main concepts in relation to the state-building, consent-building, territorialization, industrialization, modernization, and infrastructural expansion processes which were determinant tools in Turkey in the 1930s will be explained. This section defines energy not as a singular or self-evident entity, but as a set of material processes, infrastructures, and practices that operate across multiple

spatial and temporal scales. Coal and electricity, the primary energy forms examined in this dissertation, are understood simultaneously as physical substances, technological systems, economic resources, and social mediators.

2.2.Socio-Natures, Governmentality, and Political Economy

The relationship between nature and nation, the policies in the nation-building processes and their consequences on the human-environment relations are an interesting topic in the global environmental history.[64] Within recent scholarship, this relationship has been reconceptualized not as an interaction between preexisting entities but as a co-constitutive process through which political authority, ecological transformation, and spatial ordering emerge together. Modern states, differing from the earlier political organizations, assert fully evenly operative sovereignty over legally demarcated territories and rely on secular, standardized systems.[65] Such sovereignty is not merely juridical but infrastructural, enacted materially through the technical systems that render territory measurable, governable, and administratively coherent. Scott introduces the concept of "state simplifications", the administrative and technical processes by which complex social and natural realities are rendered legible and manipulable from the perspective of central authority. Legibility in this sense is not neutral description but a political technology, one that translates heterogeneous landscapes into standardized categories compatible with bureaucratic management. These simplifications are inherently linked to "high modernism," an ideology that believes in the rational and scientific design of social order.[66] High modernism thus functions less as aesthetic preference than as an epistemological regime grounded in faith in calculation, standardization, and technical mastery.

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[64] Eda Acara, "From imperial frontier to national heartland: Environmental history of Turkey's nation-building in its European province of Thrace, 1920–1940," in *Transforming Socio-Natures in Turkey* (Routledge, 2019), 52.

[65] Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, 35.

[66] James C Scott, *Seeing like a state: How certain schemes to improve the human condition have failed* (yale university Press, 2020), 3. High modernism is identified as an ideology characterized by a radical break with history and tradition, a strong belief in scientific and technical progress, and the use of state power to implement large-scale, comprehensive planning.

Socio-natures is a concept where the nature and society are co-produced through historical, material and discursive processes.[67] The analytic value of the term lies in its refusal of the nature–culture divide, insisting instead that landscapes, resources, and environments are always already shaped by labor, knowledge, and power. Such a mutual constitution also challenges the binary of nature versus society and helps to have an environmental lens while investigating the power, energy and nation building relationships. Resource-making and state-formation are interdependent and co-constructive processes where resources, states, and nations mutually co-produce one another.[68] Resources do not preexist political authority as inert deposits waiting to be extracted; rather, they become resources only through institutional recognition, technological mediation, and economic valuation. And the resources are both products of and means for socio-natural ordering.[69] In this sense, resource extraction is simultaneously a spatial practice, an epistemic practice, and a political practice. Spatially, extraction reorganizes territory into zones of intensity and neglect, creating infrastructural corridors, sacrifice areas, and strategic nodes that reorder regional hierarchies. Epistemically, it requires geological surveys, statistical measurements, cartographic abstraction, and technical expertise — forms of knowledge that translate subterranean matter into calculable national wealth. Politically, extraction consolidates authority by embedding sovereignty within material processes of control over land, labor, and circulation. The coal basin, therefore, cannot be understood merely as a site of production; it must be analyzed as a node of modern territorial governance.

Another concept, resource nationalism, can also be described as “a political discourse, applied to political and economic thinking about how a state and its population should manage and distribute profits derived from natural resources.”[70] Resource nationalism is therefore not only a policy orientation but also a narrative strategy through which states narrate sovereignty, autonomy, and developmental

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[67] Onur İnal and Ethemcan Turhan, *Transforming socio-natures in Turkey: landscapes, state and environmental movements* (Routledge, 2019).

[68] Eroğlu, "Coal, state, and society: Resource-making and state formation in early republican Turkey," 69.

[69] Perreault, "State of nature: on the co-constitution of resources, state and nation," 229.

[70] Natalie Koch and Tom Perreault, "Resource nationalism," *Progress in Human Geography* 43, no. 4 (2019): 611.

legitimacy. In the 1930s Turkey, the nationalization of energy infrastructure was not only an economic policy but also a spatial project that reordered landscapes and redefined the relationship between society, technology, and nature.[71] Such projects transformed territory into a programmable surface upon which state authority could be materially inscribed. In other words, the nature and modernity were constructed together.[72] The capital, state, and society were also intertwined through nature and infrastructure during this period.[73] This triadic entanglement suggests that modernization should be understood not as a cultural shift alone but as a reconfiguration of material circulations linking finance, territory, and labor. Such a process involved the construction of ideal urban plans, state-factory settlements, and several infrastructures in the physical realm, and their propaganda and advertisement in the state publications.[74] Representation here functioned as a parallel infrastructure, circulating images of development that naturalized the state's spatial interventions.

Building on political ecology frameworks such as Neil Smith's concept of the "production of nature," this dissertation examines how early Republican state used coal seams, urban grids, and domestic interiors as instruments of modernization. Extending this framework to architectural history foregrounds how built environments participate directly in the production of socio-natural relations rather than merely reflecting them**.** It also aims to see how coalfields, ports, electrified streets, and industrial landscapes were not natural givens but state-mediated spatial productions**.**[75] Such spaces should therefore be interpreted as historical artifacts shaped by policy, labor regimes, and technological systems. The efforts to exploit "every lump of coal" illustrate that technological systems (mines, machines, transport) and human actors (state officials, engineers, workers) formed an actor-network: each was essential to sustaining Turkey's coal supply and advancing the nation's self-sufficiency. Such a

[71] Neil Smith, *Uneven development: Nature, capital, and the production of space*, 3 ed. (University of Georgia Press, 2008, 2008).

[72] Acara, "From imperial frontier to national heartland: Environmental history of Turkey's nation-building in its European province of Thrace, 1920–1940," 52.

[73] Erensü, "Fragile Energy: Power, Nature, and the Politics of Infrastructure in the'New Turkey'," 25.

[74] Acara, "From imperial frontier to national heartland: Environmental history of Turkey's nation-building in its European province of Thrace, 1920–1940," 53.

[75] Smith, *Uneven development: Nature, capital, and the production of space*.

conceptualization of infrastructure through an actor-network perspective destabilizes human-centered historiography and highlights the distributed agency of machines, materials, and institutions.

Yet production alone does not secure authority. The material reorganization of territory must also be rendered legible, desirable, and inevitable. If coalfields and grids reorganized the metabolic foundations of the state, they simultaneously required symbolic work to translate extraction and electrification into narratives of progress and sovereignty. In this sense, infrastructure operates not only as a physical system but as a representational regime. The same networks that redistributed energy also redistributed meaning. The following part examines how the state visualized, anesthetized, and promoted the nationhood, national goods and state power through different mediums. This emphasis on mediation underscores that political authority is never exercised directly but always through representational and material apparatuses. By shifting from production to mediation, the analysis demonstrates that energo-power functions simultaneously on two registers: the material register of extraction, circulation, and standardization, and the discursive register of visualization, narration, and affective persuasion. The state did not simply build infrastructures; it staged them. Modernization became credible not only because coal was mined and electricity transmitted, but because these processes were framed as national achievement, aesthetic triumph, and civilizational advance.

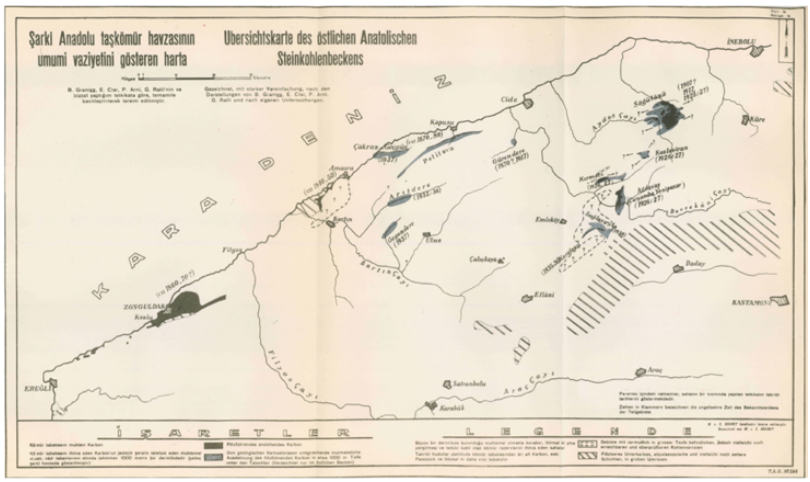


Figure 1 Kozlu coal mines discovery map (*MTA Journal*, 1939, no.17)

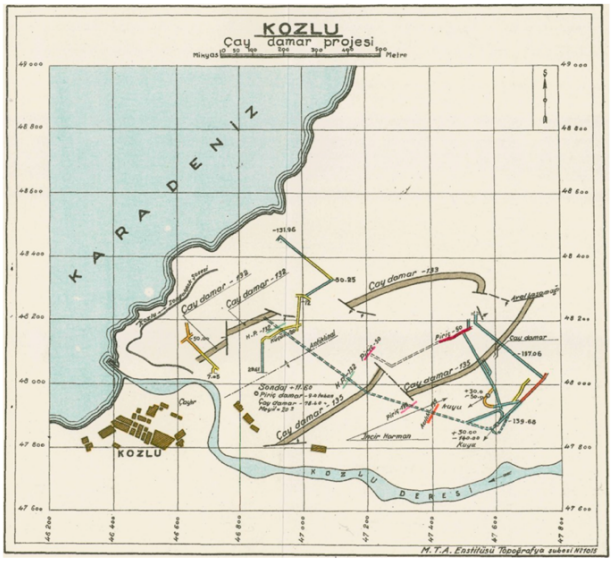


Figure 2 Çaydamar coal seams discovery map (*MTA Journal,* 1937, no.7)

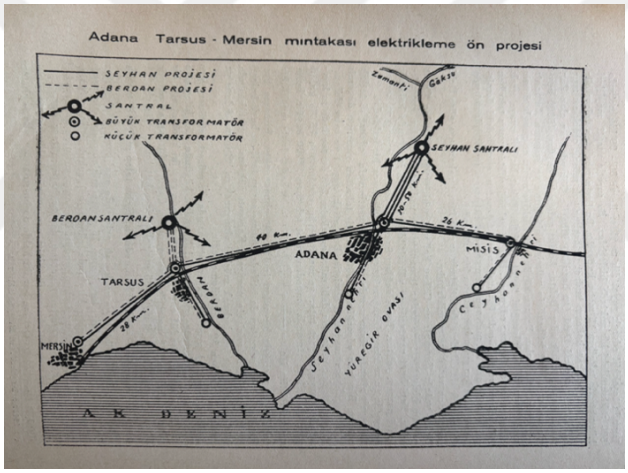


Figure 3 The electrification project between Adana-Tarsus-Mersin (*Kadro,* 1933, no.15, p.42)

2.3.Energo-Power and the State as Environmental Actor

State can be described as an environmental actor which produces environmental knowledge through reducing the natural world into simplified, legible and measurable qualities.[76] Such epistemic reduction is a prerequisite for intervention, since environments must first be rendered knowable before they can be governed. States are also the institutional and territorial products of the process of resource production and

[76] Perreault, "State of nature: on the co-constitution of resources, state and nation," 229.

consumption.[77] This reciprocal formulation reverses conventional assumptions by suggesting that states do not merely manage resources but are themselves constituted through resource regimes. Governance of socio-natural relations and institutionalization is a powerful way of state-making. State's desire for certain socio-spatial orders at different scales, reveals itself in the irrigation canals, watersheds, forestry, as well as the energy infrastructure, and makes sense as governing *through* nature rather than governing the nature.[78] Governing through nature implies that environmental systems become instruments of administration, shaping behavior by structuring material conditions rather than issuing direct commands. Since the state actively and selectively constitutes social orders, rather than being a neutral arbiter of competing interests, it both produces and reflects the changing balance of power between social forces. The state must therefore be read as a process rather than an entity — a shifting assemblage of institutions, infrastructures, and discourses. This power represents material and discursive forms of the state in the shape of institutions, territories, laws or policies.[79] These forms should be interpreted as spatial technologies that stabilize authority by embedding it within landscapes and everyday routines.

Nation, nation-ness, nationality, despite carrying a legitimate value in the political life universally, have been terms difficult to define. Yet it is possible to put them into perspective as cultural artefacts that are produced by complex dynamics and have changing meanings.[80] Treating the nation as artifact rather than essence opens analytic space for examining the material processes through which national belonging is constructed and maintained. Nation building is a project through which the legitimization of the state is achieved.[81] As put by different theoreticians, it is important to interpret the nation as an "imagined" entity, which is also inherently *limited* and *sovereign*. Anderson emphasizes that the distinguishing property of communities is how they are imagined.[82]A nation is also imagined as a community

[77] Perreault, "State of nature: on the co-constitution of resources, state and nation," 236.

[78] Perreault, "State of nature: on the co-constitution of resources, state and nation," 230.

[79] Perreault, "State of nature: on the co-constitution of resources, state and nation," 228.

[80] Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, 4.

[81] Perreault, "State of nature: on the co-constitution of resources, state and nation," 228.

[82] Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, 6.

where people are conceived in a horizontal comradeship, despite the prevailing exploitations and inequalities.[83] This paradox between symbolic equality and material inequality is often mediated through infrastructure, which promises universal access while delivering uneven distribution. Nationalism, similarly, can be described as the *invention* of nations, rather than the gaining of self-consciousness of nations.[84] Infrastructural projects frequently serve as evidence within this invention, materializing the narrative of collective progress. Its limitedness comes from the terminable boundaries of in between other nations, and the sovereignty idea recalls the existence of a sovereign state.[85] An imagined history, and a common geography are other determinants of a nation which is also a legitimating base for authority. In the same vein, the state embodies the territorial and institutional dimensions of that authority.[86] Territory thus becomes not simply land but a political technology through which sovereignty is spatially enacted.

While the premodern states did not have detailed "maps" of its terrains and people, the states gradually made both the people and the environment more legible through interventions such as the standardization of measurements, population registers, design of cities and organization of transportation.[87] These techniques collectively constitute what might be called infrastructural epistemology: knowledge produced through technical systems rather than observation alone. Such a statecraft of the early modern period aimed to turn the social conditions into an administratively more convenient format. Yet the simplifications, rather than representing the actual society, only represented what was in the interest of the official observers. Legibility therefore produces partial realities tailored to administrative priorities. These maps created under the state power also enabled the re-making of the reality.[88] Representation precedes transformation: once mapped, territories become targets for

[83] Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, 7.

[84] Ernest, "Nations and nationalism," 10.

[85] Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, 7.

[86] Perreault, "State of nature: on the co-constitution of resources, state and nation," 228.

[87] Scott, *Seeing like a state: How certain schemes to improve the human condition have failed*, 2.

[88] Scott, *Seeing like a state: How certain schemes to improve the human condition have failed*, 3.

intervention. This kind of social engineering initiated by the state brings administrative ordering of both the nature and society and promises to strengthen the concept of citizenship and social welfare. It also incorporates a high-modernist ideology where scientific progress, production increase, satisfaction of human needs, and mastery of nature come together. The ideological coherence of high modernism lies in its fusion of technical rationality with political authority. This ideology used the state power for transforming the work habits of people, living patterns, worldview and moral conducts as well.[89] Infrastructures thus operate pedagogically, teaching populations how to inhabit modernity.

Electricity enables territorial integration**,** long-distance governance, and center–periphery control without continuous physical presence. Its significance lies precisely in this capacity to extend authority across distance in an effort to minimize administrative friction. As any other technology that works as an extension of the human lives, electrification process had many actors including the ones that own, oppose, use, or interpret it. It is also a social process that is shaped by the culture, society and period in which it happens.[90] Technological systems therefore cannot be understood apart from the social relations that animate them. "Energy territory is networked territory; sovereignty is performed through infrastructural connectivity."[91] This formulation underscores that territorial power is not secured solely through borders but through circulation systems. The infrastructural state operates through a paradox. It centralizes authority by decentralizing risk, distributing environmental and bodily costs unevenly across territories and populations. The center accumulates symbolic capital from national development, while peripheral extraction zones absorb ecological degradation and labor precarity. The uneven geographies created by the environmental changes and technocratic interventions and the environmental governance are subjects that have a growing literature around. The political agency over the geophysical contexts and some expanded definitions of territory are

[89] Scott, *Seeing like a state: How certain schemes to improve the human condition have failed*, 5.

[90] David Nye, "Electrifying America: Social meanings of a new technology," (1990): ix.

[91] Painter, "Territory-network."

questioned by different disciplines.[92] In these terms, rather than an abstract and fixed political spatiality, and a solid and static land, territory is examined through its fluid and unruly matters and indeterminate elements.[93] Such reconceptualizations treat territory as processual — continuously produced through flows of matter, energy, and authority.

More than the definitions of state, nation, and nature, how they were produced in relation to each other carries significance to discuss the national resources as a source and means of socio-natural ordering, and it material and symbolic roles. Resource-making and state-making are also mutually constitutive of the same project.[94] Resources, states, and nations coproduce one another. In other words, resource-making and state formation are interdependent and co-constructive.[95] This mutual constitution suggests that resource extraction should be analyzed not as economic sector but as foundational political process. In this sense, resource extraction anchors the spatialization of national imagination. Coal becomes not only fuel but narrative substance — a material signifier of autonomy, productivity, and civilizational alignment. The insistence on utilizing "every lump of coal" signals not scarcity alone but an ethic of total mobilization, in which nature is reframed as duty-bound contributor to national destiny.

While a certain level of order and control was sufficient for premodern states, it became more important for the modern states to take charge of the national resources either as physical entities or people. These states' urge to increase productivity, health, transportation, and underground resources was the entailed objectives of the modern world.[96] It was also a discussion in the issues of Kadro Journal (1932-1935) that the statist approach was a positive and contemporary means for national defense, as well as for the construction of a new regime, development, and an expansionist policy. For

[92] de Oliveira, "Territory beyond Terra: Kimberley Peters, Philip Steinberg and Elaine Stratford, eds. New York, NY: Rowman & Littlefield, 2018. ," 35.

[93] de Oliveira, "Territory beyond Terra: Kimberley Peters, Philip Steinberg and Elaine Stratford, eds. New York, NY: Rowman & Littlefield, 2018. ," 35.

[94] Perreault, "State of nature: on the co-constitution of resources, state and nation," 229.

[95] Eroğlu, "Coal, state, and society: Resource-making and state formation in early republican Turkey," 69.

[96] Scott, *Seeing like a state: How certain schemes to improve the human condition have failed*, 52.

example, it was possible for the Turkish State Railways to transport coal at a loss which would not be provided by a private company.[97] Similarly, the research, extraction and use of coal was an issue of national defense, for its use in the iron extraction, mines, and gas industry, and compared to the importance of use of fertilizers in the agriculture.[98] It was also encouraged to search for lignite in the other parts of the country since it was too expensive to transport coal from Zonguldak to everywhere.[99] An application of socio-natures approach and the initiatives for making the land legible was the strong opinions about the "wresting with the nature" and "dominance over nature". It was seen as the primary and most vivid sign of Turkish nationalism and the national sovereignty movement. It was suggested that a new and content era of history will be created through the exploitation and defeat of nature instead of exploitation among people or nations.[100] The triumph over the nature and soil of the Turkish land was described as the next stage of the of new, rich, and merry Turkish nation.[101] The desire and grudge for a dominance over the nature for overcoming the wilderness in the form of floods, draughts and famines is emphasized in other issues.[102]

The first ten years of the republic both included the progress, admiration, optimism, belonging, and togetherness, as well as the blackouts, illegal use of electricity, and accidents.[103] These tensions reveal modernization as uneven and contested rather than seamless. The light was also a medium to shift illiteracy into literacy, insecurity into safety, disorder into order, and infelicity into joy.[104] Illumination functioned symbolically as well as materially, operating as a metaphorical technology of enlightenment aligned with national progress narratives.

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[97] *Kadro,* October 1933, Issue 22, p. 4-5.

[98] *Kadro,* September 1933, Issue 21, p.33.

[99] *Kadro,* September 1933, Issue 21, p.35.

[100] *Kadro,* September 1933, Issue 21, p. 13.

[101] *Kadro,* March 1932, Issue 3, p. 24.

[102] *Kadro*, March 1932, Issue 3, p. 21.

[103] İleri, "Ambitious yet Ambivalent: Electrical Infrastructure and Inequality in Early Republican Turkey."

[104] İleri, "Ambitious yet Ambivalent: Electrical Infrastructure and Inequality in Early Republican Turkey."

This duality — mastery and vulnerability — is crucial. Modernization discourse frequently emphasized control over nature, yet moments of accident, explosion, and blackout exposed the limits of technocratic certainty. Such ruptures should not be read as marginal failures but as constitutive elements of infrastructural modernity, revealing the dependency of sovereignty on material systems that remain partially uncontrollable.

The relationship among the state power, nature, and environment is closely examined mostly by the political geographers.[105] Political geography has been particularly attentive to the ways in which territory is not simply controlled but actively produced through environmental management, infrastructural investment, and resource extraction. Rather than treating nature as external to political processes, this body of scholarship understands landscapes as terrains of power where sovereignty materialized. In this sense, sovereignty is not exercised solely through juridical declaration but through material interventions that stabilize authority across space. Territory becomes durable not because it is bounded on a map, but because it is continuously reorganized through infrastructural, ecological, and administrative practices.

The importance of the relationship comes from the changing natural geographies of the state, due to climate change, shifting energy economies, infrastructures and the introduction of different modes of governing the natural world.[106] These transformations reveal that the state is not a static territorial container but a dynamic assemblage whose spatial coherence depends on the management of environmental change. Shifting energy regimes, in particular, reorganize economic centers, labor distributions, and geopolitical alignments, thereby altering the spatial logic of governance itself.

While the concept of socio-natures foregrounds the co-production of nature and society, energo-power shifts the analytical lens toward the modalities through which governance operates via energy systems. If socio-natures explains how coalfields, grids, and landscapes are historically produced, energo-power explains how those

[105] Natalie Koch, "Introduction: the state, energy and the environment," in *Handbook on the Changing Geographies of the State* (Edward Elgar Publishing, 2020), 225.

[106] Koch, "Introduction: the state, energy and the environment," 225.

infrastructures become instruments of territorial integration, discipline, and state authority. Energo-power thus extends theories of governmentality by specifying energy as the medium through which spatial ordering acquires continuity and force**.** Energo-power, in this sense, is a concept that defines the way the states and other actors govern through energy systems, and how the energy infrastructures, technologies and regimes shape territories, populations, and social relations.[107] It emphasizes that governance is not only discursive or institutional but infrastructural — embedded in wires, grids, extraction sites, and consumption routines. Power circulates through voltage, fuel flows, maintenance schedules, and technical standards as much as through legislation or policy declarations. Energy is invisible, yet spatially structuring, and it works through routines, expectations, rhythms and moral judgements. Its invisibility paradoxically enhances its governing capacity, since infrastructures that recede into the background of daily life become naturalized and unquestioned. The normalization of uninterrupted supply produces moral expectations about order, productivity, and civic responsibility.

Energy infrastructures do not only reorganize cities and buildings; they reorganize how the space is felt, imagined, judged, and lived. Illumination alters nocturnal perception, heating redefines interior comfort, and mechanized production recalibrates temporal discipline. Through these sensory and temporal shifts, infrastructures participate in the formation of modern subjectivity. Power operates not only through wires and pipes but through discursive and affective space-making practices. Official narratives, propaganda imagery, and celebratory rhetoric surrounding electrification contribute to an affective economy of progress in which energy becomes synonymous with civilization. The built forms of power plants, dams, and substations materialize this rhetoric, translating abstract ideals of sovereignty into concrete architectural presence.

Energy history studies, mostly the recent studies focusing on energy and its spatial consequences, and relations, demonstrate that transitions between energy regimes are deeply embedded in social relations, political decisions, and cultural

[107] Dominic Boyer, "Energopower: An Introduction," *Anthropological Quarterly* 87, no. 2 (2014), http://www.jstor.org/stable/43652700.

imaginaries rather than being linear or purely technological.[108] These studies challenge deterministic narratives that equate technological innovation with inevitable progress, instead foregrounding contestation, unevenness, and path dependency. Energy transitions often reproduce existing hierarchies even as they promise transformation. From this perspective, energy cannot be separated from the material infrastructures that extract, transport, convert, and distribute it, as well as the appliances, tools, and urban infrastructures. Energy exists only through its infrastructural embodiments; without networks of circulation and devices of conversion, it remains potential rather than operative. Mines, power plants, transmission lines, ports, and railways form interconnected systems that reorganize landscapes and urban environments, while also generating new forms of dependency and vulnerability.[109] These systems create spatial asymmetries in which some regions become indispensable nodes while others remain infrastructurally marginal. Dependency on centralized supply renders both cities and industries vulnerable to disruption, revealing the fragility beneath narratives of seamless modernization. Coal and electricity can be seen as the metabolic base of modern society, which also relates to the concept of *energo-power*. As metabolic foundations, they sustain not only industrial production but the circulation of goods, people, and information that define modern life. Energo-power thus operates at the metabolic level, regulating the flows that sustain the social body.

As the fuel of the 1930s industrialization and modernization processes, and the making of the states, and making the entities legible and governable, coal and electricity played roles at different scales. At the national scale, they enabled territorial integration; at the urban scale, they reorganized public space; at the domestic scale, they reshaped everyday routines. In the 1930s Turkey, the infrastructures of transportation and communication were very important for their role in the representation of the new territorial consciousness of the nation. Railways and electrification did not simply connect space; they narrated connection, transforming geographic extension into political unity. Electrification of the country and expanding the reach of the railways to each corner of the land were the slogans of the national

[108] E. A. Wrigley, "Energy and the English Industrial Revolution," *Philosophical Transactions: Mathematical, Physical and Engineering Sciences* 371, no. 1986 (2013).; Simon Pirani, *Burning up: A global history of fossil fuel consumption* (Pluto press, 2018).

[109] Hughes, *Networks of power: electrification in Western society, 1880-1930*.

economy policy. These slogans condensed developmental ambition into infrastructural imagery, presenting connectivity as proof of sovereignty. Such networks of communication, as well as the newspapers of the period contributed to the creation of a mental map of the "imagined community". Infrastructure here functions as cartographic pedagogy, teaching citizens to perceive themselves as part of a territorially coherent whole. This kind of propaganda and representation especially showed itself on the official documents of the period mentioning both the engineering achievements and modernist aesthetics of the newly constructed bridges, railways, stations, and factories.[110] The aestheticization of infrastructure elevated technical systems to symbols of civilizational progress, embedding engineering within national identity. Besides being praised for bringing aesthetic solutions to functional programs, dams and energy plants were also seen a witness of the sovereignty of the Republic over the nature.[111] They stood as monumental assertions that nature had been rendered calculable, harnessed, and subordinated to collective purpose.

This part of the study focuses on how energy infrastructure becomes an extension of the state's power to organize, govern, and standardize life across space.[112] Standardization — of voltage, measurements, construction techniques, and consumption practices — becomes a key mechanism through which diversity is translated into administrative coherence. As Geoff A. Perreault emphasizes, energy infrastructures are never merely technical or material systems; they are instruments of power that articulate the spatial strategies of the state. Infrastructures such as electricity grids and fossil fuel networks "govern through space," enabling new forms of territorial integration, social legibility, and political control. Governing through space implies that authority operates by structuring environments within which subjects act, rather than by intervening in every action directly. In early Republican Turkey, the nationalization and expansion of coal and electricity infrastructures allowed the statist regime not only to light homes or power factories, but also to consolidate authority over distant provinces and define a new vision of the modern Turkish subject. Access to electricity became a marker of participation in the national project, linking material

[110] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 137.

[111] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 139.

[112] Perreault, "State of nature: on the co-constitution of resources, state and nation."

comfort with civic belonging. Through what Perreault calls the infrastructure of governmentality; energy systems became both a means and a medium of governance.[113] They produced governable subjects by aligning daily life with centralized systems of provision and control. In the Ottoman era, the periphery was some kind of autonomous land, but with the Republic, the state wanted to centralize and control every corner of the country and used energy and other infrastructure as a medium to reach and govern the rural.[114] Infrastructure thus functioned as a centripetal force, drawing peripheral territories into administrative and economic alignment with the capital. Ottoman Empire was limited in terms of electric use, but within the agenda of progress, development, and unity of the Early Republic, the production, distribution, and consumption of energy has increased, and the urban electricity networks expanded.[115] This expansion was framed not only as technical improvement but as temporal rupture — a decisive break from imperial stagnation toward republican dynamism. The "conquest of the light" meant a shift from the Ottoman past and the darkness associated with it.[116] Light functioned metaphorically as enlightenment, rationality, and national awakening, embedding electrification within a broader civilizational narrative. Electrification of the country both shapes the agenda of the new regime and gets shaped by it.[117] Infrastructure and ideology thus transform together, each reinforcing the legitimacy and direction of the other.

If Chapter 2 has argued that energy infrastructures functioned as material, epistemic, and symbolic instruments of state formation — producing territory, subjectivity, and socio-natural order through energo-power — then the implications of this framework demand closer empirical examination. To treat coal seams, grids, and

[113] Perreault, "State of nature: on the co-constitution of resources, state and nation." Also, see: Janette Webb, Faye Wade, and Margaret Tingey, "Introduction to Research Handbook on Energy and Society: why study energy and society?," (2021)., Sami Moisio et al., *Handbook on the changing geographies of the state: New spaces of geopolitics* (Edward Elgar Publishing, 2020).

[114]Erensü, "Fragile Energy: Power, Nature, and the Politics of Infrastructure in the'New Turkey'."

[115] İleri, "Ambitious yet Ambivalent: Electrical Infrastructure and Inequality in Early Republican Turkey."

[116] İleri, "Ambitious yet Ambivalent: Electrical Infrastructure and Inequality in Early Republican Turkey."

[117] İleri and Degirmencioglu, "Erken Cumhuriyet Dönemi Türkiyesi'nde Asri Ev Tartışmaları ve Elektrikli Tenvirat," 100.

power plants as architectural-historiographic agents is not only to redefine the scope of architecture, but to ask how these infrastructures operated in specific sites, institutions, and everyday environments. Moving from conceptual to grounded analysis, Chapter 3 investigates how energo-power materialized coal basins, industrial settlements, urban networks, and representational media, and how these sites mediated the relationship between extraction, governance, and national imagination. By tracing the spatial, architectural, and visual strategies through which energy was staged as progress and sovereignty, the next chapter demonstrates that infrastructure did not merely support modernization — it was one of the very terrains upon which modernization was negotiated, contested, and made visible.

CHAPTER 3

SITUATING ENERGY WITHIN HISTORICAL TRANSFORMATIONS

This chapter functions as a historical and scalar hinge between energy as a framework of governance and energy as a lived and experienced condition. It consolidates the conceptual argument advanced in Chapter 2 by situating energo-power within specific institutional, territorial, and representational formations. Tracing the emergence of energy infrastructures from the late Ottoman period into the early Republican era, the chapter situates these developments within a global context of industrialization, extractivism, and infrastructural expansion from the late nineteenth century to the 1940s. Rather than offering a purely chronological history, the chapter focuses on the representational and territorial practices through which energy was made visible, imaginable, and governable. In doing so, the chapter intervenes in dominant historiographies that treat infrastructure as derivative of ideology or economic necessity. Instead, it proposes that energy infrastructures were constitutive of modernization itself. Coal seams, grids, ports, and exhibition halls did not merely reflect reform; they materially organized sovereignty and territorial integration. By foregrounding energy as an operative force rather than a background condition, the analysis shifts from a narrative of political rupture to one of infrastructural reconfiguration.

This chapter unfolds in three main sections that move from global context to territorial consolidation and finally to representational politics. It begins, in 3.1**,** by situating Turkey within the layered global energy regimes of the interwar period, establishing that the 1930s were not a clean transition from coal to electricity but an intensification of fossil-fuel–based energo-power. This global framing clarifies that developments in Turkey were neither exceptional nor derivative, but part of a broader infrastructural reorganization of sovereignty.

Section 3.2 then turns to the late Ottoman context, demonstrating that the socio-natural foundations of Republican energy policy were already embedded in imperial concessions, coal extraction, and urban lighting hierarchies. By tracing continuities and ruptures, this section reframes the Republic not as an absolute break but as an infrastructural reconfiguration. Building on this foundation, the third and longest section examines early Republican energy modernity through four interconnected lenses**.** It first focuses on how early Republican statism, nationalization, and institutional consolidation transformed energy into a central mechanism of territorial integration and economic planning. Next, it surveys infrastructural expansion**,** analyzing the material growth of mines, power plants, factory towns, railways, and grids as architectural and territorial technologies. The subsequent subsection on territory-making through roads, rails**,** ports, and grids analyzes how logistical networks materially reorganized the national space, tying extractive peripheries to administrative centers and producing uneven geographies of cost and benefit. Finally, the chapter turns to representation and consent-building**,** examining exhibitions, monuments, maps, films, and media as spatial technologies through which energy was monumentalized, aestheticized, and translated into political legitimacy. Read together, these sections demonstrate that energy modernization operated simultaneously at global, imperial, national, territorial, and symbolic scales—preparing the ground for the following chapter's shift toward lived, architectural, and everyday embodiments of energo-power.

3.1. Global Energy Regimes in the 1930s

The fossil fuel use in the 20th century both accelerated the scale of production of industrial goods and boosted the formation of networks through which imperial control and national integration were spread.[118] The 50 year period from 1880s to 1930 was the formative period when the ordering, systemizing, and coordinating human societies was realized through the electric power systems.[119] And the electric light

[118] Russ and Turnbull, *Energy's History: Toward a Global Canon*.

[119] Hughes, *Networks of power: electrification in Western society, 1880-1930*, 1.

became a ubiquitous and normal component of daily life in the 1920s.[120] By the late nineteenth and early twentieth centuries, electricity began to supplement, and gradually replace coal gas as the dominant urban energy form. The 1930s were not a moment of complete transition but of layered energy regimes. Coal, oil, hydroelectricity, and electricity coexisted, often reinforcing rather than replacing one another. Energy transitions are slow, path-dependent, and shaped by existing infrastructures and institutions, and the persistence of coal alongside electrification challenges narratives of linear progress and highlights the political choices embedded in energy systems. [121] Coal remained the dominant primary energy source worldwide. As George Orwell famously observed, modern civilization was "founded on coal".[122] Even as oil and hydroelectricity gained symbolic prominence, coal continued to underpin electricity generation, heavy industry, railways, and urban heating. What changed in this period was not coal's centrality, but its spatial and perceptual displacement. Electricity allowed coal to be burned far from sites of consumption, rendering energy production increasingly invisible while expanding its reach.[123] Coal's endurance during this period is analytically important. Rather than a clean transition from coal to electricity, it is more accurate to understand electricity as a *secondary carrier* that intensified coal's reach. Electricity did not replace coal; it reorganized its spatial and perceptual presence. In terms developed in Chapter 2, this moment represents not an energy substitution but an intensification of energo-power**,** whereby the state's governing capacity expanded through increasingly networked and centralized systems of generation and distribution. The invisibility of combustion at the point of consumption was not merely technical—it was political. By relocating smoke to distant peripheries, modern states spatially separated extraction from experience, thereby normalizing dependency on large-scale infrastructural systems.

[120] Isenstadt, *Electric Light: An Architectural History*, 21.

[121] Webb, Wade, and Tingey, "Introduction to Research Handbook on Energy and Society: why study energy and society?," 42.

[122] George Orwell, "Down the Mine," 1937, accessed 15.12.2025, 2025, https://www.george-orwell.org/Down_The_Mine/0.html.

[123] Daniel French, *When they hid the fire: A history of electricity and invisible energy in America*, vol. 2 (University of Pittsburgh Press, 2017), 146.

By the 1930s, industrialized and industrializing societies across the world confronted a convergence of economic crisis, political instability, and infrastructural transformation. The Great Depression exposed the fragility of liberal market economies and accelerated a global turn toward state intervention, planning, and infrastructural governance. Energy stood at the center of this transformation, not merely as inputs to production but as instruments of state-building and territorial integration. Globally, electrification was closely tied to state-building, industrial rationalization, and territorial integration**,** particularly in the interwar period.[124] Electrical grids enabled centralized control over energy distribution, reinforcing the capacity of modern states to regulate space, labor, and everyday life. In this respect, the interwar grid should be read not simply as engineering achievement but as a territorial technology. Grids transformed uneven landscapes into administratively coherent spaces, producing what Chapter 2 conceptualized as infrastructural legibility. Voltage standardization, load management, and regional interconnection were not only technical adjustments; they were mechanisms through which states rendered populations calculable and governable. Electrification thus functioned as a material extension of governmentality, structuring behavior through spatial conditioning rather than direct coercion.

The experience of electrification by the public was manyfold, in guises of a political issue, a spectacle element, a profit source, and sometimes a transportation means.[125] Also, many different nations in the late 19th and early 20th centuries went through different negotiations over the electrification processes for the decisions of their ownership in public or private entities, rates for small or large consumers, or who controls the systems. Electricity's unique properties, such as its capacity for long-distance transmission and conversion into multiple forms of work, made it an ideal tool for modern states. This technological capacity translated into new geographies of power, enabling centralized generation and decentralized consumption.[126]

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[124] Vaclav Smil, "Energy in the twentieth century: resources, conversions, costs, uses, and consequences," *Annual Review of Energy and the Environment* 25, no. 1 (2000).

[125] Nye, "Electrifying America: Social meanings of a new technology," 138.

[126] French, *When they hid the fire: A history of electricity and invisible energy in America*, 2, 82.

In the Soviet Union, the full electrification of the country by the construction of a national grid that reaches every home was the premise of the realization of socialist goals. Electrification served both symbolic and practical functions: it signaled modernity while enabling centralized planning and industrial coordination. On the other hand, in South Africa, the industrialists used the electricity to feed the mining of gold, coal, and diamonds, while not providing electricity to the local citizens.[127] It can be said that in any country, including the United States, electrification could not remain a neutral process that is devoid of complex political, ideological, technical, and social connotations.[128] Electricity was not a neutral force but a culturally mediated technology**,** whose meanings varied across domestic, urban, and industrial contexts. It also reshaped cities through streetcars, illuminated boulevards, factories, and department stores, producing new experiences of night, speed, and spectacle.[129] In interwar Italy, energy policy was shaped by scarcity and nationalist ideology. Lacking domestic oil resources, the regime emphasized coal imports, hydroelectric development, and autarkic industrial planning. Electrification was mobilized as a tool of modernization and national prestige, even as per capita energy consumption fell behind Northern Europe.[130] Similarly, the United Kingdom, an early coal economy, used electricity to reorganize industrial production and urban life during the interwar years. National grid initiatives rationalized generation and distribution, reinforcing state oversight of critical infrastructure while maintaining coal's dominance in generation.[131] Across all these countries, electrification projects were closely tied to national development agendas.[132] Besides those hegemonic powers of the period, nations of China, India, and Brazil also pursued energy-powered developments that contributed to today's climate challenges.[133]

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[127] Nye, "Electrifying America: Social meanings of a new technology," 138.

[128] Nye, "Electrifying America: Social meanings of a new technology," 139.

[129] Nye, "Electrifying America: Social meanings of a new technology," 14.

[130] Smil, "Energy in the twentieth century: resources, conversions, costs, uses, and consequences."

[131] Webb, Wade, and Tingey, "Introduction to Research Handbook on Energy and Society: why study energy and society?," 42.

[132] French, *When they hid the fire: A history of electricity and invisible energy in America*, 2, 146.

[133] Russ and Turnbull, *Energy's History: Toward a Global Canon*.

The 1930s also marked a profound transformation in everyday life. Electricity entered homes as a marker of modernity, cleanliness, and social progress. At the domestic scale, electrification reorganized the sensory and temporal rhythms of life. Artificial illumination extended productive hours, mechanized appliances recalibrated gendered labor, and heating technologies redefined comfort. These transformations illustrate the scalar dimension of energo-power: from territorial integration to bodily habituation. Energy infrastructures did not merely power cities; they produced modern subjects attuned to punctuality, efficiency, hygiene, and consumption. While appliances reshaped domestic labor, gender roles, and temporal rhythms, they simultaneously masked the continued reliance on coal-fired generation. Cultural narratives celebrated electricity as clean, abundant, and environmentally inconsequential. As French demonstrates, moving power plants away from cities fostered an "out of sight, out of mind" mentality that separated consumption from production.[134] This ideological separation is crucial for understanding how energy infrastructures could expand with limited public resistance.

3.2. Energy in the Late Ottoman Context

The history of energy in the late Ottoman period is a multifaceted narrative of transition from organic and animal-based power to a globalized hydrocarbon economy driven by coal, gas, and eventually electricity. This transformation was deeply intertwined with the empire's struggle for modernization, defensive developmentalism, and urban reorganization.[135] During the "longest century" of the empire, energy became a central tool for the state to project power and legitimize its authority.[136] This projection of power, however, was uneven and often mediated through foreign capital and concessionary regimes. The Ottoman case demonstrates that energy infrastructures were already embedded in imperial geopolitics before the founding of the Republic. Coal depots, gasworks, and steam navigation networks

[134] French, *When they hid the fire: A history of electricity and invisible energy in America*, 2, 144.

[135] On Barak, *Powering empire: How coal made the Middle East and sparked global carbonization* (University of California Press, 2020), 3.

[136] İlber Ortaylı, "İmparatorluğun en uzun yüzyılı," *(No Title)* (1987): 12.

constituted early forms of infrastructural territorialization, yet sovereignty over them remained fragmented. From the perspective of socio-natures, Ottoman coal was not merely extracted matter, but part of a contested imperial ecology shaped by European commercial interests, local elites, and emerging bureaucratic institutions.

Before the mid-19th century, Ottoman energy needs were met through wood, charcoal, and muscle power.[137] In Istanbul, the imperial capital, the pious endowment system managed the distribution of essential resources like water and fuel.[138] Soup kitchens and public baths required enormous amounts of wood to function.[139] Traditionally, lighting was a private responsibility; residents were required to carry lanterns at night, and failure to do so could result in arrest by the night watch.[140] This nocturnal life was centered around companionable gatherings where light was used locally and momentarily to illuminate gardens or private halls.[141] The "conquest of the night" began with the extravagant palace parties of the 18th century Tulip Era, where thousands of candles and lanterns demonstrated the sultan's spectacular power.[142]

The 19th century pivot to fossil fuels was catalyzed by the expansion of British steam navigation, and British coal began to proliferate throughout Ottoman territories via a network of coaling stations. These depots, established in ports like Mocha, Aden, and Port Said, served as "middle-points" for steam traffic between Europe and India.[143] Coal was initially used to tow crippled Ottoman vessels after the Battle of Navarino in 1828, marking the empire's first significant encounter with the strategic value of steam.[144] By the 1830s, the progress of steam navigation accelerated economic

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[137] On Barak, "Outsourcing: Energy and empire in the age of coal, 1820-1911," *International Journal of Middle East Studies* (2015).

[138] Shirine Hamadeh and Çiğdem Kafescioğlu, *A Companion to Early Modern Istanbul* (Brill, 2021), 546.

[139] Ebru Boyar and Kate Fleet, *A social history of Ottoman Istanbul* (Cambridge University Press, 2010), 132.

[140] Avner Wishnitzer, "Into the dark: power, light, and nocturnal life in 18th-century Istanbul," *International Journal of Middle East Studies* 46, no. 3 (2014): 515.

[141] Wishnitzer, "Into the dark: power, light, and nocturnal life in 18th-century Istanbul," 518. Also, see: Avner Wishnitzer, "Shedding New Light," *Urban Lighting, Light Pollution and Society* (2014).

[142] Wishnitzer, "Into the dark: power, light, and nocturnal life in 18th-century Istanbul," 520.

[143] Barak, *Powering empire: How coal made the Middle East and sparked global carbonization*, 6.

[144] Barak, "Outsourcing: Energy and empire in the age of coal, 1820-1911," 428.

exchanges and lowered transport costs, leading to an increase in the volume of coal-transported merchandise.[145] The Ottoman state sought energy independence through the extraction of its own resources.[146] In the 1840s, the state reframed coal from a useless "black stone" into a "buried treasure," a legal classification that allowed the Sultan's Privy Treasury *(Hazine-i Hassa)* to claim a share of mineral wealth.[147] Active mining in the Zonguldak Ereğli basin on the Black Sea coast began in 1848. This area became the empire's primary source of domestic coal, though production was often insufficient to meet the needs of the imperial mint, docks, and factories.[148] (Barak, 2015, p. 430). The Zonguldak basin thus emerged as a proto-site of energo-power. Even before Republican nationalization, the basin linked geological knowledge, labor mobilization, transport infrastructure, and fiscal extraction into a single assemblage. It exemplifies how resource-making preceded and conditioned later state-making. The Republican regime did not invent the coal basin; it inherited and restructured it, transforming a semi-dependent extractive frontier into a nationalized territorial anchor.

Exploration for other fuel sources extended to Şarköy, Mürefte, and Gaziköy, where local elites secured concessions for oil and coal research.[149] Despite these efforts, the empire remained heavily dependent on British imports, with local production failing to keep pace with the energy demands of new industrial infrastructure.[150] The introduction of coal gas for urban lighting represented a major shift in the socio-spatial configuration of Istanbul. In 1856, the Dolmabahçe Gasworks was constructed to illuminate the new European-style Dolmabahçe Palace. Surplus gas from this facility was used to light the Istiklal Avenue in Pera, which became a pilot

[145] Jean-Luc Arnaud, "Modernization of the Cities of the Ottoman Empire (1800-1920)," (Brill, 2008), 6.

[146] Barak, "Outsourcing: Energy and empire in the age of coal, 1820-1911," 430.

[147] Barak, *Powering empire: How coal made the Middle East and sparked global carbonization*.

[148] Barak, "Outsourcing: Energy and empire in the age of coal, 1820-1911."

[149] Aydın Özkan, "Osmanlı'dan Cumhuriyet'e Şarköy, Mürefte ve Gaziköy (Ganos) Bölgelerinde Petrol ve Kömür Çıkarma Çalışmaları (1876-1950)," *Vakanüvis-Uluslararası Tarih Araştırmaları Dergisi* 8, no. Sp. Issue (2023).

[150] Barak, "Outsourcing: Energy and empire in the age of coal, 1820-1911."

zone for urban reforms.[151] This created a physical hierarchy in the city: illuminated elite districts where Levantine and European populations demanded modern municipal services were contrasted with the dark, traditional quarters of the "indigenous" population. Lighting was viewed as an index of civilization and progress. However, the state remained fearful of the fire risks posed by new technologies.[152] By the early 20th century, the state had fully adopted the language of progress and technology, seeing energy provision as a fundamental pillar of sovereign legitimacy. [153] The legacy of Ottoman energy policies carried into the creation of the Turkish Republic in 1923.[154] The Republic centralized control of all underground resources through the Petroleum Law of 1926, declaring oil and coal to be government property. Ultimately, the late Ottoman energy history reveals that the global fossil fuel economy was not a product of Europe alone but was co-produced through the active participation and resistance of local Ottoman actors.[155]

3.3. Energy, State-Building, and Modernity in Early Republican Turkey

"There is no matter of development that is not, either directly or indirectly, related to coal. Coal is not merely a means of heating, nor solely a source of energy. It is the primary material of an entire branch of industry. Coal is not only the source of modern civilization but also its greatest support," stated Celal Bayar, Minister of Economy of Turkey, in his newspaper article about the International Coal Exhibition of 1937. By framing coal as both the "source" and the "support" of modern civilization, Bayar articulated how deeply energy was entangled with nation-building and modernization. Bayar's rhetoric crystallizes the ideological fusion of material extraction and national destiny. Coal is described not simply as resource but as ontological foundation of civilization itself. Such framing aligns directly with the

[151] Huriye Sevcan Tekin, "Dolmabahçe Gazhanesi'Nin kuruluşu Ve işletmesi" (Marmara Universitesi (Turkey), 2006).

[152] Wishnitzer, "Into the dark: power, light, and nocturnal life in 18th-century Istanbul," 79.

[153] Barak, *Powering empire: How coal made the Middle East and sparked global carbonization*, 44.

[154] Kezer, "The making of a nationalist capital: Socio-spatial practices in early Republican Ankara," 124.

[155] Barak, *Powering empire: How coal made the Middle East and sparked global carbonization*.

concept of energo-power: energy becomes the medium through which sovereignty, development, and civilizational belonging are articulated simultaneously. Coal was not only burned; it was narrated. Chosen as the subject of the first international exhibition, it was explicitly described as a *"national matter."* The increasing coal production since the founding of the Republic was celebrated as an achievement of the new regime, and energy became central to the symbolic legitimation of state power.[156] This part of the study focuses on how energy infrastructure becomes an extension of the state's power to organize, govern, and standardize life across space.[157] As Geoff A. Perreault emphasizes, energy infrastructures are never merely technical or material systems; they are instruments of power that articulate the spatial strategies of the state. Infrastructures such as electricity grids and fossil fuel networks "govern through space," enabling new forms of territorial integration, social legibility, and political control.

In Early Republican Turkey, the nationalization and expansion of coal and electricity infrastructures allowed the statist regime not only to light homes or power factories, but also to consolidate authority over distant provinces and define a new vision of the modern Turkish subject. Through what Perreault calls the infrastructure of governmentality; energy systems became both a means and a medium of governance.[158] In the Ottoman era, the periphery was some kind of autonomous land, but with the Republic, the state wanted to centralize and control every corner of the country and used energy and other infrastructure as a medium to reach and govern the rural.[159] While the late Ottoman administration approached electrification cautiously and unevenly, within the agenda of progress, development, and unity of the Early Republic, the production, distribution, and consumption of energy have increased, and

[156] *Ulus*, 24.04.1937

[157] Perreault, "State of nature: on the co-constitution of resources, state and nation.",

[158] Perreault, "State of nature: on the co-constitution of resources, state and nation." Also, see: Webb, Wade, and Tingey, "Introduction to Research Handbook on Energy and Society: why study energy and society?.", Moisio et al., *Handbook on the changing geographies of the state: New spaces of geopolitics*.

[159]Erensü, "Fragile Energy: Power, Nature, and the Politics of Infrastructure in the'New Turkey'."

the urban electricity networks expanded.[160] The "conquest of the light" meant a shift from the Ottoman past and the darkness associated with it.[161]

Electricity was an important theme of the modernization process, and "illumination" was both a literal and a symbolic aspect of the civilization.[162] A caricature published in *Akbaba* in 1931 stages this ideological confrontation spatially. In the image, "*maarif*" (education) is personified as a streetlamp confronting figures who derive their power from "darkness," implicitly associated with religious conservatism and ignorance. [163] Two modernly dressed men converse confidently in the illuminated street, while two turbaned figures eavesdrop from behind the ruins of a domed structure. The architectural setting is not incidental: the lamp occupies the open, rationalized urban street, whereas the bigots retreat into the shadow of a damaged dome, visually linking them to an obsolete imperial-religious order. Illumination here operates simultaneously as technology, pedagogy, and political metaphor. Electricity becomes a spatial weapon of modernity, casting light not only onto streets but onto the ideological reordering of the built environment itself.



Figure 4 The courage of the bigots was associated with the darkness (*Akbaba,* 1931, no.819)

[160] İleri, "Ambitious yet Ambivalent: Electrical Infrastructure and Inequality in Early Republican Turkey."

[161] İleri, "Ambitious yet Ambivalent: Electrical Infrastructure and Inequality in Early Republican Turkey."

[162] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 145.

[163] "Maarif," *Akbaba*, no. 819 (1931).

Electrification of the country both shapes the agenda of the new regime and gets shaped by it.[164] Resources, states, and nations mutually coproduce one another. In other words, resource-making and state formation are interdependent and co-constructive.[165] The first ten years of the republic both included progress, admiration, optimism, belonging, and togetherness, as well as the blackouts, illegal use of electricity, and work accidents.[166] The light was also a medium to shift illiteracy into literacy, insecurity into safety, disorder into order, and infelicity into joy.[167]

Turkey in the 1930s occupied a structurally distinct yet analytically comparable position to the global cases briefly discussed in the first section. Like Italy and the Soviet Union, it was a late-industrializing state pursuing rapid modernization under the new governance. Energy scarcity, limited capital, and uneven infrastructure shaped its options. Coal, particularly from Zonguldak, became central to industrialization, railways, and electricity generation, while electrification symbolized progress and national unity. What distinguishes Turkey is not the absence of global energy logics, but their selective adaptation**.** Turkey's trajectory reveals a patterned adaptation of global infrastructural modernity under conditions of scarcity and post-imperial restructuring. Rather than viewing Turkish statism as exceptional or purely ideological, it can be interpreted as a strategy of infrastructural consolidation. Energy nationalization functioned as a mechanism for reclaiming territorial coherence after imperial fragmentation. Coal and electricity thus anchored both economic planning and symbolic rupture from the Ottoman past. Electrification projects served state-building aims, extending administrative reach and reshaping urban and domestic spaces, while coal extraction embedded labor exploitation and environmental transformation at the periphery. Seen through the global lens of the 1930s, Turkey's energy regime appears not anomalous, but emblematic of a broader pattern in which

[164] İleri and Degirmencioglu, "Erken Cumhuriyet Dönemi Türkiyesi'nde Asri Ev Tartışmaları ve Elektrikli Tenvirat," 100.

[165] Eroğlu, "Coal, state, and society: Resource-making and state formation in early republican Turkey," 69.

[166] İleri, "Ambitious yet Ambivalent: Electrical Infrastructure and Inequality in Early Republican Turkey."

[167] İleri, "Ambitious yet Ambivalent: Electrical Infrastructure and Inequality in Early Republican Turkey."

energy functioned as a technology of governance, modernization, and social reordering**.**

The turn of some nations towards statism in the early economy-building stages was a central topic of political economy of the early 20th century.[168] The USA, for instance, implemented the New Deal program in 1933 in order to address the effects of the 1929 economic crisis. The program mainly aimed to stimulate demand, provide minimum economic security to citizens, restore the balance between production and consumption, support the lowest-income groups, and introduce state intervention and planning in the economy through public investments. Policies that sought to regulate the dysfunctional aspects of the market and support economic growth—such as the acceptance of state intervention, the use of public resources when needed, and the implementation of a limited but effective social security system—resulted in an expansion of state activity in the West. In a similar vein, the 1930s in Turkey marked a period of expansion for the central state apparatus.[169] The notion of statism meant that the role of the prime mover of capital accumulation belonged to the state, and it was the dominant approach in the industrialization policies of Turkey in the 1930s.[170] It also served as the government's political apparatus for protecting the state's interests over liberal economic freedom.[171] The policy change from an open economy in the 1920s to a mixed economy of protectionism and statism in the 1930s was a double response to the Great Depression.[172] The efects of the depression, the collapse of the capitalist economic model, and the lack of private capital within the country gave birth to an interventionist approach to the industrialization of the period. [173] It was also

[168] Kus, "Weak States, Unruly Capitalists, and the Rise of Étatism in Late Developers: The Case of Turkey," 358.

[169] Ceren Kalfa, "1933 Yılı: Planlamada Sümerbank Modeline Geçiş," in *Açıklamalı Yönetim Zamandizimi 1929-1939*, ed. Birgül A. Güler (Ankara: 2007).

[170] Sevket Pamuk, "Political Economy of Industrialization in Turkey," *MERIP Reports*, no. 93 (1981): 26, https://doi.org/10.2307/3011660, http://www.jstor.org/stable/3011660.

[171] Selami Mete Akbaba, "Ideology, Utopia and Practice: Rural Development in Turkey Until the Late 1940s," *Üsküdar Üniversitesi Sosyal Bilimler Dergisi*, no. 18 (2024): 130.

[172] Görkem Akgöz, *In the Shadow of War and Empire: Industrialisation, Nation-Building, and Working-Class Politics in Turkey* (Brill, 2023), 70. Also, see: Hale, "Ideology and economic development in Turkey 1930–1945.", and Ceren Ayas and John Wiseman, "Exploring the political economy of coal: Insights from Turkey," in *The Political Economy of Coal* (Routledge, 2022).

[173] Hale, "Ideology and economic development in Turkey 1930–1945," 104.

aimed not to copy the statist agenda of the Soviet Union or Italy but to make it a "home-grown plant" that emerges from the peculiar needs of Turkey. In the shaping of such economic system, the seemingly monolithic façade of statism was not unchallenged. [174] Intellectuals behind the *Kadro Journal* treated statism as a political system as much as an economic one. The assignment of Celal Bayar, the general director of İş Bank, who was known for his proximity to the private sector, as the Minister of Economy also prominently shaped the of the period.[175]

Within a political economy framework, statism reconfigured the relationship between capital, territory, and infrastructure. Energy became a central lever in this reconfiguration. By nationalizing mines, railways, and power plants, the state converted energy systems into instruments of centralized accumulation and spatial coordination. This was not merely economic intervention but territorial engineering. Through public ownership, the state embedded itself within the metabolic circuits of extraction, transport, and consumption.



Figure 5 The five-year developmental plan was seen as a gear that scares the Great Depression (*Akbaba*, 1934, no.2)

[174] Hale, "Ideology and economic development in Turkey 1930–1945," 105.

[175] Lütfi Sunar, "Kadro Dergisi/Hareketi ve Etkileri: Türk Devlet‹ deolojisi ve Sol Kemalizmin Oluflumu Ba¤ lam› nda Bir Analiz," *Türkiye Araştırmaları Literatür Dergisi*, no. 3 (2004): 518.

In the 19th century, public services (water, sewage, public transportation, electricity, etc.) were provided by private companies, and foreign investments were used to modernize the urban and industrial infrastructure.[176] The collaboration with the foreign capital was not a demand by the local people but a top-down initiative for reforming the weakened state structure. The motivation behind it was not an economic one but about increasing the reach, capacity, and power of the central government. The 1902-1929 period of the Late Ottoman-Early Republican period coins the early liberal experimentation, where the energy was a private and foreign-led industry. Between 1929 (Great Depression) – 1945 (end of the World War II), all privately owned energy infrastructures were nationalized.[177] One of the institutions founded in 1929 was the National Economy and Savings Society (Milli İktisat ve Tasarruf Cemiyeti) which has a pedagogic vision to educate the society to make savings and use national goods through different propaganda mediums such as posters, brochures, magazines, poems, and exhibitions.[178] The Congress of Industry took place in 1930 was the beginning of a comprehensive program of industrialization.[179] Between 1930 to 1982 is a period of nationalized energy production and establishment of key institutions of energy bureaucracy under the national planning paradigm.[180] Many other milestones happened in this period, such as the establishment of Etibank and General Directorate of Mineral Research and Exploration (MTA) in 1935 and the transformation of total control of the coal and copper mines to the state with the Turkish National Security Law from 1940.[181] It was hoped that this system will both boost the industrial growth and restore the order in the markets.[182] These institutions should be read as bureaucratic embodiments of energo-power. They consolidated geological knowledge,

[176] Erensü, "Fragile Energy: Power, Nature, and the Politics of Infrastructure in the'New Turkey'," 43.

[177] Erensü, "Fragile Energy: Power, Nature, and the Politics of Infrastructure in the'New Turkey'," 48.

[178] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 151.

[179] Hüseyin Çağatay Keskinok, "Urban planning experience of Turkey in the 1930s," *METU Journal of the Faculty of Architecture* 27, no. 2 (2010): 174.

[180] Erensü, "Fragile Energy: Power, Nature, and the Politics of Infrastructure in the'New Turkey'."

[181] Ümit Özen, II.Dünya Savaşı Yıllarında Türk Gazetelerindeki Karikatürler Üzerinden Türkiye'nin Siyasal Ve Sosyal Analizi, 2022, Unpublished PhD Dissertation Ankara Hacı Bayram Veli University.

[182] Kus, "Weak States, Unruly Capitalists, and the Rise of Étatism in Late Developers: The Case of Turkey," 367.

financial capital, and infrastructural planning into a centralized apparatus. Geological surveys, statistical yearbooks, and production charts were not neutral records; they were epistemic tools that rendered subterranean nature administratively legible. Knowledge production became inseparable from resource governance.

The statist ideology also has the themes of nationalism and an approach that sees the state "above and outside the social classes of civil society".[183] Such an approach was seen as necessary because it provides specialists and scientists educated by the state, as well as the expected decrease in the cost of production and transportation.[184]

The "First Five-Year Developmental Plan" was implemented in 1934 (for the period of 1934-1938), and it aimed to provide foreign currency, employment, and the technology, machines, and institutions that the country needed.[185] With this plan, it was aimed for Turkey to be not only a country that provides raw material but also one that processes it.[186] Therefore, Sümerbank was assigned to establish factories of materials such as silk, glass, paper, bottle, and cotton, which also brought the agricultural and industrial development ambitions together.[187] The part of the plan that involves the mining industry aimed first to supply the raw material and fuel needs of the country, then, to supply the increasing number of industrial facilities and transportation with national sources. It was also within the aims of the plan to export the coal as a source of foreign exchange.[188]

In the Second Five-Year Developmental Plan, prepared for the 1938-1943 period according to the principles of the Industrial Congress in 1936, it was decided that the mines could only be run by the state and could not be transferred to foreign

[183] Pamuk, "Political Economy of Industrialization in Turkey," 26.

[184] Hilal Öz, "Atatürk Döneminde madencilik (1923-1938)" (Doktora Tezi). Ankara Üniversitesi Türk İnkılâp Tarihi Enstitüsü, Ankara, 2018), 85.

[185] Öz, "Atatürk Döneminde madencilik (1923-1938)," 105.

[186] Öz, "Atatürk Döneminde madencilik (1923-1938)," 107.

[187] Menaf Turan, "1934: Devletçilik İçin Örgütlenme Yılı," in *Açıklamalı Yönetim Zamandizimi 1929-1939*, ed. Birgül A. Güler (2007), 524.

[188] Öz, "Atatürk Döneminde madencilik (1923-1938)," 106.

people or companies.[189] The reports prepared by the responsible commission were published by the Ministry of Economy under the title *"Second Five-Year Industrial Project"* and shared with the relevant ministries. The industrial plan envisaged the establishment of nearly 100 new facilities and projected a total investment of 1,012 million liras for these projects. The investment areas identified in the plan included energy related subjects of mining, coal mines, regional power plants, and household fuels besides soil-based industries, food industry and trade, chemical industry, machinery industry, and maritime sector.[190]

In the context of early Republican Turkey, the political economy approach, namely statism, reveals how state-led economic policies shaped the development and distribution of energy infrastructure, labor, and built environments. This lens helps unpack how energy projects were not merely technical undertakings but tools of governance, modernization, and spatial control.

3.3.1. Official Energy Modernity: Institutions, Laws, and Planning

Coal has been an important source in the realization of the Industrial Revolution, as well as the developmental level of the countries. Knowing that, the Republican government attached importance to the mining sector as a part of its developmental activities and industrialization goals.[191] It was also important to nationalize the enterprises run by the foreign companies to provide safety for the country, and to make an efficient use of strategic resources of the country.[192] Since the private sector was not technically and financially able to afford the investments, it was decided to make the large-scale public investments by the state within the "statist"

[189] Öz, "Atatürk Döneminde madencilik (1923-1938)," 118.

[190] Metin Özkan, *Türkiye ve Dünyada Yüzyılın Birikimi 1930-1939*, vol. 2 (Türkiye Büyük Millet Meclisi, 2023), 244.

[191] Mehmed Gökhan Polatoğlu, "Atatürk Dönemi'nde Maden ve Enerji Alanında Kurulan Bir İktisadî Devlet Teşekkülü: Etibank," *Tarih Araştırmaları Dergisi* 38, no. 66 (September 2019): 445.

[192] Polatoğlu, "Atatürk Dönemi'nde Maden ve Enerji Alanında Kurulan Bir İktisadî Devlet Teşekkülü: Etibank," 447.

approach.[193] The problems about the efficiency of the coal mines became more important in the 1930s with the changing economic policies of the state. With the shift to the statist industrialization model, coal gained more importance as the main raw material of the intended industries, military factories, and the railways, which made the state the biggest consumer of coal.[194] The emphasis on the importance of a scientific and planned path for the use of the mines in the financial development of the country resulted in a law and the establishment of a bank, *Türkiye Sanayi ve Maadin Bankası,* in 1925.[195]

With the nationalization of some mining basins, railways, and energy plants, a base was set for the establishment of Etibank in 1935.[196] The bank was officially opened on July 11th with the participation of Atatürk himself, after the acceptance of the law numbered 2262, and it was designated as the main conductor of the First Five Year Industrial plan which will begin in 1934. The bank was also commissioned for general banking and loaning duties besides operating the factories that will be taken over from the State Industrial Office (*Devlet Sanayi Ofisi*).[197] An earlier financing agent established in 1933 was the national Sümerbank and had the objective to start up new industries.[198] Established after the Law No. 2805, published in the Official Gazette, Etibank was positioned as the key actor in extending state control over subterranean resources and energy infrastructures.[199] Crucially, it defined Etibank's domain as mining and electricity—fields left outside the scope of Sümerbank—thereby delineating a functional division of labor between the two institutions. While Sümerbank focused on initiating and supporting industrial production, Etibank was

[193] Polatoğlu, "Atatürk Dönemi'nde Maden ve Enerji Alanında Kurulan Bir İktisadî Devlet Teşekkülü: Etibank," 446.

[194] Nurşen Gürboğa, "Osmanlı'dan Cumhuriyet'e Zonguldak Kömür Havzasında İşgücü Darlığı, Verimlilik Sorunu ve Emek Dolaşımı," *Toplumsal Tarih*, no. 377 (2025): 27.

[195] Polatoğlu, "Atatürk Dönemi'nde Maden ve Enerji Alanında Kurulan Bir İktisadî Devlet Teşekkülü: Etibank," 447. The Number 633 *Türkiye Sanayi ve Maadin Bankası Kânunu* was accepted on 19.04.1925)

[196] Polatoğlu, "Atatürk Dönemi'nde Maden ve Enerji Alanında Kurulan Bir İktisadî Devlet Teşekkülü: Etibank," 446.

[197] Özkan, *Türkiye ve Dünyada Yüzyılın Birikimi 1930-1939*, 2, 147.

[198] Bozdogan and Akcan, *Turkey: Modern architectures in history*, 41.

[199] Özkan, *Türkiye ve Dünyada Yüzyılın Birikimi 1930-1939*, 2, 225.

tasked with securing and managing the material and energetic basis of that production. In this sense, Etibank can be understood not merely as a financial institution, but as an infrastructural and territorial agent of statism, consolidating the state's role in organizing resource extraction, energy generation, and their integration into the broader industrial economy.[200] The establishment of this bank marks the beginning of the implementation of the "statism" principle of the state in the mining sector.[201] Also, the renewal of the neglected mines, the transportation, and electricity facilities resulted in a huge increase in production.[202] Sümerbank has been one of the most prominent representatives of the Republican ideals of national industrialization.[203] The factories opened under the vision of Sümerbank were generally constructed as "factory towns" rather than as single buildings or building complexes. Such an environment also carried the vision of creating new citizens of the Republic through the secular recreational areas.[204] Naming these banks with the remote past rooted in the land, Sumerians and Hittites, both carry the archaic and futuristic components of nationalism, where the ancient names of civilizations became significant for the futuristic industrial aspirations. [205] It can also be seen as an initiative to have a break from the Ottoman past, which has been one of the underlying objectives of the new regime.[206] Another role of Sümerbank has been bridging the gap and decreasing the distance between the villagers and the people living in the cities by opening the rural economy to the national market.[207]

[200] Özkan, *Türkiye ve Dünyada Yüzyılın Birikimi 1930-1939*, 2, 244.
[201] Öz, "Atatürk Döneminde madencilik (1923-1938)," 112.

[202] Polatoğlu, "Atatürk Dönemi'nde Maden ve Enerji Alanında Kurulan Bir İktisadî Devlet Teşekkülü: Etibank," 447.

[203] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 141.

[204] Bozdogan and Akcan, *Turkey: Modern architectures in history*, 43.

[205] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 118.

[206] Akgöz, *In the Shadow of War and Empire: Industrialisation, Nation-Building, and Working-Class Politics in Turkey*, 90.

[207] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 150.

3.3.2. Territory-Making through Energy Infrastructure

Securing coal from pithead to consumer required an extensive logistical network across Turkey's diverse geography. The state rapidly built railways and ports in the 1930s to integrate the coal supply chain. A pivotal project was the Irmak–Zonguldak railway, completed in 1936, which linked the Zonguldak coalfield to Ankara and the Anatolian heartland.[208]In November 1936, the first ceremonial coal train arrived in Ankara, symbolically powering the capital with the nation's coal. By rail and by sea, coal now flowed to inland cities and coastal hubs. The Turkish State Railways (TCDD) became a key actor in this network. At the endpoint of these flows were the coal depots, storage and distribution yards often run by a state agency. In 1942, a "Turkey Coal Sales and Distribution Enterprise" (*Türkiye Kömür Satış ve Tevzi Müessesesi*) was established under Etibank to coordinate internal distribution.[209] Such rationing ensured essential needs, railways, power plants, the military, and domestic heating reflecting the state's deepening penetration into everyday life. The entire logistics system from the mines, railways and ports to depots and retail outlets functioned as a tightly knit actor-network governed by the state. The everyday objects from locomotives and loading cranes to depot clerks and even the coal itself acted as an energy-bearing actors and interacted to deliver heat and power, extending state power into homes and factories across Anatolia.[210] From an actor-network perspective, coal itself acted as a mobilizing agent within this assemblage. Its caloric value, transportability, and combustibility structured decisions about railway routes, port expansions, and depot construction. Territory was not simply mapped; it was reorganized around energetic flows.

[208]İhsan Ahmed, "Kömür yolundan sonra Diyarbekire kadar uzanan bakır yolu da açıldı," *Cumhuriyet*, 1935–11–23 1935.

[209] https://www.taskomuru.gov.tr/ttk/tarihce/#:~:text=1957

[210] Bruno Latour, *Reassembling the social: An introduction to actor-network-theory* (Oup Oxford, 2007).



Figure 6 Map of the factories and railways connecting them through the country (*Ulus,* 29.10.1938)

One of the national strategies of early republic was to acquire national integration through spatial interventions. It was one of the prominent tools of the state to create a centralized and uniform network of infrastructural services, including the construction of railroads and bridges that connect the previously unreachable parts of the country, as well as opening of public buildings and squares in several cities.[211] *Railways did not only connect regions—they synchronized them temporally and economically. The Irmak–Zonguldak line exemplifies how infrastructure materialized national integration by tying the political center to extractive peripheries.* Linking the production and consumption centers was an emblem of economic sovereignty for the state while the possession of the national railways was an ambition of territorial sovereignty.[212] Such networks also produced asymmetry. Peripheral landscapes absorbed environmental degradation and labor risk, while urban centers accumulated symbolic capital from modernization. This uneven geography reflects the paradox identified in Chapter 2: the infrastructural state centralizes authority by decentralizing cost. Moreover, this map should be read not as a passive representation but as an active device of territorial production. By aligning extraction sites, industrial facilities, and railway corridors within a single visual field, it constructs the nation as an integrated energy-space, where sovereignty is exercised through the organization of flows rather than the mere delineation of borders. The uneven density of connections reveals that territorial integration is selective and infrastructural, producing gradients of inclusion

[211] Kezer, "An Imaginable Community: The Material Culture of Nation-Building in Early Republican Turkey," 510.

[212] Kezer, "An Imaginable Community: The Material Culture of Nation-Building in Early Republican Turkey," 511.

rather than a homogeneous national surface. At the same time, the map reconfigures nature into a set of mobilizable resources—coal, agricultural products, and industrial outputs—thereby enacting a socio-natural order in which environment and economy are co-produced within a national framework. Accompanied by the promise of a "stronger and more prosperous Turkey," this visualization operates as an instrument of energo-power, translating infrastructural expansion into political legitimacy and embedding energy networks at the core of state-building practices.

The prospect of national integration, as well as the governing of national territory, did not only mean modifying the physical environment but also controlling its symbolic meanings. The narrative of unity and progress besides the imagined map of railroads and urban spaces throughout the country also appeared in people's minds as they moved in these spaces, and when their bodies participated in commemorative events and shared activities. Moreover, the synchronized rhythms and routine transactions helped creating ephemeral webs as well, through which the experiential and imagined, and the abstract and the concreate were interwoven.[213] In the following part, state-led representations that created the official narratives around the energy experiences through different scales and mediums will be examined.

3.3.3. Representation and Consent-building

Nation building theme and the legitimization of state power through symbolic and cultural production are crucial parts of the historiography.[214] Anderson mentions social construction of nations through the historical emergence of new technologies of communication and sees the nation as a product of standardized thoughts.[215] In a similar vein, different mediums of communication, propaganda, and representation are used by the states to create a common narrative among the citizens. "In early Republican Turkey, energy was not only extracted and exported — it was *visualized*

[213] Kezer, "An Imaginable Community: The Material Culture of Nation-Building in Early Republican Turkey," 523.

[214] Koch, "Introduction: the state, energy and the environment," 93.

[215] Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*.

into political capital."[216] Visualization was not supplementary to extraction; it was constitutive of it. Maps, charts, exhibitions, and monuments transformed raw data into persuasive narratives. Rendering coal basins in color-coded maps or scaling exports against ships converted geological matter into legible national achievement. In Scott's terms, this was a project of state simplification, but one that simultaneously aestheticized governance. The government and its institutions mobilized energy data as a symbol of modern sovereignty. Making coal "legible" was part of governance through statistics and visuals.

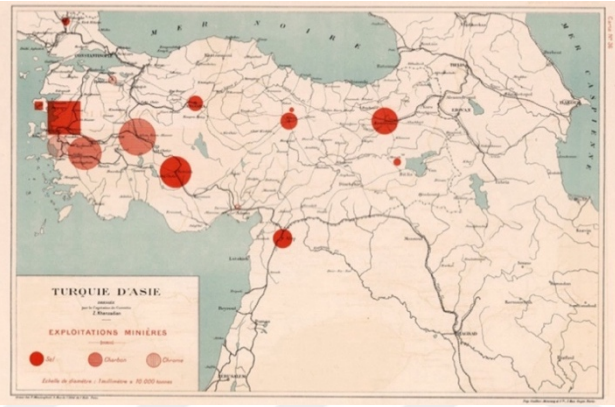


Figure 7 Color map of mining operations in Asia Minor. Shows salt, coal and chromium production and location of mines. https://archive.org/details/dr_turque-d-asie-dressee-par-z-khanzadian-exploitations-minieres-graved-p-13321040, last accessed 09.12.2025)

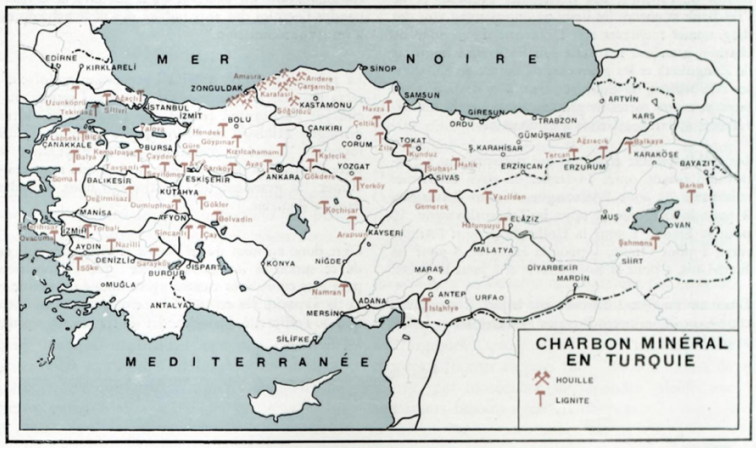


Figure 8 Coal basins map, (*La Turquie Kemaliste*, 1937, no.19, p.15)

[216] *MTA Journal*, 1936, Volume 1.

The maps of coal basins translate the subsurface into a legible territorial surface**,** marking lignite and hard coal across the country. In doing so, it produces what you frame as socio-nature: coal is no longer a hidden geological condition but a distributed national resource, spatially ordered and made intelligible. This cartographic abstraction aligns with a logic of state legibility, where the territory is simplified into extractable points, enabling both administrative control and ideological framing. At the same time, it contributes to an "imaginable community"**,** allowing citizens to perceive distant regions—Zonguldak, Kütahya, Eastern Anatolia—as part of a shared resource geography.

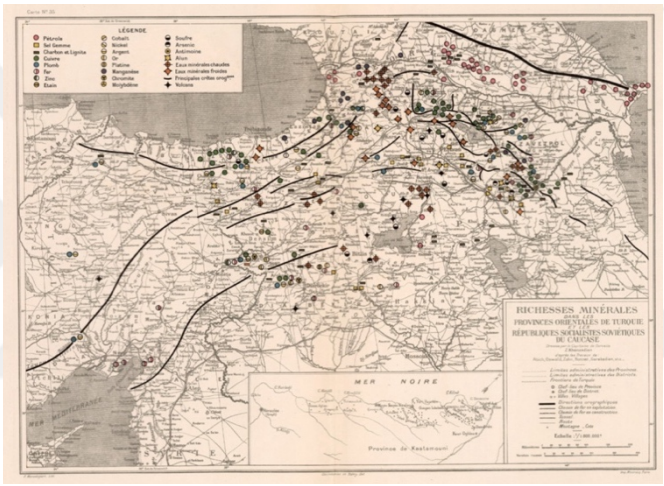


Figure 9 Color map of mines and mineral resources in the eastern provinces of Turkey and Republic of Caucasus, https://archive.org/details/dr_richesses-minerales-dans-les-provinces-orientales-de-turquie-republiques-s-13321039, last access 09.12.2025)

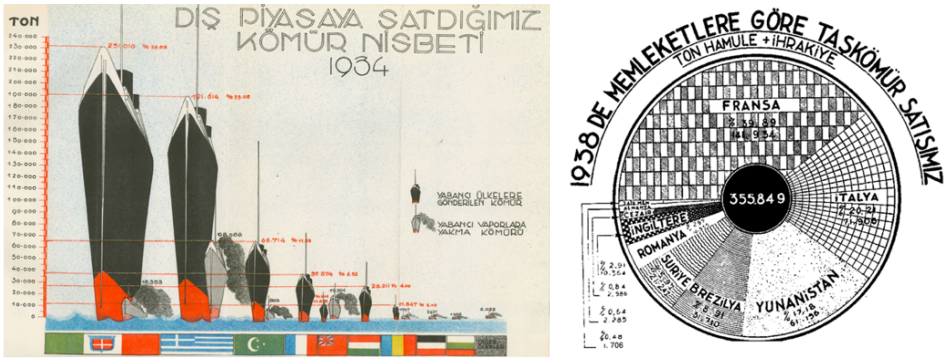


Figure 10 Graphics depicting the coal exports in 1934 and 1938 (*MTA Journal,* 1936, no.1; *MTA Journal*, 1939, no.16)

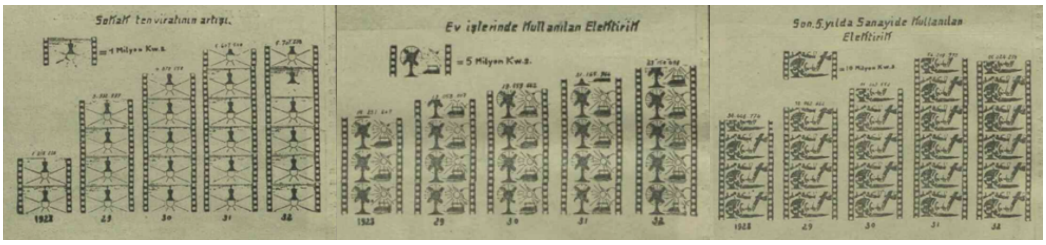


Figure 11 Charts depicting the use of electricity in street lighting, in households, and in the industry (*Hakimiyet-i Milliye*, 29.10.1933)



Figure 12 The 10-year increase in the electric power (*Hakimiyet-i Milliye*, 29.10.1933)

In addition to the official maps, different charts and images that illustrate the coal export of the country to other countries reflect the legible success and power of the state operations. The charts published on newspapers about the increase of electricity in the last decade and its distribution to the industry, households, and street lighting help representing energy as a quantifiable and legible object. The increase in the use also reveals a linear and progressive process that expands year by year. The narrative of the newspaper also compares to the Ottoman period and claims that the income of the energy companies now under control of the state rather than its previous condition where it served to a certain group of people. It also promotes the Republican initiatives that increased institutional developments, the production scale, and the illumination and electrification of several cities throughout the country, next to the other infrastructural developments including telegraph and telephone.[217]The illustrations work as an important medium of the self-consciousness and self-

[217] "Elektrik, Gaz, Su, Tramvay," *Hakimiyet-i Milliye*, 29.10.1933 1933.

representation of the Republic, while helping the society to have a mental map of the imagined community they feel the belonging to.[218]

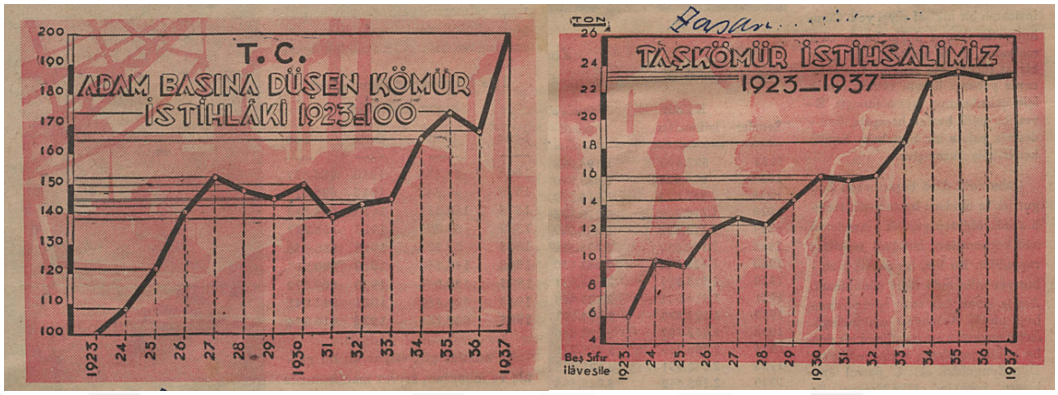


Figure 13 Graphs depicting the consumption and production of coal between 1923-1937 (*Ulus*, 29.10.1938)

The graphs showing the data between 1923-37 of "per capita coal consumption" and "hard coal production" appear in a newspaper article in a special issue for the 15th anniversary of the establishment of the Republic. The article describes the establishment of the Republic as a "creation of a new land" and compares the achievement of such a short period with the previous six hundred years of the country.[219] Depicting the gradually increasing amounts of consumption and production, the graphs also have a background of showing coal workers with hammers and factory chimneys with smoke. These graphs, different than the coal basin maps, operate through time rather than space. Their rising lines construct a narrative of progress, where numerical increase becomes visual proof of national development. They also not only work as neutral data but also as visual arguments, transforming abstract statistics into persuasive evidence. Here, energo-power becomes visible: the state extracts and distributes energy while simultaneously organizing its representation to demonstrate capacity, growth, and future promise. By making energy infrastructures and resources both spatially and temporally graspable, these visuals help naturalize the

[218] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 137.

[219] Saadettin Enver, "Madenciliğimize bir bakış," *Ulus 15. yıl ilavesi*, 1938/10/29 1938.

expansion of extractive systems and integrate them into everyday imaginaries of nationhood, progress, and modern life.

Some journals also depicted the coal mines and miners together with the depictions of the "six arrows" of the Republican People's Party, and a map of Turkey. [220] By such juxtapositions, these images tie industrial labor and natural resources directly to the legitimacy of the regime**.** Coal mining was not just economic activity; it was cast as a national duty and embodiment of Kemalist principles. and a map of the country. It can also be argued that the regime visually equated coal extraction and energy production with ideological power**.** Coal became both fuel and symbol that fuels factories, trains, and cities while embodying the transformative, modernizing, and disciplining force of the state.



Figure 14 Coal worker juxtaposed to the six arrows (*Zonguldak Karaelmas Halkevi Dergisi*, 1938, no. 105.

Coal has also found its representation in the movies that was filmed and published by the Ministry of Culture and Tourism. In a particular movie from the opening of the Zonguldak Semicoke Factory, coal is represented as the marker of a modern life that every Turkish household should adopt, and coal production becomes a metaphor for the state's responsibility to deliver modernization. It also frames coal

[220] "Cover of the journal," *Zonguldak Karaelmas Halkevi Dergisi* no. 105 (1938).

not merely as an energy source but as a civilizational marker, a moral duty, and a national achievement.[221] In this way, the film embodies the representational power of energy, where coal becomes a visible signifier of civilization, state power, and industrial modernity.

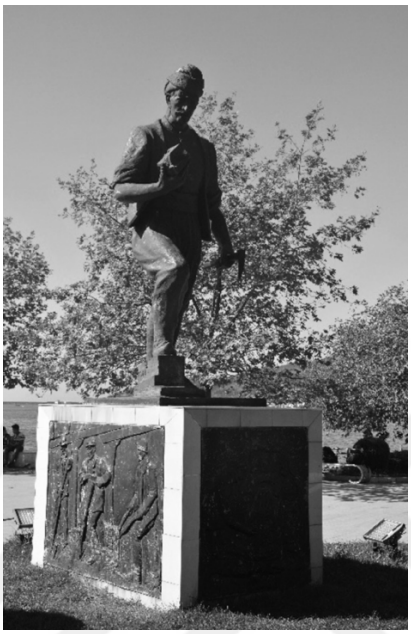


Figure 15 Uzun Mehmet Monument in Zonguldak (Oral, 2017, p.131)

The commissioning of the Uzun Mehmet Monument in Ereğli, Zonguldak, in 1932 offers a revealing spatial representation of the symbolic centrality of coal in early Republican Turkey. [222] Designed by sculptor Aslan Başpınar, the monument depicts on its pedestal a sequence of reliefs that narrate coal as both a natural resource and a foundation of national labor. The sculpture was opened with an official ceremony on November 8th in the memory of Uzun Mehmet, the figure who has discovered the first hard coal seams in Ereğli in 1829.[223] One side shows Uzun Mehmet and his mother feeding coal into a burning oven, another portrays three miners with tools, foregrounding collective labor; while a third represents a mine tunnel where workers

[221] "Çeşitli Olaylar (1936)," (Ministry of Culture and Tourism, 1936).

[222] Bülent Oral, "Zonguldak ve Karabük kentlerindeki anıt heykellerde işçi temsili," *Erdem*, no. 73 (2017): 131.

[223] Özkan, *Türkiye ve Dünyada Yüzyılın Birikimi 1930-1939*, 2, 122.

transport coal, spatializing the extraction process itself. In its multi-sided composition, the monument, materializes the statist narrative that coal was not merely fuel but the very basis of modernization and nationhood.[224] Spatializing the fusion of labor, nature, and nation and monumentalizing a miner, the regime redefined extraction as patriotic virtue. Stone reliefs narrate a socio-natural process—coal emerging from subterranean darkness into the light of national progress. The monument thus performs energo-power in sculptural form, embedding extraction within collective memory. While newspapers, advertisements, and monuments offered fragmented representations of coal's symbolic role, the 1937 International Coal Exhibition in Ankara brought these narratives together in an elaborate, state-orchestrated display that embedded coal and energy into the Republic's visual and spatial vocabulary of progress.

3.3.3.1. Display of National Energy: International Coal Exhibition

On 23rd April 1937, capital Ankara hosted an important event: the International Exhibition of Coal-Burning Equipment and Heating Appliances and Installations *(Kömür Yakan Vesait ve Teshin Aletleri ve Tesisatı Beynelmilel Sergisi)*. The exhibition was opened with the attendance of the ministers of the Ministry of Interior, Ministry of Foreign Affairs, Ministry of Customs, and Ministry of Agriculture, as well as the embassy officers, generals, bank managers, and other dignitaries.[225] Some national institutions that were involved with the exhibition were Etibank, General Directorate of Mineral Research and Exploration (MTA), Kozlu Coal Enterprise and Soma Coal Mines.[226] The first international exhibition of the republic carries the signature of Celal Bayar, the Minister of Economy, and most of the displays belonged to MTA.[227]Bayar, in his own article about the exhibition explains the choice of making coal the subject of first international exhibition as positioning coal as a "national matter". He refers to other countries that already use, promote, and govern through

[224] Oral, "Zonguldak ve Karabük kentlerindeki anıt heykellerde işçi temsili."

[225] Ulus, 24.04.1937

[226] "Ankara kömür sergisi," *Tan*, 24.04.1937 1937.

[227] Şefik Memiş, "Ankara Beynelmilel Kömür Sergisi," in *Türkiye Turizm Ansiklopedisi: Kavramlar, Kurumlar ve Kuruluşlar, Olaylar ve Kişiler*, ed. Metin Kozak Nazmi Kozak (Ankara: 2022), 365.

coal, such as England, and introduces the project of a coal law that will be presented to the National Assembly, as well as the duty of facilitating the affordable and timely supply assigned to Etibank.[228] The event was as much a political theatre as it was an industrial showcase. Extraction, technology, domesticity, and sovereignty were staged within a controlled architectural environment. Visitors moved through rooms that translated complex infrastructural systems into tangible displays. In doing so, the state mediated between expert knowledge and popular perception, producing consent not through coercion but through spectacle and pedagogy. During his opening speech, prime minister İsmet İnönü emphasized that increasing both the production and the use of coal and coal-using appliances throughout the country is a main policy that the government follows.[229] İnönü also pointed out the necessity of visiting of the exhibition by as many citizens as possible, and especially by the families and women in his speech.[230] The newspaper of the exhibition also claims that the displayed stoves and devices that provide cooking, hot water and heating of the homes would anticipate a dream life for a newly wedded couple.[231] Together, these statements frame the exhibition as a pedagogical space through which modern domesticity, and the ideal Republican family were to be collectively imagined and internalized.

The attendance to the exhibition was also promoted through the announcements in the newspapers starting from the early months of the year, and with the state-supported discounts on the train tickets for those coming to see the exhibition from other cities.[232] While such an initiative was appreciated, even further facilitations were expected to transport more people from the cities other than Ankara, and accordingly increase the reach and impact of the exhibition.[233] For those who will visit the exhibition, it was promised to see the manifestations of the "basis of the Western

[228] Celal Bayar, "Ankara İlk Kömür Sergisi," *Tan*, 23.04.1937 1937, 1.

[229] "Ankara kömür sergisi."

[230] "Ankara kömür sergisi."

[231] Nasuhi Baydar, "Sergimiz medeni teshin sisteminin en itinalı örneklerinden biri olmuştur," *Beynelmilel Kömür Sergisi*, 07.05.1937 1937, 5.

[232] "Dünya Maden Haberleri," *Bulletin of the Mineral Research And Exploration (MTA Dergisi)* 3 (1936): 40.

[233] Baydar, "Sergimiz medeni teshin sisteminin en itinalı örneklerinden biri olmuştur," 5.

civilization" in "modern life" and its application to the industrial and domestic realms.[234] It was also made obligatory to all the schools to visit the exhibition by making appointments beforehand.[235] A decision signed by the President, Mustafa Kemal Atatürk, mentions the permission be granted to commercial and industrial firms from foreign countries to enter Turkey without requiring visas, and they will be allowed to set up their installations before the opening of the exhibition. Moreover, after the exhibition, to demonstrate their manufactured goods in cities along the intended train route and stay in the country up to four months.[236]

The exhibition was realized in the Exhibition House and in its surrounding open space. The exhibition book claims that it is enough to follow the arrows to visit the exhibition in the best way. The "exhibition tour plan" consists of a site plan of the Exhibition House and the additional buildings of Experience Pavillion (*Tecrübe Pavyonu*), PTT (Post Office), Information Pavillion (*Danışma Yeri*), and Tütün (Tobacco) with red arrows directing the entrances. These pavilions were built by the Ministry of Economy to accommodate the high amount of applications by the companies to participate in the exhibition.[237] On the one corner of the plan, a train, the First National Assembly Building, and the 19 Mayıs Stadium were depicted to locate the Exhibition House, which has a strategic position on Atatürk Boulevard as one of the expressive symbols of the new capital.[238]

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[234] *Ulus*, 23.04.1937

[235] *Haber*, 24.04.1937

[236] Cumhurbaşkanlığı Devlet Arşivleri Başkanlığı Cumhuriyet Arşivi (BCA), 30-18-1-2, 74-31-10, 19.04.1937

[237] "İlk Enternasyonel Sergimiz," *Ulus*, 16.01.1937.

[238] Elvan Altan Ergut, "The Exhibition House in Ankara: building (up) the 'national' and the 'modern'," *The Journal of Architecture* 16, no. 6 (2011/12/01 2011): 857.



Figure 16 Aerial photo of the Exhibition House and the pavilions (*Beynelmilel Kömür Sergisi,* 07.05.1937)



Figure 17 International Exhibition of Coal-Burning Equipment and Heating Appliances and Installations booklet, cover and first pages

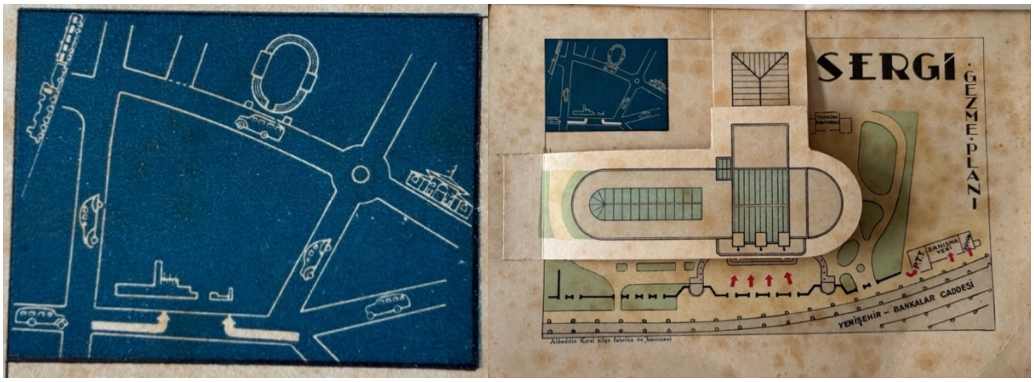


Figure 18 Exhibition Diagram and Site Plan, International Exhibition of Coal-Burning Equipment and Heating Appliances and Installations Booklet, 1937.

The book has foldable layers that respectively reveal the floor plans, and the exhibition order that include Honours Hall (*Onur Salonu*), Restaurant (*Lokanta*), Salon A (Hall A) and Salon B (Hall B) on the ground floor, and Hall C, D, and E (*Salon C, D, and E*) on the other floor. On the third page of the exhibition book there are "short and useful explanations" for the visitors, that explains that there are 7 halls within the building which are named alphabetically and has boards showing the name of each hall in their entrances.[239]

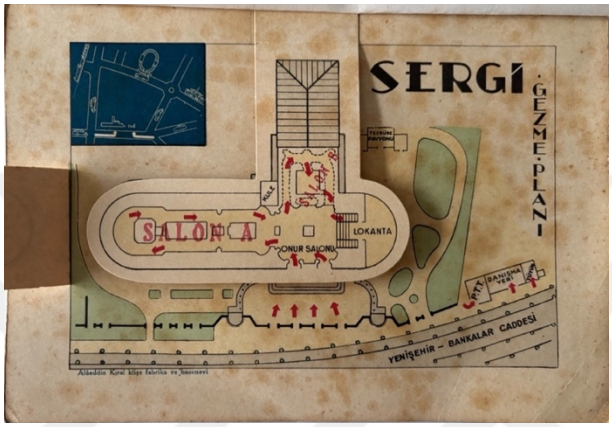


Figure 19 Exhibition Ground Floor Plan, International Exhibition of Coal-Burning Equipment and Heating Appliances and Installations Booklet, 1937.

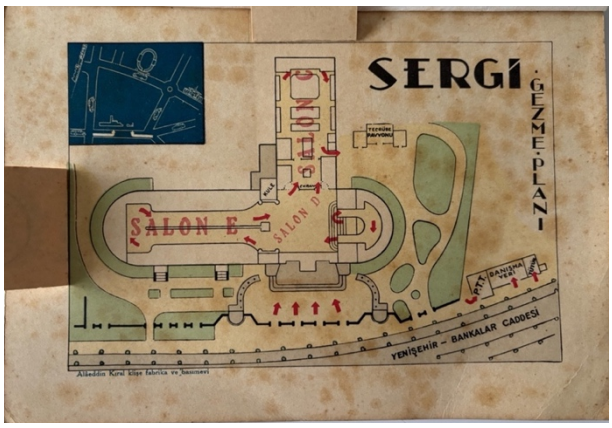


Figure 20 Exhibition First Floor Plan, International Exhibition of Coal-Burning Equipment and Heating Appliances and Installations Booklet, 1937.

[239] *Beynelmilel Kömür Yakan Vesait Sergisi Sergi Rehberi*, (İstanbul: 1937), 3.

The organization and design of the display booths belonged to Münir Hayri, and the products are displayed under seven categories: 1. Coal and its extraction, 2. Coal in the housekeeping, 3. Coal in public services (transportation), 4. Coal in the industrial realm, 5. Coal in the agricultural realm, 6. Coal-based means (coal gas, electricity), and 7. Products made of coal remnants and inks(pharmacologic preparations, drugs and fertilizers).[240]The stands in each hall are organized according to the companies that display their products, and another list that was assembled according to the product name is also provided within the book, and the lists are indexes with the all company names in alphabetic order.[241] This systematic organization reflects a deliberate effort to render the exhibition legible and accessible, facilitating comprehension and structuring the visitor experience.

The Honour Hall welcomes the visitors with a relief of Atatürk, designed by artist Münir Hayri, and a red-lit burning *"Eti mangalı"* carried by four coal workers. It was an important piece of the exhibition that has attributions to the Hittite ancestors and heritage of the country, which parallels the ethnic discourses of the regime. Such a reference to the older civilizations of Anatolia through this juxtaposition links the Republican present to imagined ancient Anatolian pasts, mobilizing references to earlier civilizations to naturalize coal as both historically rooted and nationally owned.[242] The mural on the wall inscribes "Coal is the driving source of civilization" above a woman and man running forward with an industrial background.

[240] Memiş, "Ankara Beynelmilel Kömür Sergisi," 365.

[241] *Beynelmilel Kömür Yakan Vesait Sergisi Sergi Rehberi*, 4.

[242] Cemal Kutay, "Mehmed Vatandaş Sergiyi Gezerken," *Beynelmilel Kömür Sergisi*, 07.05.1937 1937, 11.

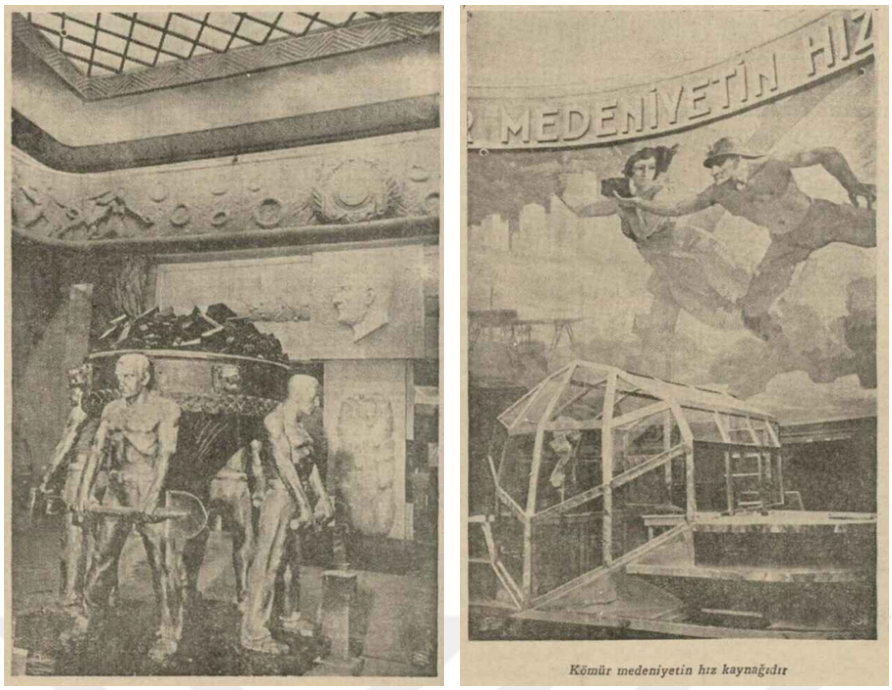


Figure 21 Eti mangal carried by four coal workers and the mural on the exhibition wall (*Ulus*, 23.04.1937)

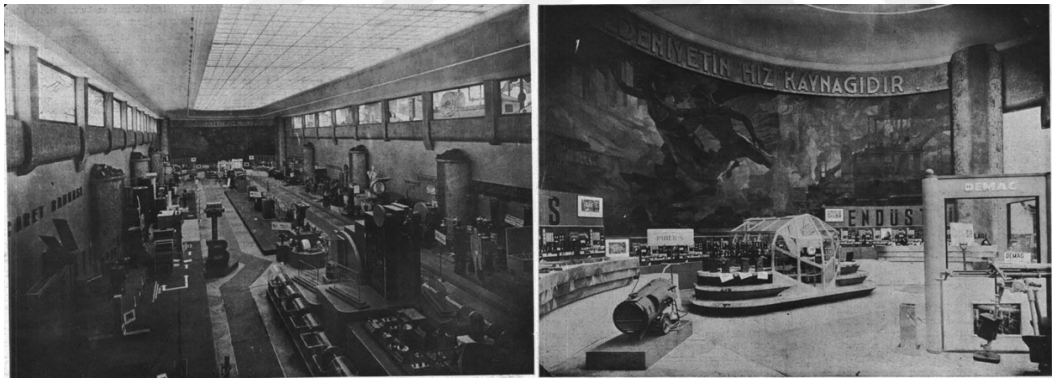


Figure 22 Display halls (*Arkitekt,* 1937, no.5)



Figure 23 Several halls of the exhibition (*Yedigün,* 1937, no.217)

Hall B was dedicated to Etibank and MTA to share, with a hall for "mines" and "hall of graphics". [243] One side of the hall opens to a dark, life-size coal mine installation where the visitors move through with a miner lantern on the narrow-gauge railway on the floor and with leaking waters on the sides, which imitates the original mines.[244] Such a dark, humid and firedamp room, accessed through an hidden door, carries the visitors into a bright space displaying models of present and projected conditions in the Zonguldak and Kütahya coal basins, alongside coal samples, coal-based products, and illuminated graphs and tables. [245]This spatial transition stages a movement from extraction to representation, transforming the mine from an inaccessible and hazardous underground environment into a legible and controlled domain. In some halls of the exhibition, models of coal mines and the life of the workers were displayed and appreciated.[246] The images of mining cities thus do more than depict distant sites; they reframe them as integral components of a national network, making visible the otherwise remote infrastructures that sustain the exhibition and the urban centers it addresses.[247] In doing so, the display mediates

[243] *Beynelmilel Kömür Yakan Vesait Sergisi Sergi Rehberi*, 59.

[244] Mekki Sait Esen, "Kömür Hazretleri," *Yedigün*, 1937, 15.

[245] Esen, "Kömür Hazretleri," 16.

[246] "Enternasyonel Kömür Sergisi'ni dün de binlerce halk gezdi," *Ulus*, 04.05.1937 1937.

[247] Aleksandr Bierig, "Building on Ghost Acres: The London Coal Exchange, circa 1849," in *Environmental Histories of Architecture*, ed. Kim Förster et al. (Canadian Centre for Architecture, 2022).

between periphery and capital, rendering the displacement of resources intelligible while symbolically integrating these distant landscapes into a unified national territory. Turning the physically remote and inaccessible places into imaginable spatial relations was also instrumentalized for the state's broader objective of cultivating a sense of citizenry.[248] By making the abstract and vicarious connections legible, materially grounded and tangible indications, the visual and spatial imagery of the exhibition helped **c**onstruct an "imaginable" nationhood that transcends the boundaries of the local and **c**onnects individuals within a broader sphere of shared spatial and experiential references.[249]

The graphs depicting the amount of production and use of coal according to the years, although described as "crooked lines", are presented as vivid evidence of developing national mining industry.[250] The increasing numbers on these graphs were seen both as indicator and a promise of progress, and are narrated as part of a broader project in which every Turkish household would burn coal instead of wood, the whole country would gain access to affordable energy, and coal exports would enrich the national economy.[251] In this sense, the graphs function not merely as statistical representations but as visual arguments that render industrial growth legible and persuasive to a wider public. Such decorated and accessible displays support the social and educational goals of the exhibition, while also contributing to the normalization of coal as a necessary and desirable component of everyday life.[252]

[248] Kezer, "An Imaginable Community: The Material Culture of Nation-Building in Early Republican Turkey," 526.

[249] Kezer, "The making of a nationalist capital: Socio-spatial practices in early Republican Ankara," 136.

[250] Esen, "Kömür Hazretleri," 16.

[251] Kutay, "Mehmed Vatandaş Sergiyi Gezerken," 11.

[252] "Beynelmilel Kömür Sergisi," *Bulletin of the Mineral Research and Exploration* 8 (1937): 51.



Figure 24 Hall of graphics and models (*Yedigün,* 1937, no.217)



Figure 25 Life-size model of a coal mine and workers, (*Yedigün,* 1937, no.217)



Figure 26 A life-sized model of a coal mine (*Beynelmilel Kömür Sergisi,* 07.05.1937)

Hall A accommodated the display of various state and private companies and institutions including Kozlu Coal Works Turkish Incorporated Company (Zonguldak), İş Bankası (Ankara), Soma Coal Mines, Cumhuriyet Press (Istanbul), Turkish Trade Bank (İstanbul), Trade Turkish Incorporated Company (Ankara), and the display booths of companies from 12 countries: Austria (7), Belgium (2), Czechoslovakia (2), England (3), France (2), Germany (29), Greece (2), Hungary (1), Italy (1), Netherlands (1), USA (5), Yugoslavia (1)[253] The varying number of participating companies highlights differing levels of industrial presence and engagement, while collectively situating the exhibition within a broader international network. Turkish coal, and its byproducts tar, pitch, and benzol are also in this hall, positioning national production alongside foreign expertise and technologies within a shared display framework. Hall C, D, and E are downstairs and again include different companies, institutions, and shops both from Turkey and from other countries, and Hall F, despite not seen on the floor plans, has a similar content.[254] Hall G is described as the "pavilion next door", and it is the Experience Pavillion and 15 display booths include local and foreign brands to introduce their products, further reinforcing the exhibition as a site of encounter between domestic industry and international markets.



Figure 27 Display room (*Arkitekt,* 1937, no.5)

There is a cinema screen in the Hall D that runs movies in various hours within the day, and the speakers all around the exhibition building calls the people for the

[253] *Beynelmilel Kömür Yakan Vesait Sergisi Sergi Rehberi*, 8–12.

[254] *Beynelmilel Kömür Yakan Vesait Sergisi Sergi Rehberi*, 61.

movie with an announcement. This is described as a precaution taken for the exhibition to be fun as much as it is useful.[255] At the buffet of the exhibition hall, some cartoons, done by artist Müfide, depicting the old *mangal* life with puppets and depicting Celal Bayar amidst coals, were displayed and appreciated by the visitors, which can be seen as a critique of the old manners and being open to the new technologies.[256] While many of the halls are covered by the displays of more than a hundred companies, the movie display, the casino, and the music present in the exhibition makes it not only educational but also joyful and entertaining, blurring the boundaries between instruction, consumption, and leisure within the exhibition space.[257]

The importance given to the displays and organization within the building was also given to the exterior view of it. To make the exhibition "attractive and beautiful", the Philips company undertakes the project of the exterior illumination. To provide the lighting service and adorn the building in novel ways, the engineers of the company arrive in Ankara.[258]

Peyami Safa in the exhibition newspaper state that the Ottoman Empire has only conquered what is above the ground, and the revolution of Atatürk and the administration of İnönü have aimed to conquer the underground assets of the country. He further argues that only now the coal will provide illumination, heating and movement in contrast to the conduct of previous regimes.[259] Framed in this way, the "underground" is not merely a physical resource but a newly legible and governable domain, brought into the scope of the state through extraction, infrastructure, and planning. Coal thus emerges as a central mediator in the reconfiguration of socio-natures, transforming buried matter into visible, circulating energy that reshapes everyday life and spatial practices. At the same time, this discourse constructs a temporal and civilizational rupture, positioning the Republican regime as both technologically and morally superior through its capacity to mobilize subterranean resources. In doing so, energy is not only material but also ideological: coal becomes

[255] *Beynelmilel Kömür Yakan Vesait Sergisi Sergi Rehberi*, 6.

[256] Haber, 24.04.1937

[257] Esen, "Kömür Hazretleri," 16.
[258] "İlk Enternasyonel Sergimiz," 6.

[259] Peyami Safa, "Kömüre dair vecizeler," *Beynelmilel Kömür Sergisi*, 07.05.1937 1937, 3.

a vehicle through which territory is deepened, the nation is materially grounded, and modern life—defined by light, warmth, and mobility—is unevenly but symbolically extended across the country.

In an article about the exhibition in Yedigün magazine, titled "*Kömür Hazretleri*", several aspects of the exhibition, including its role, meaning, and broader economic and social relations are discussed. One of the main aims of the exhibition was to broaden the domestic and foreign market reach of the coal, while promoting and developing both the coal-based products and coal-burning devices.[260] Accordingly, the most effective, affordable, and feasible coal-burning devices are selected and promoted to the people.[261] The increase in the production of the coal, therefore the decrease in the prices, is seen as an indicator of the position of Turkish coal in the international market. At least, covering and governing the Mediterranean market needs is seen as the primary aim, and the exhibition has an agency within such an international network of exchanges.[262]

The exhibition had another duty as well. Since the people in the rural cities could not carry their own coal from the mines, the state took measures to make sure to provide transportation of the coal from Zonguldak to the domestic market and expanded railways, accordingly, demonstrating how energy infrastructures operated as instruments of territorial integration and governance. Despite being a prominent consumer of the coal, the railways also brought "civilization" to wherever it reaches while fueling the developing industry of the country.[263] In this sense, among other simultaneous technological developments of the industrialization process such as the steam engines and coal-fired iron production, the advancement of the steamships and especially railways increased the number of accessible coalfields while also creating a self-propelling cycle where coal's power was used to transport coal itself, illustrating the co-production of natural resources and technological systems, resulting in significant changes in the scale and speed of production and commerce.[264] In a similar

[260] Memiş, "Ankara Beynelmilel Kömür Sergisi," 364.

[261] Esen, "Kömür Hazretleri," 15.

[262] Esen, "Kömür Hazretleri," 16.

[263] Esen, "Kömür Hazretleri," 15.

[264] Bierig, "Building on Ghost Acres: The London Coal Exchange, circa 1849."

vein with the railways, one of the most comprehensive infrastructural project of the early republic, the exhibition became a site of state-citizen transaction where the people were reminded of their participation in a shared community. Through the displays and the concrete spatial experience, the exhibition facilitates the transformation of the abstract concepts of nationhood while illustrating the places and information that is not immediately visible, therefore turn the community into an "imaginable" one.[265]

Realizing this under unprecedented and the most modern and sanitary conditions, and presenting the "new" Turkey, especially Ankara to the participating countries was also described as the great aims of the exhibition.[266] In accordance with such a recognition, Yunus Nadi mentions the praises of European media that sees the exhibition as a true European accomplishment, and emphasized the need of an association dedicated to such state exhibitions, other than the Ministry of Economics that undertakes the role, to have continuity and advancement in the exhibition practices.[267] The success of the event not only promotes coal and educates the public about its extraction, use, and potential, but also demonstrates the capacity for progress in exhibition practices when grounded in technical and systematic planning. It thus emerges as an exemplary medium for the future promotion and dissemination of subjects beyond coal.[268] The exhibition, as it intended, informs the international industry sector about the rich mining resources of Turkey. Times newspaper publishes about the importance given to the mines and especially to coal by the Turkish government within the scope of the Second Five Year Industrial Plan, and encourages companies to participate the exhibition for the potential of receiving large orders form the government.[269] A note from Berlin describes the exhibition no lesser than any

[265] Kezer, "An Imaginable Community: The Material Culture of Nation-Building in Early Republican Turkey," 509.

[266] "İlk Enternasyonel Sergimiz."

[267] Yunus Nadi, "Sergimiz haklı olarak beynelmilel takdirler kazanan bir eser oldu," *Beynelmilel Kömür Sergisi*, 07.05.1937 1937, 2.

[268] Mümtaz Faik, "Teknik ve teşkilat," *Beynelmilel Kömür Sergisi*, 07.05.1937 1937, 9.

[269] "İlk Enternasyonel Sergimiz," 6.

European counterpart, and an example for the Balkan countries.[270] The participation of the other countries to the exhibition was also an opportunity for Turkey to closely encounter the latest and most efficient products of the "Western civilization".[271] Moreover, in terms of the international promotion of the event, the company of international sleeping car undertakes the role of tourism agency of it, and any branch of it through Europe would provide the information about the exhibition.[272] The mastery of the state in the exhibition practices was also complimented by many local and foreign people, with the expressions of it being "suiting the high ideals of the Turkish nation".[273] The newspapers announced and updated the number of people visiting the exhibition, which reached 80000 people by the end of the exhibition on 23rd of May, and proudly shared the foreign comments that evaluate the exhibition as similar to European counterparts and even better than some other international exhibitions.[274]

The introduction and promotion of the main underground treasure of the country, coal, to the society was a duty of the new republican government, and the exhibition is described as the first instance that paid special attention to it.[275] Coal is also referred to as the "black diamond" in various media, emphasizing its latent energy, transformative capacity, and the range of valuable byproducts it generates..[276] Yet it is emphasized that the civilization could survive without diamonds but the world would go back in savagery in seconds without the existence of coal.[277] Such colloquial term for coal reveals how a mineral fuel intertwines with the conventional registers of value.[278] The presented contrast thus constructs coal as indispensable to modern life,

[270] Çağlar Şair, "Sergi cidden muvaffak olmuş güzel bir eserdir," *Beynelmilel Kömür Sergisi*, 07.05.1937.

[271] "İlk Enternasyonel Sergimiz."

[272] "İlk Enternasyonel Sergimiz."

[273] Haber, 24.04.1937

[274] Cemal Kutay, "Kömür sergisi bugün kapanıyor," *Ulus*, 23.05.1937 1937.

[275] Esen, "Kömür Hazretleri," 16.

[276] Dr. Ahmet Canokay, *Kömür Teşekkülü Hakkında*, vol. 2 (Beşiktaş Halkevi: 1938).

[277] Safa, "Kömüre dair vecizeler," 3.

[278] Bierig, "Building on Ghost Acres: The London Coal Exchange, circa 1849."

reinforcing its centrality in narratives of progress, development, and the everyday functioning of the nation, while framing nature itself as a resource to be reorganized and mobilized through energy infrastructures.

Another important aspect of the exhibition is that the opening day is deliberately aligned with the National Sovereignty and Children's Day. This temporal coincidence was not incidental but symbolic, reinforcing the exhibition itself as a performative act of national sovereignty. By inaugurating an international exhibition on the very day dedicated to the Republic's foundational values, the event was framed as an extension of the national holiday, thereby amplifying its political and symbolic resonance. This calendrical alignment symbolically fused energy sovereignty with political sovereignty. By synchronizing industrial exhibition with a national holiday, the regime embedded infrastructural achievement within the temporal rhythm of the Republic. Energy was not merely spatialized—it was ritualized.

The opening speech of İsmet İnönü was broadcasted live on the radio.[279] The movie of the International Coal Exhibition was also sent to the People's Houses in different cities such as Mersin and Sivas to be screened for one week.[280] The film was further screened and received recognition in foreign cities such as London, Oman, Jerusalem, and Bern, resulting in both domestic and international visibility.[281] These mediated forms of circulation extend the educational and outreach aims of the exhibition through newly introduced electric and visual technologies of the period, enabling its messages to reach audiences beyond the physical site and aligning with broader state-led efforts of dissemination.[282] The Information Pavilion distributed these brochures, and the exhibition's Post Office provided postcards and stamps marked with a special exhibition seal, which were considered valuable souvenirs for the future.[283] Such memorial and ephemeral items that remain with visitors function

[279] Memiş, "Ankara Beynelmilel Kömür Sergisi," 365.

[280] TAN 20.04.1938

[281] Zehra Nalu Gide, "Erken Cumhuriyet Dönemi'nde (1923-1950) Türkiye'nin Tanıtım Filmleri," *İletişim Kuram ve Araştırma Dergisi*, no. 64 (2023): 64.

[282] *Beynelmilel Kömür Yakan Vesait Sergisi Sergi Rehberi*, 5.

[283] "Bugün saat 15'de Ankarada İsmet İnönü çok mühim bir nutukla Kömür sergimizi açıyor," *Haber*, 23.04.1937.

as socio-natural artifacts, materializing the exhibition's narratives and extending their presence into everyday life beyond the temporal and spatial limits of the event. The news, announcements and articles in the prominent newspapers of the period, post stamps, and posters were among the media that helped carry the messages of the power of the state on both the coal fields and the representation of it in the international realm. The 1937 International Coal Exhibition in Ankara functioned not merely as an industrial display but as a spatial and discursive stage where the early Republican state materialized its energy regime, presenting coal simultaneously as a symbol of national development and a pedagogical tool for citizens to use and adapt the contemporary technologies.

The exhibition works as a public-facing representational site where energy infrastructures were staged as symbols of progress and collective destiny. It can also be seen as a pedagogical space that mediated between expert knowledge and popular understanding, translating abstract systems of extraction and distribution into tangible narratives of national development. This exhibition positions the citizens not only as beneficiaries of the energy modernization but also as participants in a shared national project.

Energy infrastructures constituted the material and epistemic ground upon which state formation unfolded. Yet this ground was never neutral. Coal extraction, electrification, and territorial integration simultaneously reorganized landscapes, labor, and domestic life. They reorganized territory, disciplined labor, standardized consumption, and produced new affective attachments to the nation. Yet, as argued in Chapter 2, energo-power is never absolute. The same infrastructures that extended authority also generated dependency, vulnerability, and uneven development. Coal extraction scarred landscapes; electrification produced hierarchies of access; logistical networks exposed the fragility of centralized supply. The state's attempt to govern nature through energy generated new dependencies, inequalities, and experiential conditions that exceeded centralized control.

This chapter has examined how energy infrastructures were conceived, politicized, and represented as state instruments of modernization in Turkey. It has demonstrated that energy modernization in Turkey was neither purely technical nor purely symbolic—it was infrastructural governance in action. By situating Turkish developments within global energy regimes while tracing their territorial, institutional,

and representational dimensions, the analysis reveals how socio-natures were actively produced through planning, extraction, and mediation. While the infrastructures were designed, built, and monumentalized, these spatial orders were not seamless or uncontested. They only materialize these claims when embedded in landscapes, cities, and interiors through lived, negotiated, and often resisted in daily life experiences. If this chapter examined how energy was organized, narrated, and monumentalized, the next investigates how it was inhabited.

The following chapter, therefore, shifts the focus from discursive framings to spatial embodiments, tracing how coal and electricity reordered territories, constructed new urban logics, and reshaped everyday environments. It turns to the urban and domestic scales to analyze how energo-power reordered everyday life, exposing the frictions between state-designed order and lived experience. In this way, the governance of energy is considered not only in plans and propaganda, but also in urban and domestic experiences while tackling the tension between ordering and inhabiting energy that the following chapter examines at the scale of everyday life. Doing so, it tests whether infrastructural sovereignty remained stable when translated into streets, buildings, and interiors.

CHAPTER 4

LIVED EXPERIENCES OF ENERGY

Since electrification extended its reach across urban and domestic environments, its social history necessarily traverses the physical fabric of buildings and cities while encompassing labor, gender, advertising, visual culture, and everyday practices. To write the history of energy solely through inventors, engineers, or state managers would reproduce a technocratic narrative. Equally necessary is an account of how ordinary actors—consumers, housewives, workers, tenants—encountered, negotiated, and interpreted energy within the spaces they inhabited.[284] Beyond fossil fuels' relation to demographic factors, economic and technological changes, and national ambitions, this chapter foregrounds experience of how energy was welcomed, feared, improvised, resisted, and cherished in daily life.[285] It shifts the analytical focus from state projects and representational scale to embodied practices and affective spatialities. Drawing primarily on print media materials including periodicals and newspapers, the chapter argues that energy was experienced not as an abstract technical system but as a set of sensory, moral, and emotional experiences that revolved around urban life and domestic routines and structured through light, heat, noise, smoke, interruption, and expectation.

Drawing primarily on periodicals and newspapers, this chapter treats print media not as illustrative supplements but as an archive of spatial practices revealing how energy participated in the construction of everyday spaces and experiences. Rather than considering newspapers, advertisements, announcements, and caricatures as secondary reflections of infrastructural change, the chapter approaches them as sites where energo-power becomes socially legible and morally negotiated. Print media did

[284] Nye, "Electrifying America: Social meanings of a new technology," xi.

[285] Russ and Turnbull, *Energy's History: Toward a Global Canon*, 6.

not simply report electrification; it actively spatialized it, framing certain neighborhoods as illuminated and progressive while casting others as dark, backward, or neglected. They also worked as manuals for the use of appliances, as well as the control of the movement in the urban space, while creating an interface between the actors including the state, the companies, shops, officers, consumers, and citizens. In doing so, the press participated in the architectural production of urban hierarchies, shaping how space was evaluated, desired, and stigmatized. Through repetition and visual rhetoric, media narratives thus produced a moral cartography and an energy-related network of the city.

Some appliance advertisements function as instructional technologies, producing normative images of the modern home and prescribing ideals of cleanliness, comfort, efficiency, and gender roles. They did not merely market products; they choreographed domestic space. The modern home emerged not simply as a site of consumption but as an architectural stage upon which energy reorganized everyday life. In contrast, caricatures and illustrations produce a critical register, exposing the gap between representational promise and material reality. This tension between promise and access surfaced most visibly in moments of breakdown. Newspapers documented accidents, explosions, infrastructure failures, economic disparities and pollution-related health concerns, revealing the fragility underlying the rhetoric of uninterrupted progress and anxieties around the distribution, placement, and use of energy. The moral connotations around energy, which simultaneously appear as a source of progress and a site of risk, redefine the boundaries between safety and danger, public and private, institutions and people, acceptable proximity and intolerable exposure. The placement of substations, the routing of transmission lines, and the siting of coal depots were not merely technical decisions; they redistributed the benefits and burdens across different social groups and urban zones. By tracing these representations alongside material conditions, this chapter argues that energo-power stabilized itself not only through wires, grids, and policies, but through perception, habit, and affect. Governance through energy was most effective where it appeared natural—when illumination felt like progress, when warmth signified order, and when darkness implied deficiency. Everyday life, therefore, becomes a crucial terrain for understanding how infrastructural authority was internalized, contested, and unevenly distributed across architectural space.

The chapter aims to complete the dissertation's analytical arc by demonstrating how the energy systems worked as a tool of application of socio-natures and governance and a medium that stabilized the energo-power practices while shaping the space of daily life not only through wires and pipes but also through emotions, habits and moral evaluations. Energo-power becomes most durable when it disappears into habit. When lighting switches are flipped without thought, when coal is expected to arrive before winter, when tram schedules depend on uninterrupted voltage, governance has migrated from decree to routine. By tracing these routines, this chapter reveals how infrastructural authority operated through repetition, expectation, and affect rather than solely through policy or institutional command. While doing so, it creates intentional urban and interior orders, including instructions, expositions, and courses, that were advertised and promoted through print media. This shift from macro-policy to micro-experience does not abandon the state-centered analysis of previous chapters; rather, it tests it. If Chapter 2 demonstrated how the state governed through energy infrastructures, this chapter asks how such governance was absorbed, contested, and reinterpreted within streets, interiors, and everyday routines. By situating scarcity, satire, complaints, and daily exchanges and encounters alongside celebratory narratives, the chapter reframes the 1930s not as a seamless ascent toward modernity but as a field of negotiation where socio-natures, architecture, and governance intersected.

This subchapter explores how energy structured moral and affective geographies within urban and interior spaces by using moral atmospheres as a lens. Through press narratives, caricatures, and visual representations, urban space was repeatedly framed through binaries such as light/dark, safe/dangerous, clean/dirty, modern/backward.[286] Electrified streets symbolized order, visibility, and security, while dark or poorly lit areas were associated with crime, disorder, and moral ambiguity. These oppositions did not merely describe space; they produced evaluative hierarchies through which the city was morally mapped.

Energy infrastructures thus participated in the atmospheric production of space. Light functioned not only as illumination but as an affective medium, generating

[286] Barclay and Riddle, "Urban Emotions and the Making of the City.", Anderson, "Affective atmospheres."

feelings of pride, comfort, visibility, and belonging. Conversely, smoke, cold, flicker, and darkness generated anxiety, irritation, and fear. Atmosphere here is not metaphorical but architectural: it refers to the sensorial and emotional conditioning of space through infrastructural systems. Newspapers and magazines frequently visualized these atmospheres, often exaggerating contrasts for rhetorical or satirical effect. Caricatures mocking blackouts, unreliable electricity, or smoke-filled neighborhoods exposed the gap between official narratives of progress and uneven realities of access.

Importantly, these moral geographies were not imposed unilaterally by the state; they were co-produced through media circulation, public discourse, and everyday embodied perception. Citizens internalized, contested, and reworked these spatial meanings, using energy conditions to evaluate neighborhoods, authorities, and each other. Illumination could become a marker of respectability; darkness could stigmatize entire districts. This perspective allows macro-level policies to be investigated through micro-level experience, revealing how governance materialized as sensation and judgment within architectural space.[287]

Treating affective atmospheres as a legitimate object of architectural history, this chapter argues that energy infrastructures shaped not only the physical spaces but their emotional and moral texture. Reading visual and textual sources together makes visible how energy made urban space legible, desirable, or stigmatized, how interiors were stabilized as orderly, hygienic, and modern—or exposed as precarious and inadequate.

Despite its abstract quality, energy preconditioned action. It structured how bodies moved, how long work continued, how evenings unfolded, and how environments were judged.[288] Grief and hope coexisted in making sense of human-nature relationships: the promise of mastery over darkness accompanied the persistent awareness of dependency and risk.[289] The electric switch in particular, condensed these tensions. The willpower it seemed to grant – allowing ordinary individuals to

[287] Adak and Lamprou, "Giriş: Tek Parti Dönemini Yeniden Düşünmek," 15.

[288] Russ and Turnbull, *Energy's History: Toward a Global Canon*, 16.

[289] Benjamin Brown and Samuel J Spiegel, "Coal, climate justice, and the cultural politics of energy transition," *Global environmental politics* 19, no. 2 (2019): 152.

“activate” space with a touch - was celebrated as a triumph of modernity, which, in turn, affected the emotional and psychic experience of the space.[290] The power of instantly altering the appearance of spaces rendered the switch an alloy of body, technology, and willpower rather than only a mechanical device.[291]

The switch can therefore be read as a micro-architecture of governance. Embedded within walls and standardized across interiors, it materialized the promise of environmental control. It staged a choreography of sovereignty at the scale of the body: press, illuminate, command. The lighting, cooling, heating, air conditioning, and cleaning devices also came with bodily instructions and hygiene and health related consequences. Appearing mostly as advertisements of certain appliances, the media educated and informed both the design and order, and the use of spaces. [292] From electric bulbs to radios, refrigerators to stoves, vacuums to water heaters, and fans to hair dryers, the appliances affected the bodily experience of the electric technology as well as the experience and perception of domestic interiors. At the same time, this tactile autonomy masked the centralized systems of extraction, generation, and distribution upon which it depended. The intimacy of control concealed infrastructural vulnerability. Domestic interiors thus became sites where sovereign subjectivity was rehearsed, even as it remained structurally tethered to national grids, coalfields, and industrial labor regimes.

[290] Isenstadt, *Electric Light: An Architectural History*, 33.

[291] Isenstadt, *Electric Light: An Architectural History*, 35.

[292] Akbaba, 1935, Issue 74.

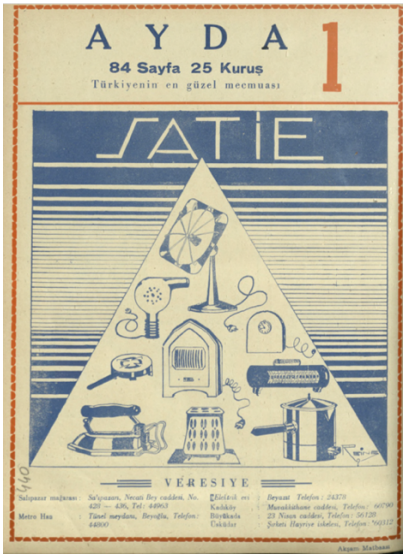


Figure 28 Advertisement for several appliances (*Akbaba*, 1935, no.74)

In this sense, moral atmosphere becomes a key analytical bridge between Chapter 2's discussion of energo-power and the lived experience explored here. If energy infrastructures territorialized the nation at the macro scale, they territorialized perception at the micro scale. Modernization did not succeed solely because grids were built; it succeeded where illumination felt synonymous with order and where darkness felt intolerable. The moralization of atmosphere was therefore not incidental to modernization—it was one of its most effective spatial technologies.

4.1. Access, Pricing and Uneven Distribution of Energy

Carbon and energy carry culturally contested meanings embedded in lived, socio-material and context-specific struggles shaped by "historically constituted structures of power".[293] A critical climate justice lens helps displace extractivist, growth-oriented, development paradigms by foregrounding the inequalities coded into the cultural politics of coal.[294] When examined from this perspective, the history of electrification in Republican Turkey appears not as a smooth trajectory of progress but as a terrain of friction, scarcity, and negotiation.

[293] Brown and Spiegel, "Coal, climate justice, and the cultural politics of energy transition," 151.

[294] Brown and Spiegel, "Coal, climate justice, and the cultural politics of energy transition," 149.

Despite the representational power of coal production and electrification and its prominence in state discourse, the uneven distribution of electricity - across regions and within cities – reveals a more fractured landscape. Energy access has been a concern even in countries with different income levels.[295] Blackouts, shortages, uneven pricing, and differential access produced conflicts that complicate celebratory modernization narratives. Rather than a linear transition from darkness to light, the evidence points to patchy illumination, intermittent supply, and infrastructural improvisation. The geography of light followed political priorities, fiscal capacities, and regional hierarchies. Modernization unfolded as a differentiated spatial process.

Artificial illumination became a crucial technology of national imagining in the late 19th and early 20th centuries while the lighting changed the temporality of urban life, also made dark spaces gloomier."[296] Street lighting and electrified public buildings did more than extend visibility; they reshaped the temporality of urban life. Night was no longer a natural boundary to activity but a governable interval. The city acquired a second life after sunset, reorganizing rhythms of work, leisure, and sociability. Electrification was frequently associated with decreased crime, the emergence of a vibrant night life, and enhanced public safety. Radio broadcasting, evening gatherings, and traveling cinemas compressed temporal and spatial distances and contributed to the distributional justice in the county.[297] Integrating provincial populations into national circuits of communication, light functioned as an infrastructural medium of simultaneity, synchronizing citizens across territory. It was a part of the state's agenda in ensuring public order, civic participation (nighttime use of public space), cultivation of literate citizens (extended hours of reading and schooling), and public health agenda (associations drawn between brightness and cleanliness).[298]

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[295] Webb, Wade, and Tingey, "Introduction to Research Handbook on Energy and Society: why study energy and society?," 6.

[296] Szeman and Boyer, *Energy humanities: An anthology*, 28.

[297] İleri, "Ambitious yet Ambivalent: Electrical Infrastructure and Inequality in Early Republican Turkey."

[298] İleri, "Ambitious yet Ambivalent: Electrical Infrastructure and Inequality in Early Republican Turkey."



Figure 29 About electric prices (*Akbaba*, 1931, no.51; *Akbaba*, 1932, no.58; *Akbaba*, 1932, no.52)

Contemporary advertisements and informational graphics consistently framed electricity as both affordable and necessary for a proper domestic life. A cost chart presenting the price of lighting in Istanbul translated electricity consumption into everyday terms, comparing the expense of using different bulbs for four hours to the cost of ordinary daily items such as matches, newspapers, or small consumables. [299] In doing so, electricity was rendered legible within the familiar economy of everyday life, minimizing its perceived burden and normalizing its regular use. This economic framing was further reinforced through advertisements that explicitly discouraged saving on light. Slogans such as “saving on light is wrong saving” and “economizing through light” redefined consumption itself as a form of prudence, suggesting that sufficient illumination would protect health, reduce fatigue, and enhance comfort.[300] Rather than promoting restraint, these materials advocated for an optimal level of consumption, positioning electricity as both a rational expense and a component of well-being.[301] Through such representations, the electric company constructed an image of energy as accessible, affordable, and beneficial, embedding it within daily routines and moral economies of the household—an image that did not fully correspond to the uneven realities of access and the contested nature of pricing.

[299] "Elektrik tenviratı pahalı değildir," *Amel-i Elektrik*, no. 51 (1931).

[300] "Ziyadan tasarruf yanlış tasarruftur," *Amel-i Elektrik*, no. 52 (1932).

[301] "Ziyadan iktisat etme," *Amel-i Elektrik*, no. 53 (1932).

On the other side of this narrative, some electricity demands often went unmet. Frequent power cuts, unequal grid expansion, and high tariffs deepened pre-existing social and spatial inequalities.[302] The relation of energy in historic and conceptual terms to the capitalism and work also reveals its profound role in the cultivation of experience of economic class differences.[303] Illumination did not simply brighten streets; it exposed disparities. Certain neighborhoods were integrated into circuits of visibility and comfort, while others remained infrastructurally precarious.[304] The republican era propagated a discourse of systematic efforts to provide the whole country with electric energy.[305] Electrification of the country both shaped the agenda of the new regime and was shaped by it.[306] Yet, electrification simultaneously produced inclusion and marginalization. The discourse of universal provision coexisted with selective implementation, rendering different classes of society more visible.[307]Although the exhibitions of the electric company were free of charge and inviting people without dictating to buy anything, both the reach of those announcements on print media and the represented images of people were limited to a certain group of the society.

The significance of energy access in this period was most visible in moments of scarcity. The outbreak of the Second World War disrupted coal production and labor supply, leading to acute coal shortages.[308] Such disparities in energy access, regional

[302] İleri, "Ambitious yet Ambivalent: Electrical Infrastructure and Inequality in Early Republican Turkey."

[303] Caleb Wellum, "The Use of Energy History," *Modern American History* 6, no. 2 (2023): 216.

[304] İleri and Degirmencioglu, "Erken Cumhuriyet Dönemi Türkiyesi'nde Asri Ev Tartışmaları ve Elektrikli Tenvirat," 100.

[305] İleri and Degirmencioglu, "Erken Cumhuriyet Dönemi Türkiyesi'nde Asri Ev Tartışmaları ve Elektrikli Tenvirat," 102.

[306] İleri and Degirmencioglu, "Erken Cumhuriyet Dönemi Türkiyesi'nde Asri Ev Tartışmaları ve Elektrikli Tenvirat," 96.

[307] İleri and Degirmencioglu, "Erken Cumhuriyet Dönemi Türkiyesi'nde Asri Ev Tartışmaları ve Elektrikli Tenvirat," 100.

[308] Caroline E. Arnold, "In the Service of Industrialization: Etatism, Social Services and the Construction of Industrial Labour Forces in Turkey (1930–50)," *Middle Eastern Studies* 48, no. 3 (2012/05/01 2012): 374.

development, and infrastructure in Republican Turkey were not accidental but an integral consequence of the state priorities in making space "legible" and governable.[309] Whenever coal could no longer be secured, electricity, tramway, and ferry services were disrupted, revealing the extent to which urban life was dependent on a steady supply of fuel. The provision of wood and coal for the cities had far-reaching consequences on everyday life. Coal, in particular, was indispensable since it sustained several spaces of production and daily life such as the bakeries, *hamams*, and coffeehouses, brick, tile kilns, electricity companies.[310] In this sense, coal functioned as both the economy's primary raw material and the city's core energy source, underscoring how energy access was fundamental not only to comfort and mobility but also to the very functioning of urban infrastructure and economic production. Coal shortages reveal the metabolic vulnerability of modern urbanism. Bakeries, *hamams*, coffeehouses, factories, and tramways were not isolated consumers but nodes within a shared energy metabolism. When fuel supply faltered, the city's architectural and social functions slowed or halted. This exposure of dependency disrupts narratives of mastery over nature. Winter cold, rainfall shortages, and labor disruptions demonstrate that socio-nature remained an active participant in shaping urban temporality. Scarcity thus functioned as a diagnostic moment, making visible the otherwise normalized flows that sustained the modern city.

This part of the study focuses primarily on the spatial inequalities and injustices produced through energy infrastructures, while extending the analysis to related environmental concerns such as air pollution and waste management that similarly reshape urban and rural ecologies and deepen questions of environmental justice. Energy distribution did not merely illuminate space; it reorganized environmental burdens, architectural development, and territorial hierarchies. Questions of environmental justice thus emerge not as anachronistic concerns but as constitutive dimensions of early Republican modernization.

The industrial and technological developments initiated through the Five-Year Industrial Plans were presented as triumphs of national planning. Large-scale state

[309] Smith, *Uneven development: Nature, capital, and the production of space.*

[310] Necati Çavdar, "Birinci Dünya Harbi Sonunda İstanbul'da Kömür Kıtlığı Ve Buna Bağlı Sıkıntılara Çözüm Arayışları," *Atatürk Araştırma Merkezi Dergisi* 30, no. 89 (2014): 103.

enterprises such as Sümerbank and Etibank, along with their regional branches in different cities, were celebrated as material embodiments of sovereignty and economic independence in the context of 1930s Republic.[311] The opening of electricity factories in different Anatolian cities (including Giresun, İzmit, Denizli, Kastamonu, Samsun) and detailed reporting on electrification in İstanbul districts such as Bostancı, Adalar, Kadıköy, and Kartal reveal how infrastructural expansion followed political and strategic priorities. Electrification mapped a hierarchy of inclusion across territory.

Newspapers framed these openings as spectacles of progress. The illumination of streets, the inauguration of power plants, and the purchase of electrical appliances were narrated as collective achievements. While Kilis, Amasya, and Tokat were reported to have gained electricity, they were symbolically incorporated into the modernity project. The promise to illuminate the entire "East" within a year reveals how electrification functioned rhetorically as territorial completion.[312] Infrastructure became a language of national integration.

Early 1930s witnessed establishment of electric factories in many Anatolian cities including Adana, Urfa, Konya and Malatya.[313]The opening of the Aydın electricity factory in 1936, celebrated by the attendance of a large crowd, exemplifies this performative dimension. People were posing with electric posts as a symbol of triumphant moment since illumination was not simply technical activation; it was staged as a civic event. Once electrified, the city was described as transformed — its streets visible at night. People were also reported to buy radios and connect with the world through national and global broadcasts.[314] Electricity reconfigured architectural and urban temporality, extending activity into the night and embedding provincial cities into broader communicative networks.

Newspapers repeatedly announced a dazzling movement of construction across the country: bridges, schools, factories, and power plants rising simultaneously.[315]

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[311] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 133.

[312] *Son Telgraf,* 1937-09-27, p.2.

[313] Ülker, "Aşağıdan Milliyetçilik, Emek Süreçleri ve Türkleştirme: Silahtarağa'dan Cumhuriyet'e Bakmak," 74.

[314] "Aydın'da elektrik," *Akşam*, 1936–04–05 1936.

[315] "Yurdda neler yapıyoruz," *Ulus*, 1938–06–13.

Such descriptions constructed an image of synchronized national transformation. Claims that villages now possessed electricity, water, and cinemas—amenities that could not be previously found even in urban centers—projected an image of uplift. Even where such amenities were not yet present, they were promised as imminent, framed as the "culture and comfort" of the 20th century."[316]



Figure 30 People posing with electric posts and news about constructions around the country (*Akşam,* 05.04.1936; *Ulus,* 13.06.1938)

Yet these celebratory narratives must be read critically. The rhetoric of ubiquity often exceeded material reality. The spatial distribution of energy followed fiscal capacity, administrative attention, and strategic value. Reading these accounts alongside evidence of shortages and uneven access complicates the image of seamless modernization. The same newspapers that celebrated factory openings also reported blackouts and pricing disputes. The geography of pride coexisted with the geography of scarcity. Modernization was therefore not a singular developmental arc but a contested and differentiated spatial process—simultaneously spectacular and precarious.

316 "comfort," *Ulus*, 13.06.1938 1938.

Access to certain types and amount of energy is integral to modernity since it informs the social and intellectual life.[317] One of the central issues shaping energy accessibility - both for coal and electricity - was pricing. Debates on the pages of the *Kadro* Journal framed Turkish national statism as non-class-based, insisting that rural villages equally expected heating, water, and illumination.[318] Reduced electricity tariffs were presented not merely as economic adjustments but as instruments of national development. Lower prices, it was argued, would decrease production costs in factories, stimulate industrial growth, and expand infrastructural capacity. In this formulation, pricing functioned as a lever for spatial transformation: affordable electricity would accelerate industrial output, illuminate homes, and integrate cities and villages into a shared temporal rhythm of modern life.[319]

Yet this developmental rhetoric clashed with material realities. A report in a 1933 issue noted that only the 2,7% of the population had access to electricity, while the vast majority of the country relied on petroleum lamps or remained in darkness during nighttime.[320] This statistic punctures the statist discourse revealing how although electrification was imagined as a national condition, it remained geographically and socially restricted. The gap between promise and access exposes pricing not as a neutral economic matter but as a structuring mechanism of uneven inclusion.

Articles in *Kadro* also framed electricity not simply as a replacement for petroleum lamps but as an engine for economic sovereignty. The ideal extended beyond illumination to encompass copper extraction (which constitutes an important part of the production of electricity), machinery production, and industrial self-sufficiency.[321] In this sense, electrification condensed multiple scales of modernization—from mining to manufacturing to domestic interiors. However, the persistence of petroleum lamps in Ankara households as late as 1937 complicates the image of capital-centered transformation. The complaint that “when electricity does

[317] Wellum, "The Use of Energy History," 205.

[318] Tahir Hayrettin, "İnkılap ve Köy," *Kadro*, no. 20 (1933).

[319] M. Şevki, "Elektrikli Türkiye," *Kadro*, no. 15 (1933).

[320] M. Şevki, "Elektrikli Türkiye II," *Kadro*, no. 14 (1933): 45.

[321] Şevki, "Elektrikli Türkiye II," 46.

not enter to the houses, the new life cannot enter either" directly links infrastructural access to cultural and temporal belonging.[322]

Electricity thus became both material resource and moral threshold. The twentieth-century lifestyle it promised—extended evenings, mechanized housework, illuminated streets—depended on reliable access. Where electrification lagged, cities were described as "sleeping" at night, suspended outside the tempo of progress.[323] Darkness marked not only technical deficiency but temporal exclusion. Pricing, therefore, functioned as a gatekeeping mechanism within energo-power: it determined who could participate in the rhythms and spatial reconfigurations of modern life and who remained infrastructurally delayed.

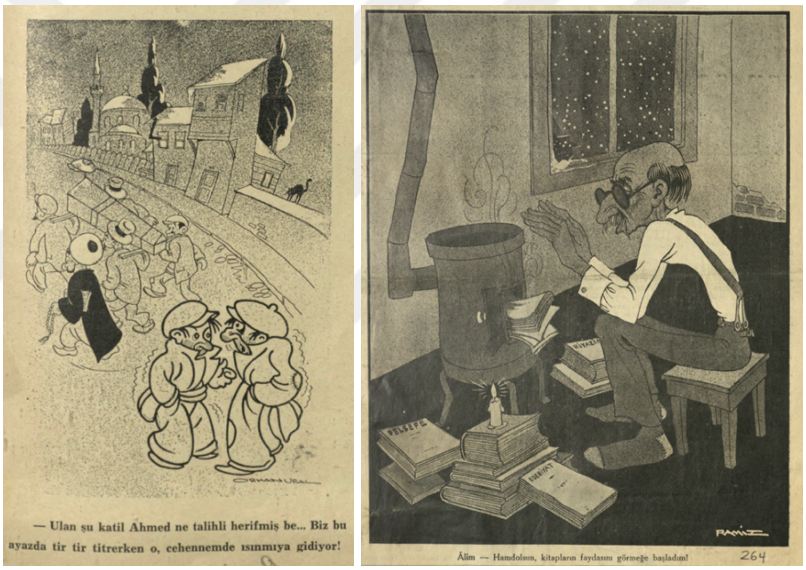


Figure 31 Two men freezing outdoors comment that someone dead is lucky because he is warm in hell, and scholar warming himself by burning books in the log burner (*Akbaba,* 1933, no.72; *Akbaba*, 1935, no.60)

A caricature on the pages of a 1935 Akbaba issue shows a man burning books to survive the winter. [324] The image can be read as a powerful allegory of material scarcity overtaking intellectual modernity. While modernization promised

[322] "Şehir sabaha kadar uykuya dalıyor," *Ulus*, 03.12.1937, 3.

[323] "Şehir sabaha kadar uykuya dalıyor," 3.

[324] Akbaba, 1933, Issue 72.

enlightenment through electric light, rational planning, and cultural uplift, the lived condition foregrounded the immediacy of cold and the fragility of heating infrastructures. The illustration collapses the presumed hierarchy between intellectual modernization and material survival. Without accessible energy, the symbolic capital of enlightenment cannot sustain itself. Infrastructure, therefore, reorganizes everyday life not only symbolically but metabolically—through warmth, combustion, and bodily endurance. In such critical representations, modern state-building practices appear vulnerable before seasonal climate. Winter is not a passive backdrop but an active socio-natural force that destabilizes the narrative of orderly modernization. The cold exposes the limits of planning, the insufficiency of supply, and the embodied consequences of infrastructural delay. Socio-nature, in this sense, intervenes directly in political temporality, interrupting the rhythm of progress with the urgency of survival.

Archival accounts from Eskişehir similarly reveal that winter conditions intensified infrastructural tensions. Complaints addressed both the lack of proper pavements and roads in the city and the high pricing of electricity, linking environmental exposure to economic exclusion. The subsequent discounts granted by the electricity company—reportedly after "understanding the situation of the people"—illustrate how pricing became a site of negotiation rather than a fixed technical parameter.[325] In İzmir and Istanbul, similar tariff reductions were publicized, while in Mersin, predominantly working-class residents continued to rely on gas lamps because electricity remained unaffordable.[326] Illumination, therefore, was stratified not only geographically but socially.

These accounts expose the fractures within energy networks: tensions among state ideals, companies, municipalities, the Ministry of Public Works, and the consumers as active agents.[327] Energy governance did not operate as a seamless hierarchy but as a field of competing rationalities and constraints. Pricing disputes, supply interruptions, and public complaints reveal that energo-power was constantly recalibrated through negotiation.

[325] Akşam, 1937-02-16, p.11.

[326] Akşam, 1938-09-23, p.6.

[327] Son Posta, 1935-09-29, p.3.

Importantly, the cost of coal and electricity was not solely a domestic concern for individuals and households. Industry, transportation, and commercial enterprises were equally dependent on affordable energy sources. Newspapers recorded the demands of tramway and ferry companies seeking tariff adjustments to compete with buses, demonstrating how pricing decisions reshaped urban mobility and economic viability. [328] Energy costs thus reorganized architectural and infrastructural space at multiple scales—from the domestic interior to the transportation network.



Malatya tekrar nura kavuştu

Kuraklık yalnız tarlada değil elektrik tenviratında da tesirini gösterdi

Malatya, 14 (Hususi) — Vilâyetimizde aylardan beri devam eden kuraklık neticesinde bütün sular kesilmişti. Hattâ Malatyanın meşhur Derme suyu bile yarı yarıya inmişti.

Susuzluk yalnız tarlalarda değil, elektrik tenviratında da birçok müşkilâta sebebiyet vermişti. Kuraklık yüzünden Malatyanın bir çok yerleri karanlıkta kalıyordu.

" Kuraklıkla elektrik arasında ne münasebet var? " diyeceksiniz. Malatyada çok büyük münasebet var.

Çünkü Malatyayı tenvir eden elektrik kuvveti sudan alınır suyun miktarı azalınca elektrik türbinleri eskisi gibi dönmemeğe, neticeten itibarile istihsal edilen elektrik kuvveti azalmağa başladı. Elektrik şirketi de verdiği elektrik cereyanını azalttı. Bu yüzden Malatyanın bir kısmı apaydınlık iken bir kısmı karanlıkta kalıyordu.

Malatyanın umumî manzarası, aşağıda elektrik fabrikası

Son günlerde bol yağmurlar yağdı. Bu hal çiftçinin yüzünü güldürdüğü kadar elektrik şirketini de sevindirdi. Şimdi daha bol elektik kuvveti alınıyor ve şehrin her tarafında elektrik lâmbaları yanıyor.

Malatyada son zamanlarda büyük bir un fabrikası yapıldı. Bu fabrikayı yaptıran teşebbüsatı sınaiye Türk anonim şirketidir. 400 bin lira sermayeli olan bu şirket elektrik fabrikasını yaptırdığı gibi şimdi de un fabrikasını tesis etmiştir.

Halk temiz unla yapılan nefis ekmeğe kavuştu. İptidaî değirmenler ortadan kalkmaktadır.

Şirket üçüncü bir hizmet olarak bir iplik fabrikası kurmak üzeredir. Bu fabrika Malatyanın bol pamuk mahsulünü kullanacak ve pamuk ziraatinin ilerlemesine hizmet edecektir.

Malatyada spor eskiden beri ölü vaziyette idi. Gençler vakitlerini kahvelerde geçiriyordu. Halkevi reisi Osman Hilmi bey bunu nazarı dikkate alarak gençleri toplamış ve bunlar arasında spor teşkilâtı yapmıştır. Bundan başka halk evinde bir kütüphane tesis edilmiştir. Şimdi gençler burada toplanıyor ve istifadeli vakit geçiriyorlar.

İstanbuldan elbiseler, voleybol ağları getirtilmiştir.

Oğuz

Figure 32 Malatya gaining the illumination back (*Akşam,* 1932)

In another instance, electricity generated through hydropower rather than coal was equally vulnerable to interruption. In Malatya, insufficient rainfall disrupted production, revealing the fragile entanglement between natural cycles and infrastructural systems. [329] Hydroelectricity, often framed as a modern and rational harnessing of nature, remained contingent upon climatic variability. Drought did not simply reduce output; it exposed the dependence of urban life on seasonal rhythms.

[328] *Son Posta,* 1932-05-08, p.1.

[329] Oğuz, "Malatya tekrar nura kavuştu," *Akşam* 1932.

Nature was not fully subordinated to technological control but persisted as an active agent within the energy network.[330]

The case of Samsun illustrates a different but related vulnerability. There, repeated infrastructural failures were attributed to insufficient technical knowledge and neglect in operating machinery.[331] These breakdowns foreground the pedagogical dimension of electrification. Building power plants and transmission lines was not enough; the state also had to produce trained operators, disciplined workers, and informed consumers. Energy infrastructure required an accompanying infrastructure of expertise. These examples open a critical analytical space: electrification was not merely a matter of supply but of social learning. The implementation of state-led energy systems depended on the cultivation of new technical competencies, habits, and expectations. Failures in Samsun reveal that energo-power operated through education as much as through extraction and distribution. The stability of the grid relied on the formation of subjects capable of maintaining and properly using it. At the level of everyday life, this process involved the making of an "energy consumer." Norms of correct usage—when to switch lights on or off, how to manage load, how to avoid waste—were gradually translated into the hardware of energy networks through meters, switches, fuses, and tariff structures.[332]

The use of the contemporary sources of energy, either in the form of coal or electricity depended on the ability of the consumers to invest in. Therefore, while the preference of one to another, or using aesthetically pleasing fireplaces was a privilege for some, the hybrid use of heating and cooking sources was the survival strategy for others just to keep warm in the winter. Such a situation created an experience of both economic and spatial restrictions.[333] The quantity of coal purchased at one time constituted another economic constraint, as the limited storage capacity of smaller dwellings prevented bulk buying during periods of lower prices, thereby disproportionately affecting lower-income households. The distribution and use of

[330] Akşam, 1935-11-20, p.5

[331] *Tan,* 1937-01-18, p.7.

[332] Webb, Wade, and Tingey, "Introduction to Research Handbook on Energy and Society: why study energy and society?," 5.

[333] Sean Patrick Adams, "Domestic Storage Problems and Transitions: Coal in Nineteenth-Century America," *RCC Perspectives*, no. 2 (2019): 40.

energy constituted an uneven process for the ordinary people for economic reasons, imperfect knowledge about the use of the technologies, and cultural preferences.[334]

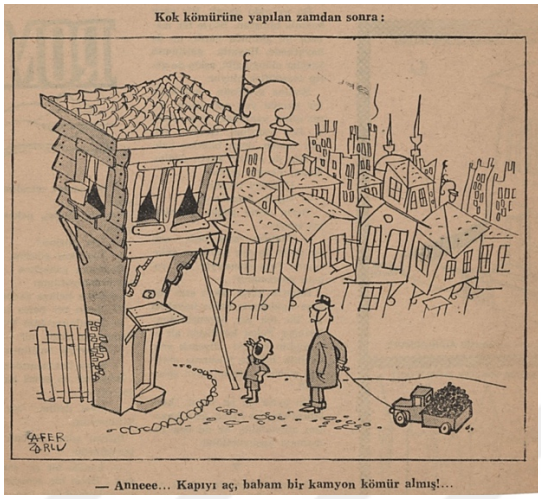


Figure 33 Satiric depiction of coal prices (*Amel-i Elektrik,* 1932, no.52)



Figure 34 Coal prices in discussion on a street Economic concerns and street safety (*Akbaba,* 1934, no.48; *Akbaba*, 1937, no.170)

The pricing of electricity was a recurring subject of public debate in the newspapers of the period as well. One notable controversy concerned the supply of

[334] Adams, "Domestic Storage Problems and Transitions: Coal in Nineteenth-Century America," 45.

electricity to Ankara from Zonguldak. Engineers criticized the transmission of electricity over long distances, arguing instead that transporting coal to Ankara and producing electricity locally would significantly reduce costs. Moreover, it would provide employment to many miners and make the production more efficient Such a shift to the lignite mines around Ankara would not only lower transmission costs but also generate local employment for miners, make production more efficient, and redistribute industrial activity.[335] The debate reveals that infrastructural configuration was inseparable from territorial strategy. Supplying Ankara from Zonguldak reinforced a centralized extraction–distribution model, binding the capital to the Black Sea coalfields through a long infrastructural corridor. By contrast, the suggestion to utilize lignite mines around Ankara proposed a more regionally anchored energy regime. In this sense, the controversy was about spatial organization as much as energy pricing.

Taken together, these examples complicate narratives of smooth industrial ascent. They show that modernization was conditioned by seasonal climate, labor capacity, tariff politics, and material scarcity. The promise of electrified progress remained contingent upon the affordability and reliability of coal and electricity. Where energy faltered—whether through cold winters or high prices—the limits of infrastructural sovereignty became visible, and the modern city's dependence on socio-natural systems was unmistakably exposed.



Erzurumda evlerden elektrik cereyanı kesilecek

Yeni elektrik tesisatı yapıldıktan ve alternatif cereyanla çalışılmıya başlanıldıktan sonra evlere yeniden cereyan verilecek

Figure 35 Power cut in houses in Erzurum (*Son Posta,* 23.12.1937)

[335] *Akşam,* 1934-10-08, p.1.



Zonguldakta mum sarfiyatı arttı, stok kalmadı

Bunun sebebi şehirdeki elektrik tesisatının eski ve fazla istihlâke mütehammil olmaması, elektrik cereyanının ikide birde kesilmesidir

Zonguldağa elektrik veren Kozlu santralı

Figure 36 Kozlu Electricity Factory (*Son Posta*, 30.09.1936)

Another fracture in energy access emerged through blackouts. [336] Newspapers criticized the outdated condition of the Kozlu Electricity Factory in Zonguldak, where aging machinery resulted in frequent power cuts. These interruptions not only disrupted urban life but paradoxically generated alternative commercial activity—most notably, increased candle sales.[337]Scarcity thus produced its own micro-economies, revealing how infrastructural instability reorganized both consumption and commerce. In Erzurum, a different strategy unfolded. Faced with limited supply, the municipality deliberately reduced electricity to domestic interiors in order to prioritize street lighting. This redistribution of scarcity exposed the political hierarchy embedded within the grid: public visibility was privileged over private comfort. Plans were announced to establish an electrically powered bakery capable of producing bread for the entire city, once new machinery was eventually installed for better supply.[338]

[336] "Erzurum'da evlerden elektrik cereyanı kesilecek," *Son Posta*, 23.12.1937.

[337] "Zonguldak'ta mum sarfiyatı arttı," *Son Posta*, 30.09.1936.

[338] "Erzurum'da evlerden elektrik cereyanı kesilecek."

Blackouts temporarily reversed the spatial order produced by electrification. Architectural hierarchies flattened in darkness; illuminated façades lost symbolic authority; domestic routines were interrupted. The modern city's claim to permanence was exposed as contingent upon uninterrupted flow. Citizens were reminded that illumination depended on distant coalfields, functioning machinery, trained operators, and climatic conditions. Infrastructural interdependence became visible precisely when continuity failed. In this sense, blackouts reveal a central dynamic of energo-power: it governs most effectively through invisibility and regularity, and its authority becomes most perceptible when disrupted. The anxiety generated by darkness was not merely practical but political. It unsettled the promise of control and reintroduced contingency into the spatial imagination of modernization.

This part of the study aimed to challenge the linear depictions of energy systems which are not actually accurate and present the access to and the affordability of energy as a concern in Turkey in the 1930s.[339] Electric pricing was not simply an economic matter; it was a disciplinary mechanism within energo-power. Regulating tariffs shaped patterns of consumption, domestic habits, and industrial viability. Affordable electricity promised inclusion within the national project, while high tariffs signaled deferred belonging. In this way, access to energy became an index of citizenship calibrated through the market. The debate over whether to transport coal or electricity further reveals how infrastructural decisions reorganized territorial hierarchies. Competing technical rationalities carried political implications regarding regional employment, extraction intensity, and spatial centralization. The following part aims to discuss several aspects of the energy experiences in the urban sphere through environmental concerns, street lighting, and energy nodes.

4.2. Urban Experiences of Energy

The shifting definitions, ambitions, and territorial boundaries of the states open a crucial space for examining the lived experiences of energy – particularly because energy infrastructures functioned as powerful tools of order, visibility, and

[339] Webb, Wade, and Tingey, "Introduction to Research Handbook on Energy and Society: why study energy and society?," 6.

governance. While official narratives framed electrification and coal distribution as markers of national progress and unity, these processes unfolded unevenly across urban space. Collective expressions of identity and the consolidation of authority were articulated through master narratives of modernization, yet these narratives rarely captured how energy was actually encountered in streets, homes, workplaces, and neighborhoods.

Approaching the state through a state-in-society framework - where the state is understood as a process rather than a fixed entity - reveals the reciprocal transformation of governing institutions and social groups while admitting the limitations of the state.[340] Energy infrastructures did not simply impose order from above; they were negotiated, resisted, adapted, and reinterpreted in everyday practice. Urban residents responded to new lighting regimes, heating systems, and distribution networks in ways that exposed both the reach and the limits of infrastructural authority. In this sense, the history of electrification is not only a story of technical expansion but of social mediation.

The simplifications, calculations, and representations promoted by the state were necessarily more static than the actual experience.[341] They translated complex spatial and social processes into legible abstractions. Yet daily life exceeded these abstractions. Blackouts interrupted promises of permanence; coal shortages disrupted domestic routines; infrastructure failures exposed the fragility beneath narratives of control. The city, therefore, became a testing ground where state rationalities encountered embodied experience. By foregrounding experience, this subsection asks how energy was used as a commercial and representative tool, how felt, how it was judged, and how it unevenly distributed comfort and risk across diverse spaces, and it will examine such concerns through certain urban nodes. Urban experiences of energy reveal modernization as a layered and contested process embedded in architectural space.

[340] Joel S. Migdal, "State Building and the Non-Nation State," *Journal of International Affairs* 58, no. 1 (2004): 250, http://www.jstor.org/stable/24357934.

[341] Scott, *Seeing like a state: How certain schemes to improve the human condition have failed*, 46.

4.2.1. Environmental Concerns: Case of Kuruçeşme Coal Depots

As one of the most visible urban interfaces of the coal industry, the Kuruçeşme Coal Depots frequently appeared in newspapers throughout the whole decade not as symbols of promised modernization but as sources of public discontent due to their deteriorated condition and environmental impact. Their presence in the city became a contested issue, drawing criticism for pollution, visual degradation, and threats to public health. Rather than functioning as peripheral technical facilities, the depots constituted a highly visible socio-natural node where extraction, transportation, storage, and domestic consumption intersected within the urban fabric. They were not simply storage grounds but architectural and territorial thresholds between the subterranean mine and the domestic.

The character of the Kuruçeşme shoreline has undergone significant transformations over time, affecting both the use and appearance of the area. Until the first quarter of the 20th century, the Ortaköy–Kuruçeşme shoreline was characterized by the construction of waterfront palaces.[342] Some of these buildings, which used to belong to the families of the previous regime were abandoned after the foundation of the republic.[343] Moreover, following the 1919 fire in the Late Ottoman period, the cleared parcels and remaining structures began to be used as depots for sand, tobacco, and coal.[344] The fuel-depot character of the area was further reinforced in 1931, when the *Neft Sindikat Şirketi*, responsible for Istanbul's oil supply, initiated constructing oil storage facilities in the area.[345]

Kuruçeşme Coal Depots, located between Kuruçeşme Port and Defterdar Cape, was one of several coal depot sites along the Bosphorus—alongside Sarayburnu, Kasımpaşa, Unkapanı, and Üsküdar—that supplied a significant share of the city's

[342] Özlem Atalan, "Ortaköy-Kuruçeşme Sahilinde Yapılaşma ; 20. Yüzyıl Başları," [Ortaköy-Kuruçeşme, At the Beginnig of the 20.Th Century.] *Turkish Studies* 10, no. 10 (2015 2015): 102.

[343] Atalan, "Ortaköy-Kuruçeşme Sahilinde Yapılaşma ; 20. Yüzyıl Başları," 103.

[344] Sevgi Tuğçe Akıncı, "Boğaz Yerleşmelerinde Değişen İnsan–çevre Etkileşimi Ve Mahalle Bağlılığı: Kuruçeşme Örneği" (Master Istanbul Technical University, 2006), 56.

[345] Burcu Özgüven, "Erken Cumhuriyet Döneminde İstanbul'da Yakıt Depolama Tesisleri," *Trakya Üniversitesi Mühendislik Bilimleri Dergisi* 24, no. 2 (2023): 79.

coal.[346] The only island in the Bosphorus is located off Kuruçeşme, approximately 160 meters from the shore. It was granted to the architect Sarkis Balyan by Sultan Abdülaziz, upon which he constructed a two-storey house. Following Balyan's death, the island was leased by Şirket-i Hayriye and also used as a coal depot for its ferry operations.[347]



Figure 37 Map of Kuruçeşme and the depots on the island (https://katalog.ibb.gov.tr/kutuphane3/haritalar/Hrt_010043.pdf)

The French architect-urbanist Henri Prost was one of the leading figures of his generation, and he worked as a consultant to the Directory of Urban Development of Istanbul Municipality.[348] In the 1936 master plan report prepared by him, the removal of all depots and industrial structures along the Bosphorus was proposed.[349] During

[346] Özgüven, "Erken Cumhuriyet Döneminde İstanbul'da Yakıt Depolama Tesisleri," 75.

[347] Akıncı, "Boğaz Yerleşmelerinde Değişen İnsan–çevre Etkileşimi Ve Mahalle Bağlılığı: Kuruçeşme Örneği," 54.

[348] Cânâ Bilsel, "Les Transformations d'Istanbul: Henri Prost's planning of Istanbul (1936-1951)," *ITU A| Z* 8, no. 1 (2011): 103.

[349] Atalan, "Ortaköy-Kuruçeşme Sahilinde Yapılaşma ; 20. Yüzyıl Başları," 103.

the tenure of Lütfi Kırdar—who served as both mayor and governor of Istanbul (1938–1949)—the plans were implemented. The Bosphorus coastal road system, as well as the sewerage and water systems, were improved. In this period, as the depots in Kuruçeşme could not be removed, they were instead converted into loading and unloading facilities.[350] The discussions about the location of the depots continued into 1939, this time in connection with the Prost Plan, particularly with proposals for coastal roads, sports fields, and playgrounds.[351] The plan also proposed to move the depots to Haydarpaşa area.[352]



Figure 38 Coal depots on Kuruçeşme shore and on the island
(https://www.eskiistanbul.net/2235/kurucesme-komur-depolari, last access: 15.04.2026)

Newspaper reports between 1930 and 1939 document an unfolding process in which the depots were framed as hazards, petitions were filed, and relocation was repeatedly debated. Even in an article in *Arkitekt*, architect Behçet Ünsal complains

[350] Sakine Yıldız Salman, "Boğaziçi Tarihi Sit Alanının Yok Olma Süreci Ve Kalan Sınırlı Değerlerin Korunma Olasılıkları," (2004): 37.

[351] "Kuruçeşme kömür depolarının hali içler acısıdır," *Cumhuriyet*, 1939–05–25 1939.

[352] "Kömür depoları Haydarpaşa'ya nakledilecek," *İkdam Sabah Postası*, 1939–06–15 1939.

about the transformation of Kuruçeşme into a storage zone besides other industrial facilities along Bosphorus that pollute the land, the air and the water.[353] The controversy began in 1931, when articles questioned how such facilities had been installed in "one of the most beautiful countrysides in Istanbul."[354] This early questioning reveals that the placement of energy infrastructure was never merely technical but deeply political—embedded in competing visions of urban order, aesthetic value, and territorial hierarchy. Changes in municipal leadership (*şehremini*) further exposed how infrastructural decisions reflected shifting governance priorities rather than neutral planning logics.[355]

In the same year, residents of the region initiated legal action, hiring lawyers and sending hundreds of petitions to the *Sıhhiye ve Muavenet-i İçtimaiye Vekâleti* (the Ministry of Health). They described, in a newspaper interview, Kuruçeşme as historically valuable yet rendered uninhabitable, citing respiratory illnesses and eye conditions attributed to coal dust. Even property owners considered relocating to protect their families. The stark alternative presented—either the depots must move or the residents must—transformed the issue into a negotiation over sovereignty and spatial rights.[356] Infrastructure here became the site where state capacity was publicly tested. The conflict demonstrates that energo-power is not absolute; its authority must be continually negotiated at the scale of everyday life.[357]

The controversy also reveals that territory is not only administratively mapped but atmospherically experienced. The boundary between "nature" and "infrastructure" becomes blurred when coal dust penetrates interiors and sea currents carry residue along the shoreline**.** Newspapers described the area as a "center of death," associating it with tuberculosis and domestic contamination.[358] Such language re-coded the depots from economic asset to environmental liability, destabilizing the celebratory developmental narrative attached to coal. Comparisons with other countries such as

[353] Ünsal Behçet, "Mimarlık Hakkında Düşünceler," *Arkitekt*, no. 117-118 (1940): 222.
[354] "Kuruçeşme kömür depolarına müsaade eden kimdir?," *Akşam*, 1931–04–14 1931.

[355] "Kuruçeşme kömür depolarına müsaade eden kimdir?."

[356] "Kuruçeşme halkı ya bu kömür depoları kaldırılmalı ya biz hicret edeceğiz diyorlar," *Cumhuriyet*, 1931–06–14 1931.

[357] Migdal, "State Building and the Non-Nation State."

[358] "Kuruçeşme'yi tehdit eden afet: verem ve depoların yangın tehlikesi," *Son Posta*, 1931–05–25 1931.

England - where the coal workers were said to be spatially separated from mines to endure clean air – served to critique municipal inaction and frame Kuruçeşme as a "disgrace".[359]

Municipal and ministerial disagreements further exposed infrastructural politics. Although the municipality proposed relocation, the Ministry of Economy resisted.[360] A 1932 court decision sided with residents, compelling depot owners to construct high walls around the depots and pay compensation to the residents. [361] Yet enclosure did not resolve the issue; walls became defensive devices that attempted to stabilize pollution without addressing its source. The same year, additional lawsuits followed, citing damage to gardens, flowers, interiors, and property values.[362] Architect Naci Cemal notes that the extent to which the houses in Kuruçeşme were affected by the coal depots can be clearly understood from their external condition.[363] Such interactions among the various actors reveal the immensely complex system of energy delivery that links the far away mining zones to urban distribution centers, and scales between houses and national institutions.[364] Relocation, maybe to Sirkeci area, was reconsidered in 1934 with the municipality announcing its plans to "beautify" Kuruçeşme after the relocation.[365] Although the lawsuits continued in the following years, in 1935, the municipality decided against the relocation of the depots, citing Kuruçeşme as the most proper position in the city for the supply of coal due to its winds, natural conditions, sea currents, and the route of the boats.[366] Instead of relocation, regulatory modifications were imposed, including height restrictions and usage limits.[367] The discussions about the location of the depots continued into 1939,

[359] "Kuruçeşme'de kömür derdine bir de petrol derdi imzimam etti," *Son Posta*, 1931–06–11 1931.

[360] "Belediye de kömür depolarının fenalığını itiraf ediyor," *Son Posta*, 1931–06–13 1931.

[361] "Temyiz Kuruçeşmeliler lehine karar verdi," *Cumhuriyet*, 1932–12–29 1932.

[362] "Şikayetler çoğalıyor, yeni davalar açılıyor," *Vakit*, 1932–06–30 1932.

[363] Naci Cemal, "Şehrin mıntıkalara ayrılması ve tertibi," *Arkitekt*, no. 45-46 (1934/09–10 1934): 291.

[364] Adams, "Domestic Storage Problems and Transitions: Coal in Nineteenth-Century America," 42.

[365] "Kuruçeşme kömür depolarından kurtuluyor," *Akşam*, 1934–08–18 1934.

[366] "Kuruçeşme kömür depoları kaldırılacak," *Haber*, 1935–06–17 1935.

[367] "Kömür deposu sahiplerine dün yapılan tebligat," *Tan*, 1936–04–26 1936.

this time in connection with the Prost Plan—particularly with proposals for coastal roads, sports fields, and playgrounds.[368] The plan also proposed to move the depots to Haydarpaşa area.[369]



Figure 39 Aerial view of Kuruçeşme coal depots (https://www.eskiistanbul.net/6156/tepeden-kurucesme, last Access:18.04.2026)

The persistence of the depots underscores a structural contradiction within infrastructural modernity: energy was indispensable to the city's functioning, yet its storage disrupted the scenic and hygienic ideals of the Bosphorus. The decision-making processes involved various correspondences between the municipality and Ministry of Public Works.[370] The depots became entangled in broader processes of territorial reordering, where planning sought to restore legibility and aesthetic order to the Bosphorus while negotiating the material necessity of fuel supply. In this sense, the depot became a spatial anomaly—indispensable yet unwanted, central yet stigmatized.

The fisherman's complaint that coal dust drove fish away illustrates how socio-nature operated as an active participant in urban politics.[371] Coal dust, carried by wind

[368] "Kuruçeşme kömür depolarının hali içler acısıdır."

[369] "Kömür depoları Haydarpaşa'ya nakledilecek."

[370] "Belediye müstakbel liman yerinin bir an evvel tayinini istiyor," *Son Posta*, 1939–08–25 1939.

[371] "Kömür depoları insanları değil balıkları bile kaçırdı," *Son Posta*, 1935–10–08 1935.

and currents, mixed with the sea and infiltrated domestic interiors, dissolving the boundary between infrastructure and dwelling. In doing so, it reshaped the atmosphere itself as a socio-natural actor. The sky—no longer a neutral backdrop—became materially altered, thickened, and obscured. Residents complained that it was no longer possible to "see the moon and the stars," a sensory register of heavy pollution that transformed both perception and daily experience.[372] What was once scenic horizon became infrastructural residue. The atmosphere, rather than passive setting, emerged as an active terrain through which energo-power reorganized visibility, health, and urban life. Pollution blurred distinctions between land and sea, interior and exterior, architecture and atmosphere. Coal dust settling inside homes dissolved the boundary between public infrastructure and private dwelling. Environmental concerns extended beyond coal depots of Kuruçeşme. Reports described discoloration in the Golden Horn due to slaughterhouses, air pollution from brick factories, and persistent fog along the Anatolian coastline caused by cement production. Such accounts suggest that environmental degradation was not accidental but structurally embedded within industrial expansion. [373]


Kuruçeşme, kömür depolarından kurtuluyor

Depolar kalktıktan sonra belediye burasını imar edecek

Kuruçeşmedeki kömür depoları

Dünyanın en güzel yerleri

Şirin Boğaziçi bakımsızlık ve ihmalden harabiye sürükleniyor

İhmal ve lâkaydi boğaziçi rıhtımlarını bakınız ne hale getiriyor

Şirin Boğaziçi günden güne harabiye maruz kalmakta, ihmal edilmektedir. Boğazın iki sahilini süsliyen eski ve büyük yalılardan bir kısmı yıkıcıya verilmekte ve enkazı satılmaktadır. Bunların yerine yenisinin yapıldığına da hiç tesadüf edilmiyor. Diğer bir takım yalılar da tütün ve kömür deposu ittihaz edilmektedir. Bu kömür depoları yüzünden Kuruçeşme de ölmüştür. Üsküdardan Kuzguncuğa kadar

[Mabadi Sa 3 Sü 2 de]

Figure 40 Complaint about the depots in Kuruçeşme, Istanbul (*Cumhuriyet,* 07.09.1929; *Akşam,* 18.08.1934)

[372] "Kömür tozu bir kere havalandı mı gökte ne ay kalır, ne de yıldızlar!," *Akşam*, 1934–12–08 1934.

[373] Cemal, "Şehrin mıntıkalara ayrılması ve tertibi," 291.



Figure 41 The removal of the coal depots from Kuruçeşme was seen as a relief from that disgrace. (*Akbaba*, 1936, no.27)

The depots thus territorialized the Bosphorus in both material and symbolic terms. They transformed atmosphere, reconfigured residential desirability, and triggered legal mobilization. They rendered the Bosphorus temporarily illegible as an elite scenic zone, prompting planning interventions to restore legibility.[374] In Elden's terms, territory functioned as a political technology of control—but one continually destabilized by material flows of dust, wind, and water. [375] The coal depot became a paradigmatic site of socio-natural co-production: energy infrastructure, environmental health, property value, and aesthetic order become inseparable.

Seen through the lens of energo-power, the Kuruçeşme conflict reveals that modernization externalized ecological costs unevenly across urban space. Coal enabled industrial growth and domestic warmth, yet its storage and circulation imposed localized pollution burdens. Environmental injustice here did not appear as abstract policy failure but as architectural and atmospheric experience. Walls, winds, currents, and interiors became actors within a contested energy landscape. Such uneven distribution of environmental costs illustrates what contemporary scholarship

[374] "Boğaziçi'nin en kıymetli ve şerefli bir mevkiinde bugün kömür depoları," *Vakit*, 1933–09–16 1933, 88.

[375] Elden, *The birth of territory*.

identifies as energy injustice.[376] In this sense, the coal depot becomes a site where socio-natures are co-produced: energy, urban space, and public health become inseparable. Rather than neutral infrastructure, the depot functioned as a spatial instrument of state-led modernization that externalized its ecological costs. The Kuruçeşme conflict shows that territory is not only mapped but also regulated through material infrastructures**.** This also relates to what Elden calls territory as a political technology of control**,** where spatial ordering becomes a tool of governance.[377] Moving from polluted storage sites and environmental concerns to illuminated boulevards, the following section shifts focus from environmental externalities to visual regimes. If Kuruçeşme exposes the burdens of energy infrastructure, the next section examines how electrification reconfigured urban visibility, public order, and the moral geography of the modern street.

4.2.2. Street Lighting and Urban Conditions

Infrastructures must be understood as social institutions: they require organizational forms, labor regimes, regulatory frameworks, and everyday practices that mediate their functioning and produce new relations between state, society, and nature.[378] In this thesis, infrastructure is treated not only as a physical system of energy distribution but also as a social institution, a cultural artifact, and an imaginary formation. The coal and electricity infrastructures of 1930s Turkey were simultaneously material networks, bureaucratic arrangements, and symbolic stages upon which modernity and nationhood were enacted.

This section shifts the analytical lens toward the everyday urban experience of streets and their representation in relation to electricity infrastructure. Street illumination was frequently represented as a symbol of progress, visibility, and order. Unlike the contested and materially polluting case of the coal depots, the streetlamp emerged as the purified icon of electrification —detached from extraction and

[376] K Sovacool Benjamin, *Energy Security, Equality, and Justice* (Earthscan, 2014).

[377] Elden, *The birth of territory*.

[378] Brian Larkin, "The politics and poetics of infrastructure," *Annual review of anthropology* 42, no. 1 (2013).

presented as an unambiguous marker of civilization. Newspapers frequently celebrated the illumination of public squares, gardens, and boulevards, framing them as evidence of urban transformation.

Illuminated public space also carried social implications. Previously, certain leisure spaces such as picnic areas were associated with danger or moral ambiguity, particularly after dark. Electrification enabled their multi-seasonal and nocturnal use, contributing to a secular reconfiguration of public life where men and women, Muslims and non-Muslims, could occupy shared spaces under the regulating gaze of light.[379] It was also embedded in urban planning agendas for 1930s Istanbul, which envisioned streets and squares as sanitary, orderly, and culturally modern centers where children and women would also gain increased visibility.[380]

The newspaper column titled “Lights of the City” *(Şehrin Işıkları)* offers a visual condensation of this imaginary. Illustrations often depict a dominant streetlamp set against a layered skyline of chimneys, minarets, and modern buildings.[381] The lamp stands as vertical counterpoint to the heterogeneous architectural silhouette, symbolizing rational order within spatial complexity. Illumination becomes a compositional device in the urban image, visually reorganizing the city’s profile.



Figure 42 Newspaper column headline "Lights of the City” with urban silhouette (*Cumhuriyet,* 31.01.1937)

[379] Tanyeli, *Korku metropolü İstanbul: 18. yüzyıldan bugüne*.

[380] Cansu Değirmencioğlu, "Erken Cumhuriyet İstanbul'unda Mekan, Mimari ve Elektrik Işığı," in *Bir Cereyan Hasıl oldu: Osmanlı'dan Cumhuriyet'e İstanbul'da Elektrikli Yaşam*, ed. Nurçin İleri (Türk Tarih Vakfı, 2024), 156.

[381] *Cumhuriyet,* 1937-01-31

Yet electrification did not simply produce a unified modern image; it also made urban heterogeneity more visible. The presence—or absence—of street lighting enabled a socio-cultural mapping of districts.[382] Illumination functioned as an index of municipal investment and political priority. Areas that were brightly lit appeared progressive and secure, while poorly lit districts were implicitly marked as neglected or marginal. Through such representations, electricity became a cartographic tool, spatializing inequality.



Figure 43 Newspaper advertisement on the illumination of parks and gardens (*Yeni Adam,* 23.07.1934)

Another appearance of the fractures in the energy network was the casualties caused by electricity in the urban spaces. Newspapers and periodicals frequently published ironic illustrations of tram accidents involving electrocuted animals or severely injured pedestrians.[383] Street scenes often feature two men in suits and contemporary hats conversing beneath a streetlamp—sometimes functioning, sometimes broken. The lamp becomes a narrative device through which commentary on municipal services, coal prices, and urban renovation is staged. Electric posts,

[382] Değirmencioğlu, "Erken Cumhuriyet İstanbul'unda Mekan, Mimari ve Elektrik Işığı," 158.

[383] taksim meydanında tramvay teli koptu…," *Cumhuriyet*, 1929–02–13 1929.

minarets, and chimneys compose the vertical vocabulary of this urban imagery, while figures such as beggars, intoxicated or disabled people disrupt the idealized image of hygienic modernity.[384]



Figure 44 Electric casualties caused by the tramways (*Cumhuriyet,* 13.02.1929; *Akbaba*, 1933, no.37)

While early Republican discourse promoted the image of a healthy, hygienic, orderly, and sanitized citizen inhabiting a rationally illuminated urban environment, these magazine illustrations complicate that narrative. They foreground infrastructural breakdown, social and bodily unevenness, and everyday frustration, revealing a more heterogeneous urban reality beneath the rhetoric of modern civic order.[385] The illustrated men comment on the lack of municipal services such as street lighting, urban renovation, and readjustment of coal prices. In some cases, road improvements and new streetlamps are ironically attributed to the arrival of an important resident, subtly exposing clientelism and infrastructural inequality.[386]

[384] Akbaba, 1936, Issue 140.

[385] Bozdogan and Akcan, *Turkey: Modern architectures in history*, 214.

[386] Akbaba, 1938, Issue 237.

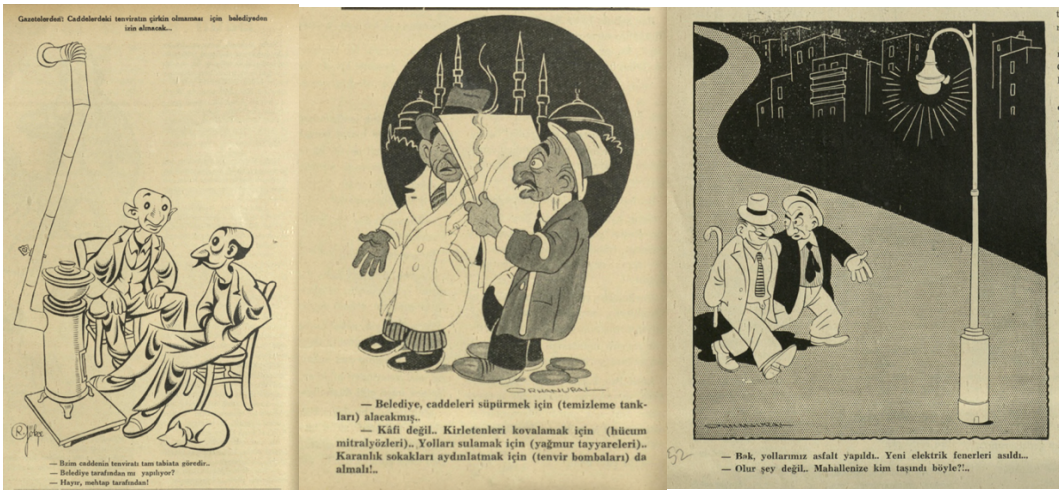


Figure 45 Street lighting expectations and critiques alongside other municipal services (*Akbaba*, 1935, no.56; *Akbaba* 1936, no.62; *Akbaba,* 1938, no.237)



Figure 46 Urban representation with minarets, trees, electric posts, and a beggar, and drunk men and streetlights (*Akbaba*, 1936, no.140; *Akbaba*, 1938, no.188)



Figure 47 The critics over urban conditions of the city (*Akbaba*, 1931, no.869)

Electricity also reshaped architectural thinking. Modern architecture increasingly emphasized the "clever use of electricity".[387] Electric light, in particular, was understood not merely as utility but as "a new kind of building material, a set of compositional practices, and a host of occupational strategies that produced new places to live, work, and play".[388] It produced new strategies for inhabiting, displaying, and circulating within space.[389] In a 1932 issue of *Arkitekt*, Burhan Arif argued that illumination required not only technical calculation but also emotional labor. Architects were encouraged to design buildings with nighttime presence in mind, anticipating how electric lighting would transform façades and interiors after sunset.[390] The building thus extended into the nocturnal city through light.

Electricity also became a public medium of representation. Illuminated façades, signboards, and decorative lighting featured prominently in official

[387] Isenstadt, *Electric Light: An Architectural History*, 51.

[388] Isenstadt, *Electric Light: An Architectural History*, 1.

[389] Değirmencioğlu, "Erken Cumhuriyet İstanbul'unda Mekan, Mimari ve Elektrik Işığı."

[390] Burhan Arif, "Mimaride tenvirat," *Arkitekt*, no. 15 (1932/03 1932): 83.

celebrations, fairs, and state ceremonies. [391] Light animated architecture, transforming buildings into luminous surfaces that conveyed optimism, youth, and development. [392] It was also a space to express national personality through novel experiences and promotions of manufactured goods.[393] The economic rationale accepted that brighter lighting brought more new customers while preventing the existing ones from leaving.[394] Commercial establishments were encouraged to illuminate shop windows for better visibility, using electricity to attract customers and stimulate consumption.[395] It was emphasized that the hypnotic quality of electric light possessed the power to influence and shape people's decision-making processes. While informing shop owners about the potential of showcase illumination, such promotions also guided consumers toward shops that conformed to contemporary standards and expectations. [396] In this sense, electricity reorganized not only space but also urban choreographies and visual economy.

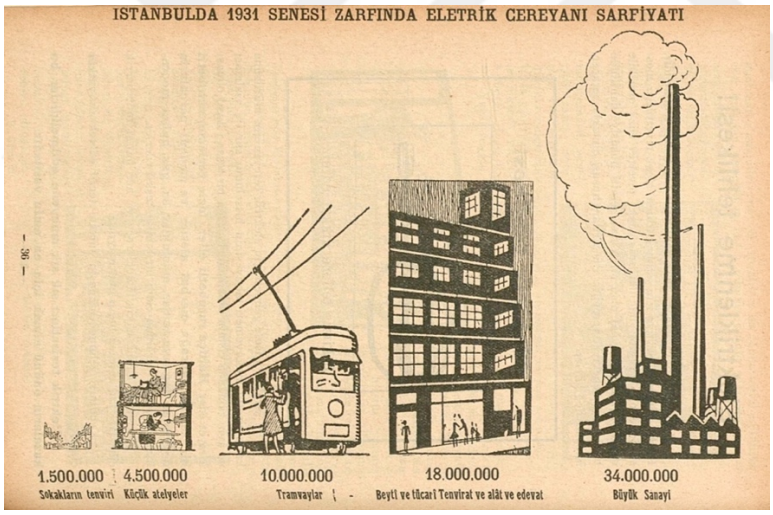


Figure 48 Visualization of electric consumption of Istanbul in 1931 (*Amel-i Elektrik*, 1932, no.54)

[391] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 147.

[392] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 147.

[393] Isenstadt, *Electric Light: An Architectural History*, 181.

[394] Isenstadt, *Electric Light: An Architectural History*, 200.

[395] Cumhuriyet, 06-04-1935, Son posta - 1932-02-05.

[396] Değirmencioğlu, "Erken Cumhuriyet İstanbul'unda Mekan, Mimari ve Elektrik Işığı," 165.

A statistic published in Amel-i Electric journal presents a visualization of electricity consumption in Istanbul in 1931, categorized as industry, commercial use, tramways, small workshops, and street lighting –the socio-natural assemblages through which electricity shapes daily life, mobility, and production. While industry appears as the primary consumer, commercial use follows as a major category, indicating the growing role of electricity in everyday economic activities. Street lighting also constitutes a significant share of consumption, alongside tramways and small workshops, pointing to its notable presence within the urban system.[397] The distribution of these categories shows how electricity was utilized across production, commerce, transportation, and public illumination in the city.

Amel-i Electric Journal created specific illustrations for the instruction about how to illuminate the facades and showcases of the buildings. Providing schemes for the positioning of the light fixtures, the journal claims that under well-arranged waves of light, even the most ordinary scenes take on a magical quality. It also promotes and instructs the use of colored lighting in showcases, explaining how carefully arranged light can enhance the visual appeal of displayed objects and create more attractive, attention-grabbing environments.

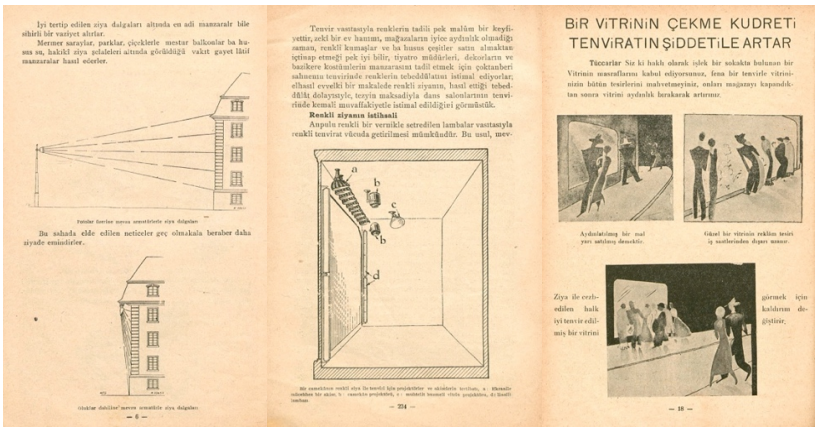


Figure 49 Schemes of illumination devices (*Amel-i Elektrik,* 1929, no.32; *Amel-i Elektrik,* 1928, no.31)

[397] "İstanbul'da 1931 senesi zarfında elektrik cereyanı sarfiyatı," *Amel-i Elektrik*, no. 54 (1932): 36.



Figure 50 Propoganda of lighting for better sales and illumination of the shops (*Cumhuriyet,* 06.04.1935; Son Posta, 05.02.1932)

The visual culture of newspapers and magazines suggests that the modern illuminated street was implicitly coded as male. Men appear as workers, officials, flâneurs, and drunks occupying the public nightscape, while women remain associated with interior domestic scenes. Energy infrastructure, therefore, did not merely light streets; it stabilized gendered divisions of space. Public illumination expanded male mobility and visibility, while domestic electrification was framed as transforming women's labor within interiors.

4.2.3. Urban Nodes of Energy in Istanbul

Although receiving relatively scant attention compared to the monuments, landmarks, and political landscapes of the state that assert national pride, the scenes of daily transactions constitute a larger stock of the buildings. Commonplace buildings and ordinary places where the people are socialized into citizens play an important role in their understanding of social and spatial order.[398] In this subchapter, the urban nodes of the energy network in Istanbul are approached not merely as isolated architectural objects but as interconnected sites through which energy was circulated, mediated, and made legible in everyday life. Focusing on the buildings and facilities of the SATIE

[398] Kezer, "An Imaginable Community: The Material Culture of Nation-Building in Early Republican Turkey," 508.

Electricity Company, these nodes—ranging from service offices and exhibition spaces to repair centers and educational venues—functioned as critical interfaces between infrastructure and society. Carrying out activities such as sales, subscriptions, repair services, public courses, exhibitions, and technical administration, they operated simultaneously as spaces of pedagogy, governance, and consumption. As such, they can be read as socio-nature nodes where material flows of electricity and coal intersected with social practices, producing new habits, competencies, and dependencies. Through the lens of energo-power, these sites reveal how energy infrastructures extended beyond technical provision to shape urban experience, disciplining users while enabling new forms of comfort, knowledge, and participation. Situated across both the European and Asian sides of the city, these multifunctional nodes collectively contributed to the spatial experience of energy, structuring its access, representation, and everyday negotiation within the urban fabric.

4.2.3.1. Metro Han

Located in the Tunnel Square in Beyoğlu, Metro Han had manifold functions and meanings both within the energy network of the city, and mental imagery of the people. the building was designed by French engineer Eugéne-Henri Gavand, as a part of the Tunnel project which was offered as a solution to the dense population on the steep pavements connecting Galata and Karaköy and completed in 1875. In the 1930s, with an additional floor the building becomes a seven-floors tall building within the city. The building was bought by IETT in 1939 together with the Tunnel funicular and begins to be used as the general headquarters.[399] Also housed the central office of SATIE (*Societé Anonyme Turque de l'Installation Electrique, Tesisat-ı Elektrikiye Türk Anonim Şirketi)*, the company that was founded in the 1920s, and from 1924 on commissioned to purchase and sell all kinds of electrical appliances, by importing them or manufacturing them locally; to establish lighting and motive power installations, and to engage in electrical installation works.[400] SATIE was also the

[399] https://kultursanat.istanbul/haberler/metro-han

[400] Gökçe Dervişoğlu Okandan, "İşletmecilik Tarihinde Modern'den Postmodern'e Bir Yolculuk: Silahtarağa Elektrik Santrali'nden Santralistanbul'a Süreklilik ve Değişim," *İstanbul Üniversitesi İşletme Fakültesi Dergisi* 45 (2016): 42.

company that fed the symbolic connection between modernization and electricity through their advertisements of modern houses and interiors filled with appliances.[401]



Figure 51 Metro Han in Beyoğlu urban plan (Jacques Pervititch Insurance Plan, 1932, SALT Archive)

The first floor of Metro Han was where electricity subscriptions to the company can be arranged. On the third floor, the building also houses the print of the Amel-i Electric journal.[402] The journal was published bimonthly between 1925 and 1934, reaching a total of 67 issues.[403] It was the first journal that was delivered to the subscribers in different districts of Istanbul via posting while billing and informing them about the amount of electricity they have used.[404] The journal also worked as a pedagogical tool that promotes the use of electricity and appliances by providing manuals, receipts, advertisements and announcement that will be more incorporated in the following parts of the study, where the evolving social roles and domestic practices become more visible. It also included news about the electrification of places

[401] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 145.

[402] Fulya Lale Dalfes, "Marketing electricity: Ameli elektrik magazine (1925-1934) and the introduction of electricity as a mass consumption item in the interwar period," (2022).

[403] Dalfes, "Marketing electricity: Ameli elektrik magazine (1925-1934) and the introduction of electricity as a mass consumption item in the interwar period," 44.

[404] Ardan Ergüven, "Elektrik ve Grafik Tasarım: Ameli Elektrik Dergisi Kapaklarının Görsel Analizi," *Güzel Sanatlar Enstitüsü Dergisi* 27, no. 46 (March 2021).

all over the world, including Spain, Buenos Aires, Paris and England, both for informing the people about the modern applications of the technology and position itself within the international realm.[405]

The building finds itself a place both on the cover and inner pages of the magazine, besides the frequent mention on the newspapers as the selling point of coal, several appliances, and electricity subscriptions. The cover of a 1926 issue of the journal depicts the building, next to the tram, and coins the entrance of the Tunnel, the direction of the exposition, and the name of SATIE. Position of the building in Pera district, and the height of the total printed pages of the journal compared to it, that emphasizes the volume and impact of the journal that reached 38.500 copies. It again appears in the issues of *Amel-i Elektrik* of 1927, as located in relation to the tram lines and other important locations of the city, including Vezneciler, Bab-ı Ali, Bakırköy, and Kadıköy as a part of the transportation and energy network of the city.[406]

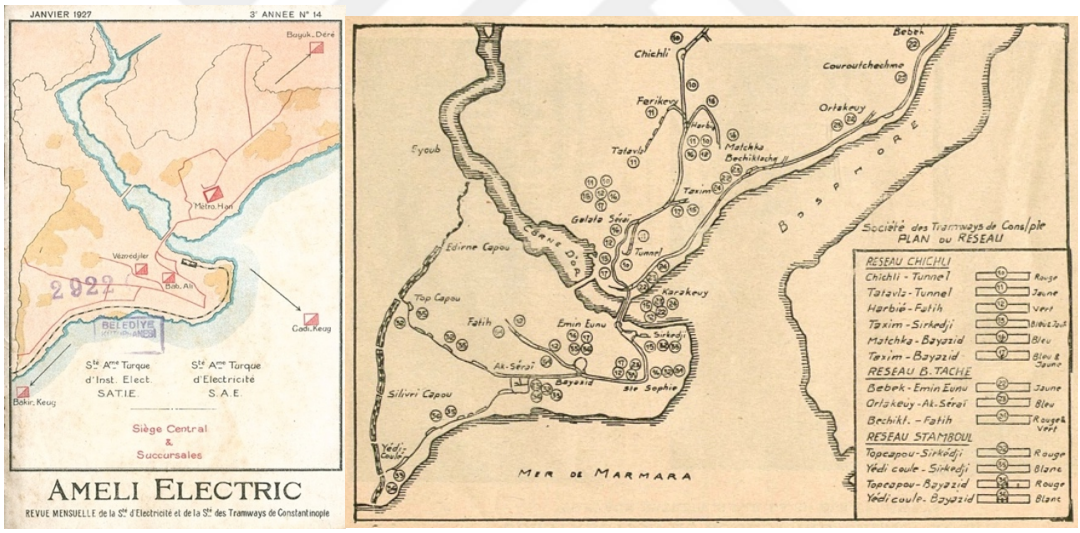


Figure 52 Metro Han and Tunnel positioned in the urban networks and tramway lines (*Amel-i Elektrik*, January 1927, no.14; *Amel-i Elektrik*, 1927, no.16)

[405] Dalfes, "Marketing electricity: Ameli elektrik magazine (1925-1934) and the introduction of electricity as a mass consumption item in the interwar period," 28.

[406] "Ameli Electric," *Amel-i Elektrik*, no. 16 (1927).

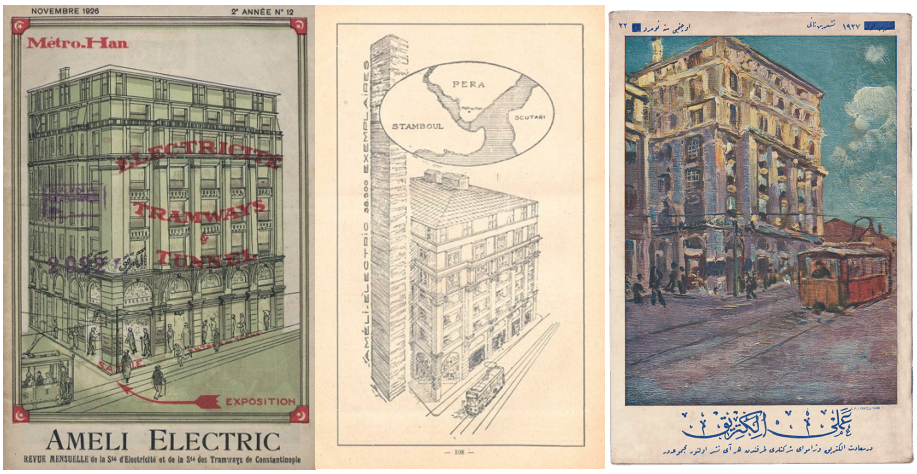


Figure 53 Various illustrations of Metro Han (*Amel-i Elektrik*, 1926, no.12; *Amel-i Elektrik*, 1927, no.22)

ILAN

ELEKTRİK ŞİRKETİ her gün saat 14 den 18 e kadar, Metro hanında, ikinci katta iyi tenvirat servisinde, bir mütehassısın, muhterem müşterilerin emrine amade olduğunu ve arzu edenlere İYİ TENVİRAT VE ELEKTRİK ALETLERİNİN SURETİ İSTİMALİ hakkında lâzım gelen malumatı verdiğini ilân eder.

Figure 54 Announcement of educational service in Metro Han (*Amel-i Elektrik*, 1932, no.53)

The SATIE (*Tesisat-ı Elektrikiye Türk Anonim Şirketi*) facilities in Istanbul—particularly the Metro Han in Tünel Square and the Beyazıt Electric House—functioned as multi-level service nodes within the urban energy network, where different floors were organized to accommodate distinct yet interconnected services. In Metro Han, the second floor hosted the "good illumination service", where specialist engineers were available daily (14:00–18:00) to provide technical consultation, guidance on lighting and electrical appliances, and information on proper usage.[407] This floor also operated as a public interface space**,** including a consultation office, a testing bureau preparing lighting projects, and a "demonstration hall" (*tecrübe salonu*) where customers could experience lighting arrangements before

[407] "İlan," *Amel-i Elektrik*, no. 53 (1932).

implementation. The same building additionally housed subscription services**,** where customers could apply for electricity connections by filling out forms specifying appliances, power demand, and residence details. [408] Through demonstrations, exhibitions, and credit-based consumption, Metro Han staged electricity as a desirable component of modern life, mediating its transition from infrastructure to everyday practice. Yet this process of mediation also revealed points of friction, as the meanings and promises of electrification were not uniformly received across different social groups. A caricature from *Akbaba* journal, for instance, depicts two traditionally dressed men judging a bill poster of the company on a public wall. On the poster, a figure sits in front of a fan, but the men interpret the phonetic similarity of "SATIE" to "sat ye" ("sell and eat"), recasting the company's modernizing message as one of exploitation rather than progress. This humorous misreading exposes the gap between institutional representations and popular interpretations, highlighting how the diffusion of energy infrastructures was negotiated, contested, and reinterpreted within everyday urban experience.[409]



Figure 55 The confusion over the SATIE company by traditionally dressed men (*Akbaba*, 1935, no.54)

[408] "İyi bir tenvir elde etmek için," *Amel-i Elektrik*, no. 54 (1932).

[409] Akbaba, 1935, Issue 54.

4.2.3.2. Kadıköy and Beyazıt Electric Houses

The Electric House emerges as another node of the urban energy network. These establishments, present not only in Istanbul but also in other cities, functioned as subscription offices for electricity and coal-gas while simultaneously serving as retail and display spaces for modern appliances. Architecturally, they operated as transitional typologies between infrastructure and commerce—urban interfaces where invisible networks became materially legible.

The Electric House in Kadıköy is located on İskele Street, opposite the municipal building and positioned within a developing waterfront district. The building functioned as a localized yet strategic node within Istanbul's expanding energy network. Designed by Rebii Gorbon (1937), the building's placement and form responded directly to its constrained urban parcel yet expanded its public interface by creating a second façade through a setback, thereby increasing its exposure to the street and maximizing its display capacity. [410]

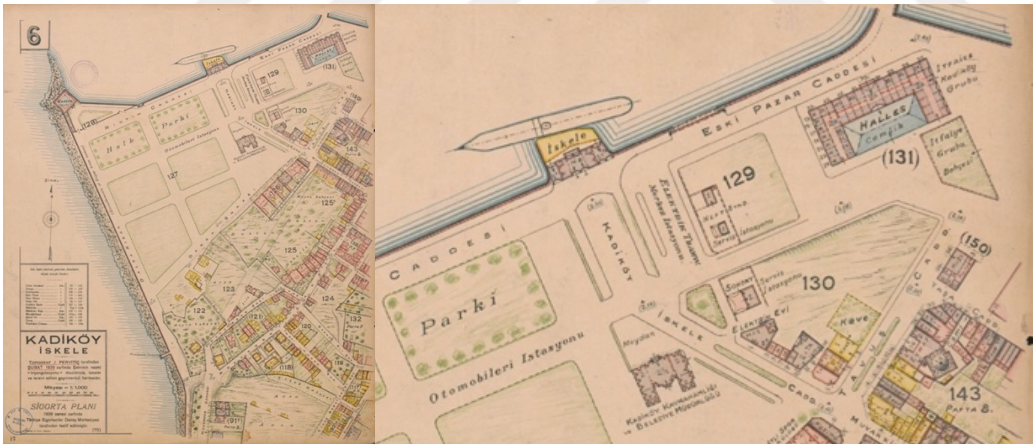


Figure 56 Kadıköy Port and Electric House plan (Jacques Pervititch Insurance Plan, 1938, SALT Archive)

[410] Mimar Rebii Gorbon, "Elektrik Evi - Kadıköy," *Arkitekt* 73 (1937).



Figure 57 Kadıköy Electric House on the left (https://www.eskiistanbul.net/1772/kadikoy, last access: 15.04.2026)



Figure 58 Electric House in Kadıköy, the facades from the street (*Arkitekt,* 1937, no.73)

Materially, the building's reinforced concrete structure, wide glass surfaces, flat roof, and integrated electrical installations positioned it within a modernist architectural language that emphasized transparency, accessibility, and technological integration. Similar to the architect's other works, which adhere to the dominant modernist tendencies of the period, the building's interior employs a comparable formal and spatial vocabulary, aligning with the expressionist articulation and the emphasis on horizontality evident on the exterior.[411]

[411] Canse Yüzer and Gül Cephanecigil, "Rebii Gorbon: Mimarlik Ve Seramik Arasinda Bir Kariyer," *METU Journal of the Faculty of Architecture* 38 (2021 2021): 7.

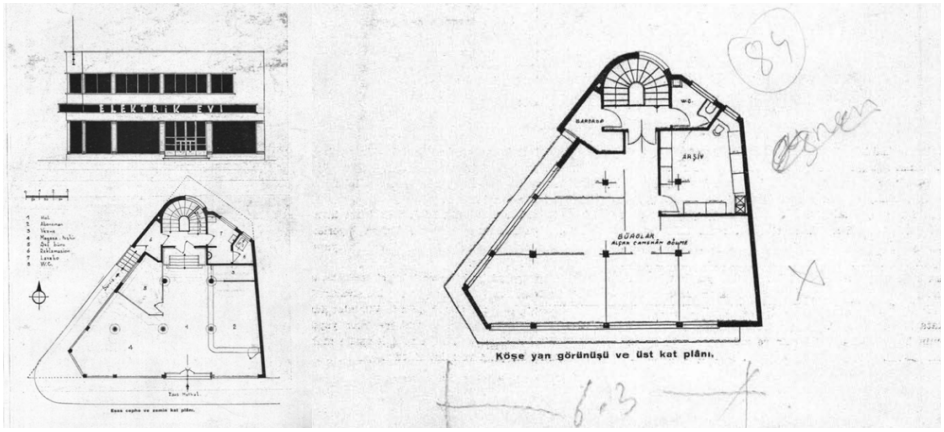


Figure 59 Electric House, Kadıköy, floor plans and an elevation (*Arkitekt,* 1937, no.73)

The visibility of appliances within the vitrines on the ground floor, combined with the permeability of the façade, blurred the boundary between urban space and interior, allowing electricity to be encountered as part of everyday urban life. The presence of subscription desks, exhibition and demonstration spaces, and the shop on this floor indicates that the building was not merely a point of sale but a site where electricity was explained, experienced, and domesticated. The upper floor comprises a cloakroom for officers, an archival room, and offices partitioned by glass enclosures and wooden divisions.[412] This architectural move was crucial: the ground floor was organized as a combined sales, exhibition, and subscription hall, with large vitrines opening directly onto the street, transforming the façade into a continuous display surface. Inside, the open plan supported both circulation and demonstration, while the upper floor accommodated administrative offices, linking bureaucratic management with public interaction.

[412] Gorbon, "Elektrik Evi - Kadıköy," 1.

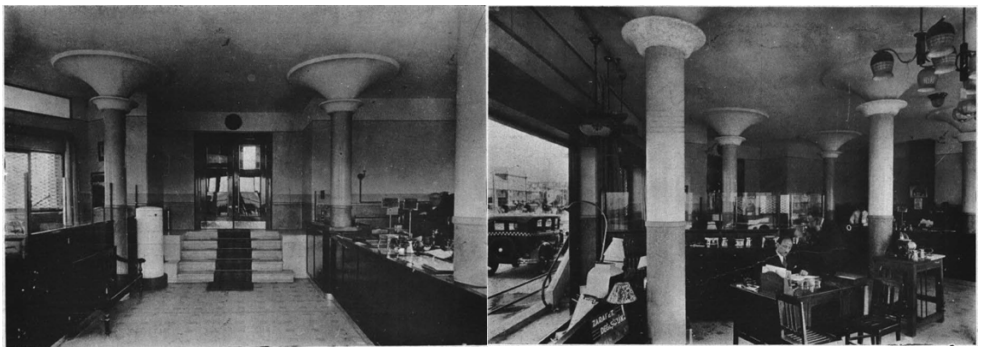


Figure 60 Electric House in Kadıköy, interior views (*Arkitekt*, 1937, no.73)

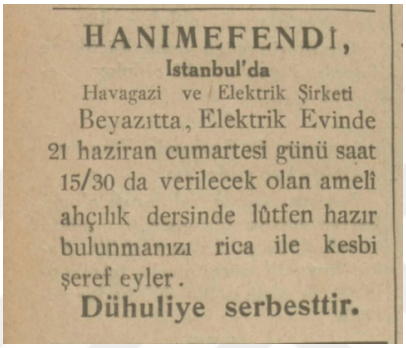

HANIMEFENDİ,
İstanbul'da
Havagazi ve Elektrik Şirketi
Beyazıtta, Elektrik Evinde
21 haziran cumartesi günü saat
15/30 da verilecek olan ameli
ahçılık dersinde lûtfen hazır
bulunmanızı rica ile kesbi
şeref eyler.
Dühuliye serbesttir.

Figure 61 Cooking class announcement (*Cumhuriyet,* 09.06.1930)

The Beyazıt Electric House building appears in contemporary newspaper reports as a property expropriated from the SATIE company and taken over by the Istanbul Municipality in the late 1930s, in the context of the transfer of electricity, tramway, and tunnel services from the Ministry of Public Works (Nafıa Vekâleti) to municipal control. Unlike other infrastructural components, which were transferred through inventory-based procedures, this building was directly acquired through expropriation, indicating its early incorporation into the reorganized urban energy network. The building is mentioned in newspaper and magazine advertisements of SATIE as one of the company's key urban branches, where customers could have their appliances repaired, purchase coal, or attend cooking classes.[413] The advertisements emphasize not only the range of services offered but also the spatial reach of the company, highlighting a system in which appliances were collected from and returned to customers' homes. As one announcement notes, "too many people are unaware"

[413] "Tramvay ve Elektrik İşletmelerinin Devri," *Son Posta*, 06.07.1939.

that SATIE provides such services, collecting devices “of every brand and every origin” that require repair. The notice further explains that repairs are carried out “free of charge when there is no need to change parts,” and “at cost price” when replacement is necessary. [414] Rather than a simple commercial message, this framing reveals how energy-related services were embedded within everyday urban life through a network of nodes such as Beyazıt Electric House. The mobility implied in the collection and return of appliances points to an extended infrastructural system that connected domestic interiors to centralized technical expertise. In this sense, the advertisement articulates a socio-natural assemblage in which electrical appliances, repair practices, urban transport, and human actors were interwoven. The spatial experience of energy thus exceeded the point of consumption, unfolding across the city through circuits of maintenance, service, and circulation, and positioning institutions like Beyazıt Electric House as mediators between technological systems and everyday domestic life. Together, these spaces were physically and programmatically organized to integrate administration, technical expertise, pedagogy, and consumer engagement within a single architectural framework.

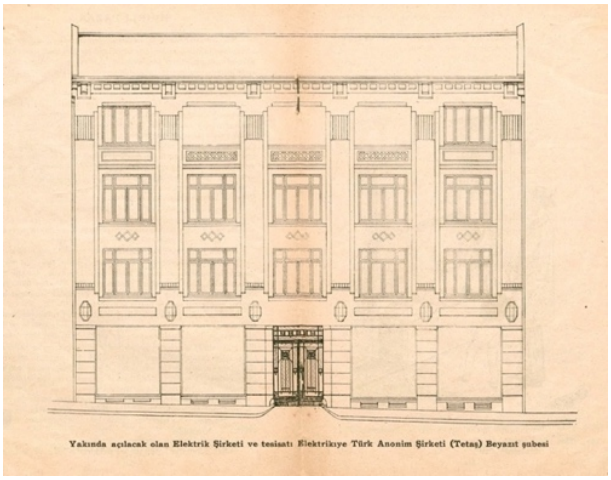


Figure 62 Elevation of the planned Electric Company branch in Beyazıt (*Amel-i Elektrik*, November, 1928, no.31)

[414] "Pek az kimse biliyor," *Amel-i Elektrik*, 1932.



TESİSATI ELEKTRİKİYE TÜRK ANONİM ŞİRKETİ nin, alındığı yer ve markası ne olursa olsun TAMİRATA ihtiyac gösteren bütün cihazları müşterilerin evlerinden alıp tekrar getirdiğini ve tamiratı, parça değiştirmeğe lüzüm olmadığı zaman MECCANEN yaptığını, parça değiştirmek mecburiyeti alınca MALİYET FİYATİLE tebdil ettiğini

Pek az kimse biliyor.

TELEFON

BEYOGLU Metro han, Tünel meydanı, Telefon Beyoğlu 4800
İSTANBUL Elektrik Evi–Beyazıt » İstanbul 24378/9
KADIKÖY Muvakkıthane Caddesi No. 83. » Kadıköy 66
ÜSKÜDAR Şirketi Hayriye İskelesi No. 10. » Kadıköy 312
BÜYÜK ADA 23 Nisan Caddesi No. 19 » Büyük Ada 128

— 8 —

Figure 63 Announcement of services of the electric company (*Amel-i Elektrik*, February 1932)

The buildings exemplified a dual function as a shop selling electric and gas appliances, it also acted as a stylistic showcase of the modernization.[415] Their architectural language communicated technological progress, while its interior display staged electrified domesticity as aspirational lifestyle. Within the framework of energo-power, the Electric House can be understood as a spatial instrument through which energy infrastructures were translated into social practices. It mediated between the abstract network of electricity production and the concrete routines of domestic life, shaping users through demonstration and guidance rather than coercion. These spaces were not neutral retail environments; they were pedagogical sites. [416] Through collaboration with the Gas and Electricity Company, they offered applied cooking classes for women, demonstrating how to use electric stoves and appliances properly. [417] In doing so, they institutionalized new domestic habits and reinforced gendered roles within energy consumption. The Electric House therefore functioned as both infrastructural mediator and cultural agent. At the same time, as a socio-natural interface, it embedded electricity into material environments and bodily practices,

[415] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 147.

[417] "Hanımefendi, İstanbul'da Beyazıt Elektrik Evi'nde," *Cumhuriyet*, 1930–06–19 1930.

contributing to the gradual normalization of electrified comfort, hygiene, and domestic labor in the urban context. If coal depots exposed the environmental burdens of energo-power and streetlamps symbolized its purified urban face, the Electric House materialized its pedagogical and commercial dimension.

4.2.3.3. Fındıklı Electric Company Depot

Located in Salıpazarı district in Istanbul between the tramway street and the shore, the depot building was designed by one of the prominent architects of the period, Sedad Hakkı Eldem. First designed as five-storey building but built as three, the building has contemporary concrete frame system.[418] Although planned as a building complex at first, then constructed as an individual building, it hosts the shop on the ground floor on the street side, and depots and offices on the upper floors.[419] The workers' entrance was positioned on the seaside façade separating it from the commercial one. The horizontal emphasis of the undecorated façades, curved walls of the shop entrance, the flat roof, iron joineries, and the balanced proportions of the prismatic mass align with the characteristics of the modern aesthetics of the period.[420]

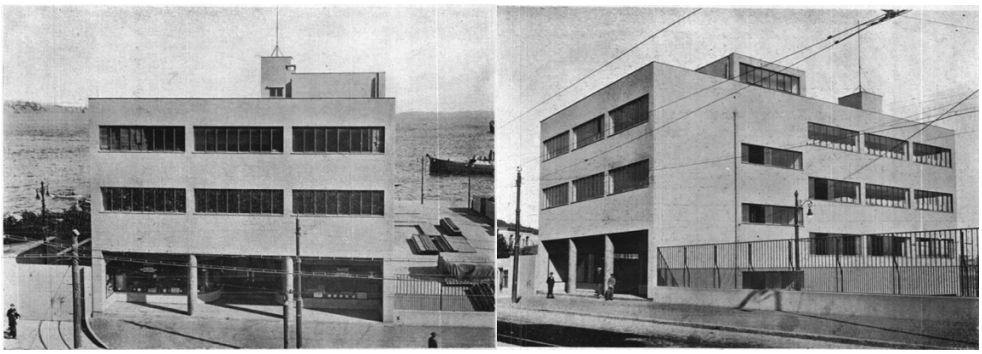


Figure 64 Shop entrance and facade (*Arkitekt,* 1934, no.42)

[418] Eldem Sedad Hakkı, "Elektrik Şirketi Deposu," *Arkitekt*, no. 42 (1934).

[419] Değirmencioğlu, "Erken Cumhuriyet İstanbul'unda Mekan, Mimari ve Elektrik Işığı," 165.
[420] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 102.

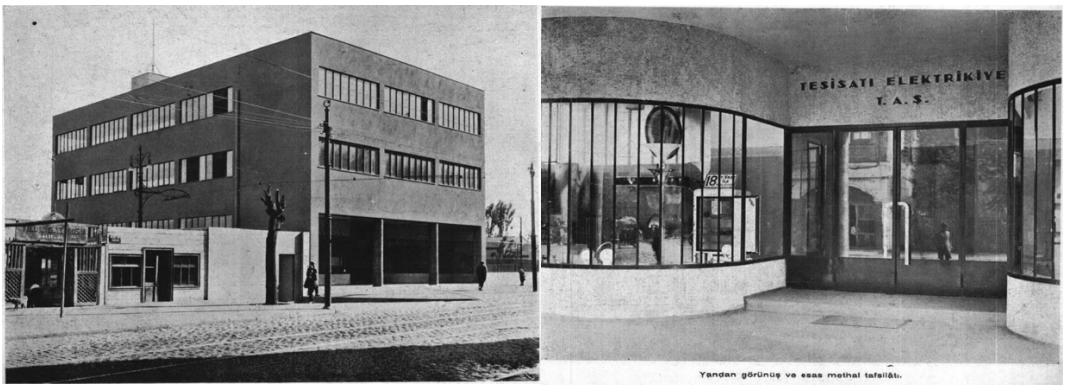


Figure 65 Shop entrance and the showcases (*Arkitekt,* 1934, no.42)

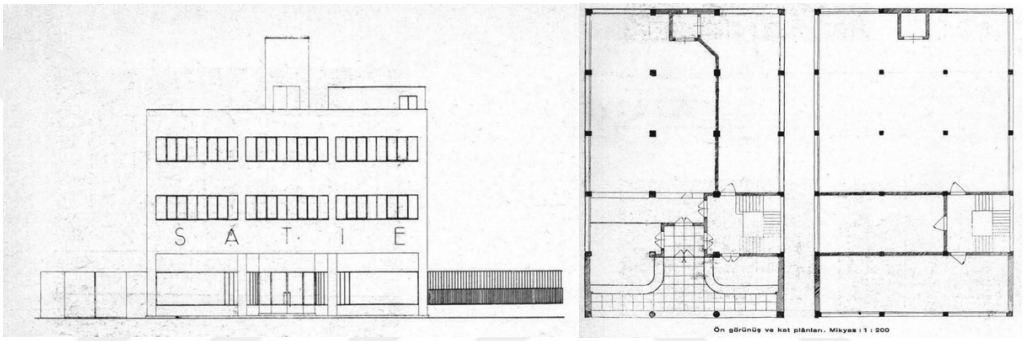


Figure 66 Shop entrance elevation and the floor plans (*Arkitekt*, 1934, no.42)

The depot and shop appear in the newspaper advertisements of SATIE for the electric oven and water heaters that the company alongside the other branches of the company in Metro Han, and Kadıköy and Beyazıt Electric Hosuses. Same advertisements also promote the participation to the Taksim Exhibition as another agent within the energy network of the city in terms of its urban and social experience. Similar to the other nodes of the company, the shop within the Fındıklı Depot provides installations free of charge. In the same advertisement the water heaters are promoted as automated, odorless, smokeless, and flameless. [421] Therefore, it does not cause any danger, risk of fire or explosion, and becomes superior and preferable to coal and gas for its ease of control and safety. [422] The electric oven provides constant and adjustable heating while

[421] "SATIE Elektrik Aletleri," *Akşam*, 01.05.1935.

[422] Nye, "Electrifying America: Social meanings of a new technology," 37.

promising a cooking experience devoid of odor and smoke.[423] The promotion of electric appliances goes alongside the other technological developments of the period, when, for example in the USA, General Electric Company made similar advertisements, especially about the all-electric houses.[424]



Figure 67 Water heater advertisement for Fındıklı branch (*Akşam*, 01.05.1935)



Figure 68 Night illumination of the facade (*Yedigün,* 1935, no.123)

[423] "Elektrik fırınını kullanınız," *Haber*, 01.07.1935.

[424] Yannis Zavoleas, "House-as-machine: the influences of technology during early modernism," (2012), 383.



Figure 69 Electric oven advertisement for Fındıklı branch (*Haber,* 01.07.1935)

Commercial speech in the city and lighted texts have been a part of the built environment for a certain period that began with the candles and gas lamps on the streets.[425] Such use of the streets and facades also blur the lines between corporate production and lived experience, and between public sphere and private interests.[426] The nighttime illumination of the Fındıklı building and the illuminated text that inscribes "Neon installations are carried out by SATIE" also works as a tool of advertisement while directing the consumer movement on the street. Değirmencioğlu interprets such use of the façade of the building not only as the importance given to visual propaganda tools but also the role of architecture itself as a powerful medium through which electric light is introduced to society's aesthetic reception. Such an image carries the "light sells" arguments of the company used in the advertisement to the level of "architecture sells".[427] Merging a modern means of communication with a modern form of construction and function also bring about a new kind of urban modernity where the built environment function as spaces of aspiration, consumption and education while creating new modes of perception and novel experiences of architectural space.[428]

4.2.3.4. Taksim Permanent Electricity Exhibition

Located the northern end of the "spine" that that extends from the bridges of Atatürk and Galata, Taksim Square was a part of the "modern" master plan of Prost

[425] Isenstadt, *Electric Light: An Architectural History*, 157.

[426] Isenstadt, *Electric Light: An Architectural History*, 178.

[427] Değirmencioğlu, "Erken Cumhuriyet İstanbul'unda Mekan, Mimari ve Elektrik Işığı."

[428] Isenstadt, *Electric Light: An Architectural History*.

for Istanbul (1937). Alongside with the park, imagined as the recreation center of the area, the old military casern and the vehicle lanes and promenades, it constituted a symbolic center of the city.[429] The Taksim Permanent Electric Exhibition (*Daimi Elektrik Sergisi*) at the corner of Taksim's Republican Square (*Cumhuriyet Meydanı*) can be seen as a part of the modernization project of the republic through the construction of public spaces.[430] The building operated as a highly visible urban interface through which electricity was introduced, explained, and normalized to the public, aligning the experience of energy with the spatial and political visibility of the Republic.

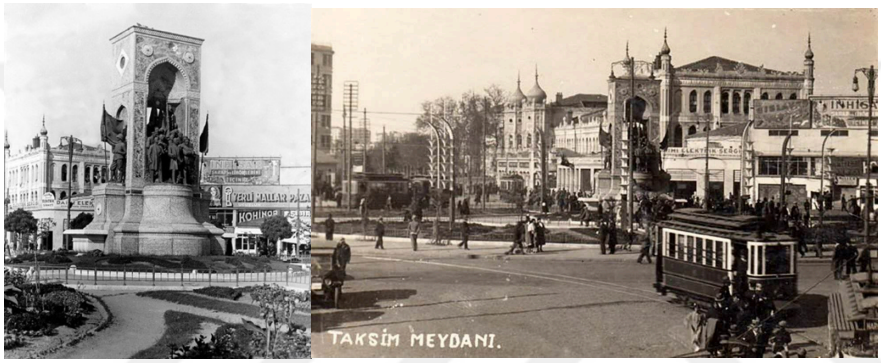


Figure 70 Exhibition building in the Taksim Square, https://www.eskiistanbul.net/205/taksim-aniti-1934, https://www.eskiistanbul.net/1233/taksim-meydani-ve-topcu-kislasi, last access: 18.04.2026)



Figure 71 Aerial images of Taksim Square, 1935 and 1933 (https://www.eskiistanbul.net/422/taksim-bolgesi-hava-fotografi-1935, https://www.eskiistanbul.net/159/taksim-cumhuriyet-aniti-1933, last access: 18.04.2026)

[429] Bilsel, "Les Transformations d'Istanbul: Henri Prost's planning of Istanbul (1936-1951)," 108.

[430] Birge Yıldırım and Arzu Erdem, "Taksim Meydanı'nın Cumhuriyet'in Kamusal Alanı Olarak İnşası," *Tasarım + Kuram* 11, no. 19 (2016): 95.

Rather than a monumental structure, the exhibition took the form of a low-rise, transparent pavilion wrapping the square, directly addressing pedestrian flows and embedding itself within everyday urban circulation. Its open façades and continuous frontage blurred the boundary between street and interior, inviting passersby to enter freely—an invitation explicitly reinforced in advertisements emphasizing that entry was open and that visitors were under no obligation to purchase anything. This spatial and discursive openness positioned the building not as a commercial shop but as a pedagogical environment. The language of the advertisements—framing the exhibition as a place to "gain an idea" of electricity and its applications—reveals a deliberate strategy of soft persuasion, where knowledge, demonstration, and experience preceded consumption.

At the same time, the content of these advertisements and displays foregrounded electrical appliances associated with comfort, hygiene, and efficiency, such as heaters and domestic devices, often accompanied by payment plans and installation services.[431] This indicates that the exhibition functioned as a node linking infrastructural provision to domestic life, translating abstract energy systems into tangible, desirable practices. In this sense, the building mediated between multiple actors—electricity companies, engineers, devices, and urban residents—while shaping new habits and expectations around energy use. Through the lens of energo-power, the exhibition can be understood as a spatial technology of governance that guided citizens toward adopting electrified lifestyles not through coercion but through demonstration and accessibility. Simultaneously, as a socio-natural interface, it reconfigured the relationship between energy and everyday life, embedding electricity within the material and sensory routines of the modern home.

[431] "Taksim Daimi Elektrik Sergisi," *Amel-i Elektrik*, no. 64 (1933).



Figure 72 Exhibition announcements (*Amel-i Elektrik,* 1933, no.6, https://www.instagram.com/p/DQejtP5iMq-/?igsh=bWl0Nzg0OGplNjRp , Last Access: 17.04.2026)

The exhibition did not merely display electrical technologies but operated as an urban interface that mediated their adoption by translating infrastructure into everyday knowledge, practices, and desires. Framed explicitly as a space "opened for you" the exhibition positions itself not as a commercial interior but as a public interface where knowledge, rather than commodities, is the primary offering. The exhibition functioned as a pedagogical environment where citizens were trained to adopt electrical practices voluntarily. The exhibition constituted one of the nodes, besides Bakırköy, Yeşilköy, and Büyükada where cooking classes with electric stoves are offered.[432]

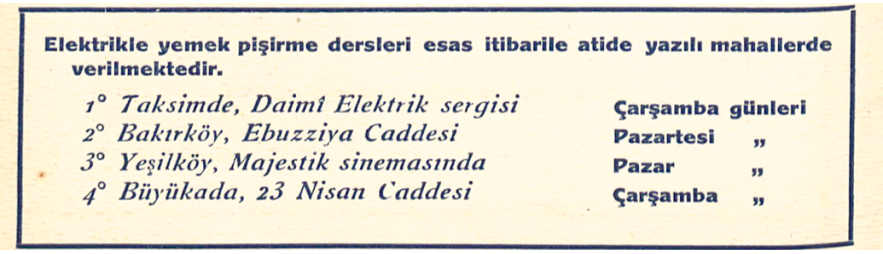


Figure 73 Schedule and places of the cooking classes in Istanbul, (Amel-i Elektrik, 1934, no.66)

[432] "Elektrikle yemek pişirme dersleri," *Amel-i Elektrik*, no. 66 (1934).

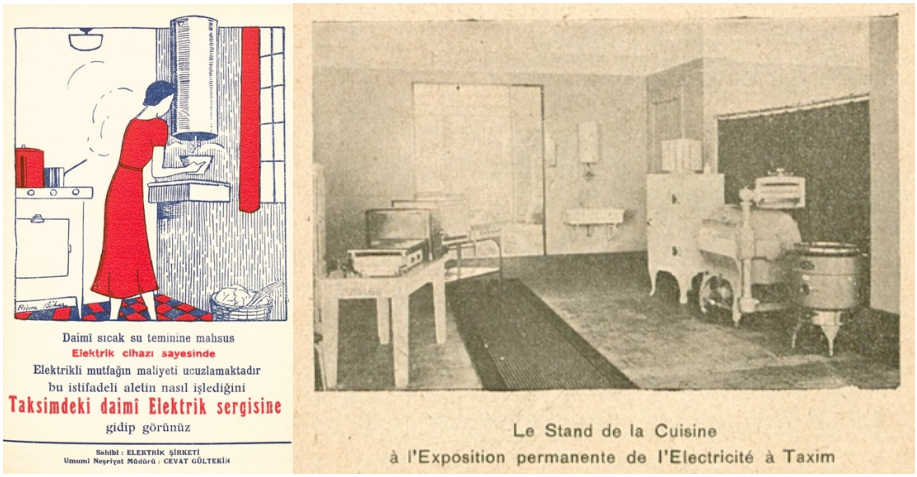


Figure 74 Announcement of the exposition and the kitchen display (*Amel-i Elektrik,* 1934, no.65; *Amel-i Elektrik,* 1934, no.66)

It was announced that "all the officers are at your service", and "you don't have to buy anything", "the exhibition is opened for you. It aims to inform you about various uses of electricity. Please enter, ask for explanations, and see the ways of using the devices." At the same time, the promise of "contemporary comfort" achieved in an "economic manner" situates these encounters within a broader discourse of modernization, where efficiency, affordability, and domestic convenience become key vehicles for normalizing and disseminating new energy practices.

The Permanent Electricity Exhibition at Taksim emerges as a carefully constructed urban node where energy is not merely displayed but actively mediated through pedagogy, consumption, and everyday practice. The text explicitly invites visitors who have not attended the company's courses to experience the exhibition space, where "all explanations" regarding electric cooking and appliances are provided, positioning the site as an accessible extension of formal instruction. This framing transforms the exhibition into a didactic environment in which knowledge about electricity is spatialized and embodied.[433] At the same time, the emphasis on the simplicity, economy, and improved taste achieved through electric appliances connects infrastructural systems to domestic routines, revealing how electricity reconfigures socio-natural relations within the household.

[433] "Exposition Permanente de L'electricite," *Amel-i Elektrik*, no. 65 (1934).

These buildings, despite being individual nodes within different parts of the city, helped reconciling among the scales spanning between national industrialization and urban history, the companies and consumers, the officers and ordinary people.[434] They also functioned as urban interfaces where electricity was not only distributed but socially learned, normalized, and domesticated. Offering most of the services free of charge, while advertising itself, the company and their urban spaces work as a site of encounters both with the new technologies, and the other citizens that participate the same experience of nationhood and its transformations.

The spatial imprint of coal and electricity did not end at the scale of the city. As infrastructures reshaped urban layouts and public institutions, they extended inward, into homes, bodies, habits, and rhythms. If the illuminated street represented the visible face of energo-power, the interior revealed its intimate dimension. The following section therefore turns to the domestic realm, examining how coal, gas, and electrical appliances reconfigured architectural space, everyday routines, and gender roles within the home.

4.3. Domestic Experiences of Energy

The housing has more than one meaning and role both for the physical environment and the society. Some of these roles, include to be a medium where the social relationships and labor dynamics are reproduced and to be a cultural "artefact" in the making of urban environments.[435] Such role makes the houses and domestic spaces, both for their design and daily use a prominent subject of the everyday experiences of ordinary people. This section examines the consequences of the coal and electricity-powered appliances on the layouts, use, and symbolic value of domestic interiors, as well as their relation to contemporary debates on the *Asri Ev* (Contemporary House) gender roles, and modern domesticity.[436] The analysis relies primarily on articles, advertisements, illustrations, and advice columns published in

[434] Bierig, "Building on Ghost Acres: The London Coal Exchange, circa 1849," 9.

[435] İlhan Tekeli, *Türkiye'de yaşamda ve yazında konutun öyküsü (1923-1980)* (Tarih Vakfı Yurt Yayınları, 2012), 12.

[436] İleri and Degirmencioglu, "Erken Cumhuriyet Dönemi Türkiyesi'nde Asri Ev Tartışmaları ve Elektrikli Tenvirat."

newspapers and magazines of the period. While gender could also be examined through the lenses of production, technical labor, decision-making, and advertising industries, this study limits its scope to domestic use, everyday energy habits, and the social values attached to them.[437]

By turning to the interior, this part signals the multiplicity of ways in which energy materialized, experienced, and was lived in 1930s Turkey. It addresses how spatial inequalities shaped through energy access (pricing, shortages, and uneven distribution of facilities) entered the domestic realm, and how frictions in energy use appeared through accidents, breakdowns, and improvisations in both urban and interior spaces. Questions of justice and inequality are foregrounded by asking who had access, who suffered shortages, and who bore the risks of malfunction or scarcity. Energy is therefore examined not only as infrastructure but as everyday encounter - sometimes through accidents and frictions - where policy translated into practice and where sovereignty met material limits.

The chapter moves into the domestic interior, the space where energy infrastructures intersected most directly with gender, routine, and embodied labor. Advertisements for electric appliances, lighting fixtures, and modern homes promoted electricity as a marker of civilized domesticity and feminine efficiency. The ideal home was represented as clean, bright, orderly, and technologically equipped; the ideal woman was positioned as the rational manager of energy consumption and household hygiene. In this sense, interiors became laboratories of modern citizenship where energy modernity was tested, adapted, and sometimes resisted. Domestic space functioned as a pedagogical environment in which the "new citizen"—women, men, and children—was to be disciplined through routines of cleanliness, punctuality, and efficient resource use.

At the same time, newspaper anecdotes, complaints, and advice columns complicate this idealized image. Electricity was frequently unreliable, expensive, or entirely unavailable. Households improvised through mixed fuel systems – coal stoves, *mangal,* gas lamps, and occasional illegal connections - revealing domestic space as a site of negotiation rather than linear progress. These practices blurred the

[437] Graeme Gooday and Ruth Sandwell, "Rethinking the Agency of Women in Energy Management Early British Debates on Electrification," *RCC Perspectives*, no. 1 (2020), https://www.jstor.org/stable/26937548.

boundary between “modern” and “traditional,” demonstrating that energy transitions unfolded as layered coexistences rather than clean substitutions. The domestic interior thus becomes a micro-territory where energo-power was tested, adapted, and sometimes quietly resisted.

Architecturally, electrification altered spatial organization. Electric lighting reduced dependence on daylight, enabling deeper floor plans and greater flexibility in room arrangement.[438] Artificial illumination extended the temporal use of interiors, reorganizing rhythms of cooking, reading, sewing, and socializing. In this sense, electricity acted as a new building material—less visible than brick or concrete, yet equally formative in shaping interior spatial logic. However, while plan schemes were influenced by electrification, this section prioritizes lived experience over formal typology, examining how energy restructured atmosphere, perception, and routine.

Artificial illumination also functioned as a technology of national imagining.[439] In the late 19th and early 20th centuries, light symbolized enlightenment, order, and progress. Within domestic interiors, this symbolism became intimate. Domestic space functioned as a pedagogical environment in which the “new citizen”—women, men, and children—was to be disciplined through routines of cleanliness, punctuality, and efficient resource use.[440] The technology of electricity became an actor that transforms these domestic interior spaces creating its own material culture.[441] Coal- and electricity-powered heating, cooling, and ventilation appliances were promoted as guarantors of hygienic living. Appliance companies actively cultivated this transformation. Some offered nighttime trial use of products, allowing families to experience illuminated interiors before committing to purchase. Such strategies reveal that energy consumption was not assumed but cultivated. Domestic interiors became sites of persuasion, where technological devices mediated between state visions of progress and household budgets.

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[438] Isenstadt, *Electric Light: An Architectural History*, 121.

[439] Szeman and Boyer, *Energy humanities: An anthology*, 28. Also, see: David Nye, "The Great White Way," in *Energy Humanities: An Anthology* (Johns Hopkins University Press, 2017).

[440] İleri and Degirmencioglu, "Erken Cumhuriyet Dönemi Türkiyesi’nde Asri Ev Tartışmaları ve Elektrikli Tenvirat," 102.

[441] İleri and Degirmencioglu, "Erken Cumhuriyet Dönemi Türkiyesi’nde Asri Ev Tartışmaları ve Elektrikli Tenvirat," 96.

By reading domestic energy use as spatial practice, this section expands architectural history beyond built form to include gestures, routines, atmospheres, and material improvisations that constituted lived space. The interior emerges not as passive container but as an active arena in which infrastructure, ideology, gender, and economic constraint intersected. If previous sections examined energy as territorial and representational power, here energo-power becomes embodied—negotiated through switches, stoves, bills, and habits.

4.3.1. Accidents, Warnings, and Bodily Pedagogies

Hygiene, pollution and coal dust were persistent concerns surrounding the use of coal both in both domestic interiors and urban space. Debates over fuel choice were not merely technical but environmental, economic, and cultural. The continued use of wood instead of coal raised multiple issues: forest preservation, transportation logistics, and regional access to heating in areas without nearby woodland. Coal was promoted as more efficient and nationally strategic, particularly in regions distant from forests. Yet resistance to coal use was not only economic. The insistence on wood was often framed as attachment to tradition but also reflected limited knowledge of coal-burning appliances and the lack of appropriate stoves.[442] Fuel choice thus became a site where environmental policy, national resource management, and domestic habit intersected.

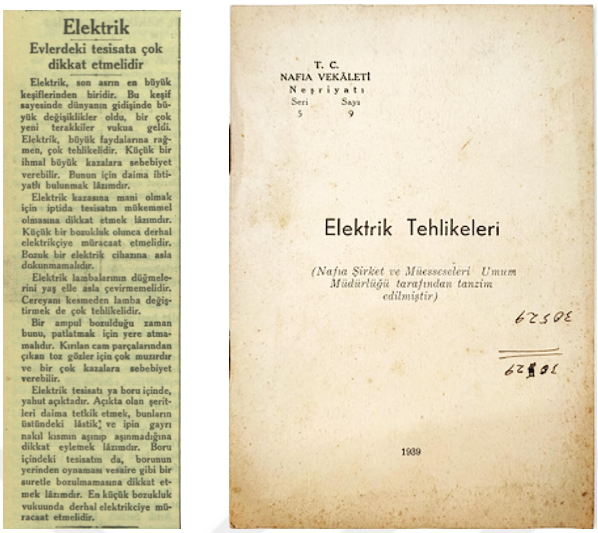
Coal carried visible environmental materiality—smoke, soot, dust, and odor—making its presence physically undeniable. Electricity, by contrast, appeared clean and immaterial, yet it introduced another category of concern: accident and risk. Although switch technology transformed a previously lethal force into a seemingly tamed and controllable domestic utility, electricity generated new fears and anxieties.[443] Consumers feared having invisible current inside their homes. Newspapers regularly published warnings about electrocution, improper wiring, and faulty appliances.[444]

[442] Kadro, September 1933, Issue 21, p.36.

[443] Isenstadt, *Electric Light: An Architectural History*, 32.

[444] *Akşam,* 1932-08-02; *Hakimiyeti Milliye,* 1934-10-17; *Milliyet*, 1930-04-03; *Tan,* 1936-05-07; *Türk Dili*, 1939-01-13.

The Ministry of Public Works circulated brochures instructing citizens on safe usage. Such materials reveal that energy was never neutral. Electrification required training, literacy, attentiveness, and obedience to technical rules.



Elektrik

Evlerdeki tesisata çok dikkat etmelidir

Elektrik, son asrın en büyük keşiflerinden biridir. Bu keşif sayesinde dünyanın gidişinde büyük değişiklikler oldu, bir çok yeni terakkiler vukua geldi. Elektrik, büyük faydalarına rağmen, çok tehlikelidir. Küçük bir ihmal büyük kazalara sebebiyet verebilir. Bunun için daima ihtiyath bulunmak lâzımdır.

Elektrik kazasına mani olmak için iptida tesisatın mükemmel olmasına dikkat etmek lâzımdır. Küçük bir bozukluk olunca derhal elektrikçiye müracaat etmelidir. Bozuk bir elektrik cihazına asla dokunmamalıdır.

Elektrik lambalarının düğmelerini yaş elle asla çevirmemelidir. Cereyanı kesmeden lamba değiştirmek de çok tehlikelidir.

Bir ampul bozulduğu zaman bunu, patlatmak için yere atmamalıdır. Kırılan cam parçalarından çıkan toz gözler için çok muzırdır ve bir çok kazalara sebebiyet verebilir.

Elektrik tesisatı ya boru içinde, yahut açıktadır. Açıkta olan çerileri daima tetkik etmek, bunların üstündeki lâstik ve ipin gayrı nakıl kısmın aşınıp aşınmadığına dikkat eylemek lâzımdır. Boru içindeki tesisatın da, borunun yerinden oynaması vesaire gibi bir suretle bozulmamasına dikkat etmek lâzımdır. En küçük bozukluk vukuunda derhal elektrikciye müracaat etmelidir.

T. C.
NAFIA VEKÂLETİ
Neşriyatı
Seri 5 Sayı 9

Elektrik Tehlikeleri

(Nafıa Şirket ve Müesseseleri Umum Müdürlüğü tarafından tanzim edilmiştir)

62505

1939

Figure 75 Warnings about the electricity wiring (*Akşam,* 02.08.1932) and the brochure by the Ministry of Public Works about electricity safety

If coal externalized environmental cost through smoke and dust, electricity internalized discipline through conduct. Risk was unevenly distributed, just like infrastructure itself. Poor wiring, informal connections, and lack of technical knowledge heightened danger in certain districts and households. Public safety announcements functioned as moral-pedagogical instruments, teaching citizens how to behave within electrified environments. Energy infrastructures thus operated not only as technical systems but as disciplinary environments that produced trained, cautious, and governable subjects. Through safety regulation and instructional discourse, the state materialized its authority.

A contemporary advertisement for Mazda electric lighting stages the domestic interior as the final destination of a broader energetic system, visually linking industrial production to everyday life through a cascading flow of light bulbs. At the center, a female figure orchestrates this flow, positioning women as mediators of electrified domesticity, responsible for integrating new technologies into the home. Meanwhile, the relaxed male and female figures and the presence of the radio construct electricity as a source of comfort, leisure, and modern identity.

Rather than depicting electricity as a neutral utility, the image frames it as a desirable lifestyle, contributing to the formation of new socio-natural environments in which light, sound, and temporality are reorganized. As such, the advertisement operates not only as a commercial object but as a representational infrastructure that normalizes and disseminates the experience of electrified modernity.



Figure 76 Electric bulb and radio advertisement (*Amel-i Elektrik*, 1928, no.23)

Coal-related accidents also appeared frequently in the press: mine explosions, gas poisonings, fires, and collapses, often discussed alongside international comparisons and new regulatory measures.[445] Child labor and worker safety emerged as recurring themes. [446] At the domestic scale, carbon monoxide poisoning from mangals and stoves was not uncommon, reminding readers that energy's risks extended from extraction to consumption.[447] To prevent domestic accidents and risk

[445] "İNGİLİZ KÖMÜR OCAKLARINDAKİ KAZALARIN SEBEBLERİ," *BULLETIN OF THE MINERAL RESEARCH AND EXPLORATION (MTA Dergisi)* 3 (1936).

[446] "İNGİLİZ KÖMÜR OCAKLARINDAKİ KAZALARIN SEBEBLERİ."

[447] "Kömür vurmasından bir adam daha öldü," *Cumhuriyet*, 1929–02–06 1929.

of electricity, Amel-i Electric Journal published many instructions and warnings.[448] The articles warn against the danger of electric shock, emphasizing that even low-voltage currents can become hazardous, especially in cases of worn wires, improper insulation, and humid environments. It advises users to regularly check and maintain electrical installations to prevent accidents.[449]


Cumhuriyet

VUKUAT

Yangınlar

Elektrik ütüsü kontak yapmış

Dün saat 9 da Koskada Lâleli apartımanlarının karşısında Ali Beyin apartımanının ikinci katında oturan doktor Fahri Celâl Beyin dairesinde elektrik ütüsü kontak yaparak yangın çıkmıştır. Eşya kısmen yandığı halde söndürülmüştür.

Bir Genç kız ampul takarken elektriklendi ve öldü

Figure 77 Newspaper clip depicting electric shock and fire (*Cumhuriyet*, 05.08.1929)

[448] "Kaza," *Amel-i Elektrik* 52.0 (1932).

[449] "Elektriklenme tehlikesi," *Amel-i Elektrik*, no. 54 (1932).



Bir ihtiyar kömür vurmasından öldü

Ayasofyada oturan doktor Abdullah Cevdet Beyin ahçısı 62 yaşında İsmail ağa evelki gün feci bir şekilde ölmüştür.

İsmail ağa odasındaki mangala çokça kömür doldurmuş ve iyice yanmadan odasına götürmüştür.

İhtiyar ahçı mangalın başına geçerek ısınmağa başlamış, aradan biraz vakit geçtikten sonra başı dönmiye, midesi bulanmağa başlamıştır.

İsmail ağa yerinden kalkamıyacak bir hale gelmiş ve uyumağa başlamıştır.

Akşam üzeri İsmail ağanın odasına girenler zavallı adamı ölü bulmuşlardır.

Belediye tabibi tarafından yapılan muayenede İsmail ağanın kömür vurmasından öldüğü tespit edilmiştir.

Kasımpaşada bir zenci kadın yandı

Yangın yatağın kenarına konan mangaldan çıkmıştır

Evelki gece, sabaha karşı, Kasımpaşada çıkan bir yangında ihtiyar bir zenci kadın diri diri yanmak felâketine maruz kalmıştır.

Yangın, Kasımpaşada Hacı İshak mahallesinde Araplar sokağında 15 numaralı evden çıkmıştır.

Tahkikata göre, bu evde ikamet eden 65 yaşında zenci Makbule Hanım, yatarken tepeleme doldurduğu mangalı yatağının yanına bırakmış ve yatmıştır.

Biraz sonra uyuyan kadıncağız uyku arasında sağdan sola dönerken yorganın ucu, yandaki mangala dokunarak devirmiş, Makbule ateşin üzerine düşmüş, eteği tutuşmuştur. Zavallı kadın, canı yanarak uyanmış, kendisini tepeden tırnağa kadar kaplıyan alevlerden kurtarmağa çabalamış, istimdat etmiş maalesef yetişilinciye kadar pek feci ıztıraplar içinde çayır çayır yanmış, her türlü tedavi tesirsiz kalarak vefat etmiştir.

İtfaiye de yangını geç haber almış, fakat gidinciye kadar ateş söndürülmüştür.

Figure 78 Newspaper clip depicting a coal poisoning (*Cumhuriyet*, 06.02.1929; *Cumhuriyet,* 03.02.1929)

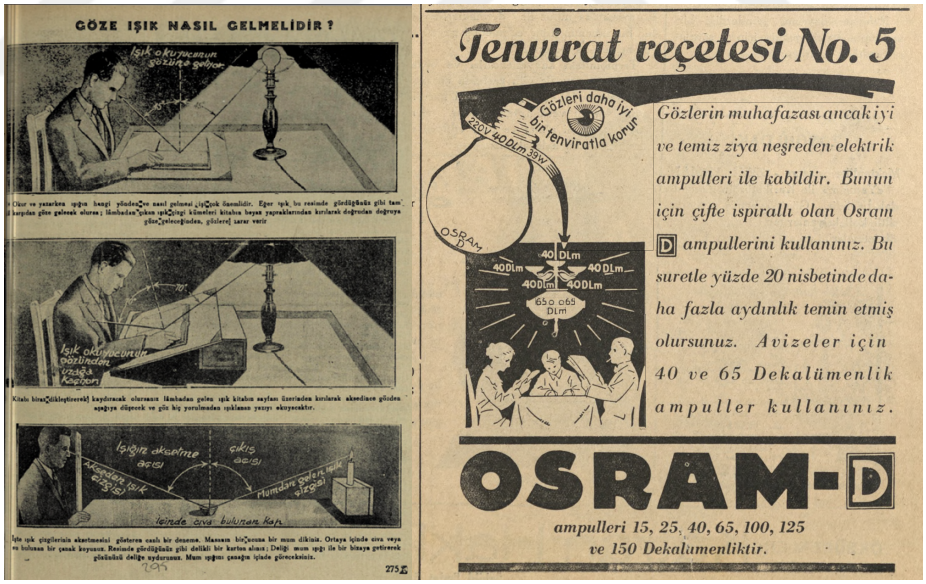


Figure 79 Illustration of proper reading light (*Cumhuriyet Çocuğu,* 12.10.1938; *Yedigün*, 1937, no.207

Another health-related concern was the proper illumination of interior spaces, aimed at preserving eyesight and enabling comfortable conditions for reading and

work under clean, controlled light. The graphics and advertisements of the period frame electricity as a matter of bodily well-being, instructing users on appropriate lighting intensity, direction, and placement to protect the eyes. In this sense, they function as pedagogical manuals that translate technical knowledge into everyday practice, regulating the relationship between the body and electrically mediated environments.[450]

The warnings and instructions for the mitigation of risks of energy sources within the domestic space were conveyed both through print media and through physical sites of instruction, as exemplified by the urban nodes discussed earlier. The following part will focus on the interior comfort, hygiene and the adaptation of appliances to the everyday life. [451]

4.3.2 Interior Comfort, Hygiene, and Appliances

The appliances that entered Turkey in the 1930s were described not as luxuries but as instruments of comfort and necessity. Their marketing deliberately reframed consumption as participation in modernity.[452] The use of electric appliances was directly equated with being modern, hygienic, and rational. The expanding marketplace for coal, coal-burning devices, electricity subscriptions, and electrical appliances (fans, radios, refrigerators, irons, lamps, vacuums) was explicitly aligned with ideals of a "modern" and sanitary nation. Distribution centers such as Istiklal Avenue, Galata, Metro Han in Istanbul and select urban shops functioned as spatial nodes where infrastructure, commerce, and aspiration converged.

Illuminated public spaces simultaneously cultivated what newspapers described as a spirit of "admiration, optimism, belonging and togetherness."[453] The promotion of Turkish hard coal and coal-burning heaters extended beyond domestic

[450] "Göze ışık nasıl gelmelidir?," *Cumhuriyet Çocuğu*, 1938/10–12, 1938.

[451] "Kaza."

[452] Bahar Emgin, "Hizmetçi Prenses: Erken Cumhuriyet Döneminde Evlerin Elektriklendirilmesi," in *Bir Cereyan Hasıl oldu: Osmanlı'dan Cumhuriyet'e İstanbul'da Elektrikli Yaşam*, ed. Nurçin İleri (Türk Tarih Vakfı, 2024), 186.

[453] İleri and Degirmencioglu, "Erken Cumhuriyet Dönemi Türkiyesi'nde Asri Ev Tartışmaları ve Elektrikli Tenvirat."

spaces into public interiors such as schools, hotels, banks, and hospitals. Energy appliances were marketed as part of a civilizing mission promising to elevate Turkish households to the level of "modern civilizations" through cleanliness, hygiene, and efficiency. These advertisements operated as soft propaganda**,** aligning domestic consumption with state-led industrial development. In this sense, the domestic interior became a micro-territory of modernization, where energo-power was internalized not through coercion but through desire, aspiration, and consumption.

Within the home, climate itself became technologically mediated via fans and heaters. Irons, hair dryers, vacuum cleaners, ovens, radios, and refrigerators were presented as indispensable elements of contemporary life.[454] Electricity reorganized domestic time and space by compressing tasks and rationalizing routines. Advertisements of these appliances choreographed daily life, depicting streamlined sequences of cooking, cleaning, ironing, and resting. Fans, for instance, promoted not only as comfort devices but as instruments of hygiene—repelling flies, regulating temperature, and circulating "fresh" air.[455] Climate, once seasonal and variable, became adjustable.

The electric switch introduced a new tactile relationship between body and infrastructure and played a cultural role in rehearsing gender roles.[456] With a simple gesture, ordinary users appeared to command light, heat, and motion. This gesture produced a new domestic subjectivity, rehearsing control over invisible forces.[457] Thus, socio-nature here was domesticated: climate, heat, dust, and air were reorganized through technological mediation, reshaping both bodily comfort and gendered labor within the household. Yet this autonomy was partial and dependent upon centralized supply systems beyond the household. The switch symbolized mastery while concealing infrastructural dependence.

Coal advertisements operated through a different register. They emphasized the "healthier," cleaner, and odorless qualities of the national product.[458] Interiors

[454] Akbaba, 1935, Issue 74.

[455] "Satie vantilatör," *Cumhuriyet*, 08.05.1929 1929.

[456] Isenstadt, *Electric Light: An Architectural History*, 49.

[457] Isenstadt, *Electric Light: An Architectural History*, 51.

[458] Akbaba, 1936, Issue 112.

heated with national coal were depicted as serene and content, while inferior fuels were associated with illness, irritation, and disorder.[459] At the same time, the coexistence of different fuels within the same household exposed fractures in the idealized image of the sterile, electrified home. Mixed fuel practices—coal, wood, gas, and electricity—were often economic necessities rather than ideological choices. These layered usages reveal that energy modernity unfolded unevenly across social strata.



Figure 80 Newspaper advertisement of Satie ventilator and vacuum cleaners (*Cumhuriyet,* 08.05.1929; *Cumhuriyet,* 09.07.1929)



Figure 81 Water heating advertisement and woman in house (*Haber,* 06.06.1935)

[459] Akbaba, 1936, Issue 112; Akbaba, 1936, Issue 115.



Figure 82 The coal burning stove and a woman with a book and a man with a newspaper are praising the comforts of the Turkish hard coal (*Cumhuriyet*,11.12.1936)



Figure 83 The smell of the coal was a health and hygiene concern, also the Turkish coal emphasis (*Akbaba,* 1936, no.112; *Akbaba*, 1936, no.115)

The state in the 1930s was invested in national energy sovereignty. The newspapers of the period included many advertisements and praises about the different Turkish coal types with depictions of interiors and peaceful citizens.

The emphasis on the "Turkish" hard coal links warmth and relaxation to national coal, symbolizing not only physical comfort but patriotic consumption. It was also a common ritual in the 1930s to celebrate Domestic Products Week, mostly organized by the National Economy and Savings Society (established in 1929) to promote the consumption of domestic goods.[460] Turkey is defined as a coal country, and coal is framed as a protector of national forests.[461]On the front page of the third issue of the exhibition newspaper, Falih Rıfkı Atay states that, among the many benefits of coal, he considers the salvation of Turkey's forests to be perhaps the foremost. He further discusses that the industrial developments throughout whole Anatolia, along with wood-burning hammams, bakeries, and domestic devices, were placing increasing pressure on forests, and claims that coal heating will ultimately save the nature of the country.[462] In this narrative, forests, fuel, and technology are not separate domains but are reconfigured together, presenting coal as a modern agent that reorganizes human–environment relations. He finally emphasizes the burning of turd in a close proximity to the electric facilities in Ankara, arguing that coal is the ultimate solution, tamer, and source of pride to such a contradictory coexistence of different levels of civilization.[463] This juxtaposition reveals a socio-natural framing in which energy choices are mobilized to redefine both "nature" and "civilization," positioning coal as the mediator that resolves environmental degradation while simultaneously advancing a unified, modern national landscape.

In some European contexts, many women intentionally maintained coal usage for decades despite the availability of "cleaner" alternatives. This was often a "prudent domestic economy," as coal suppliers were known and varied, whereas the "faceless technocracy" of a national grid required trusting an unknown, vulnerable system.[464] In relation to class identities, the use of appliances also creates a moral supremacy and hierarchic norms by defining certain ways of doing housework as rational, efficient,

[460] Sibel Bozdoğan, "Introduction: Modernization, National Identity, and Visual Culture in Turkey," *The Journal of Decorative and Propaganda Arts* 28 (2016): 15.

[461] Esen, "Kömür Hazretleri," 14.

[462] Falih Rıfkı Atay, "Vatanın tabiatını kömür ısıtımı kurtaracak," *Beynelmilel Kömür Sergisi*, 07.05.1937 1937, 1.

[463] Atay, "Vatanın tabiatını kömür ısıtımı kurtaracak," 1.

[464] Gooday and Sandwell, "Rethinking the Agency of Women in Energy Management Early British Debates on Electrification," 21.

and practical, therefore modern, and others as tiring, time-consuming, and traditional, showing how energo-power not only organizes material life but also shapes normative expectations about conduct, efficiency, and modern citizenship within the household. A refrigerator or a vacuum cleaner becomes a symbol of status and a certain lifestyle.[465] These contemporary technologies, although presented as necessities for the whole society, ended up being privileges only accessed by a certain group of the society.[466] Electrification and the use of fossil fuels also rendered energetic flows "increasingly invisible," obscuring the continued vital labor women performed in managing these new fuels.[467] While appliances promised to reduce labor, they often intensified expectations placed upon women as managers of the rationalized home. Time saved by one device could be reallocated to higher standards of cleanliness and care.

Ultimately, the domestic interior functioned as a micro-territory where energo-power was internalized through desire, comfort, aspiration, and consumption, yet continually negotiated through constraint and improvisation. Energy appliances, coal, and electricity promised hygiene, efficiency, and liberation; they reorganized climate, labor, and daily routines while reinforcing domestic gendered responsibilities and moral expectations. The illuminated cubic houses of modernist representation coexisted with smoky, cluttered interiors struggling with fuel cost and supply. The coexistence of these realities exposes the limits of infrastructural standardization and the persistence of uneven socio-natural relations. The following subchapter will focus on the gendered use of energy within the domestic sphere and the simultaneity of idealized and lived experiences of energy modernity.

4.3.3. Gendered Use of Energy and Fractioned Modernity

Prior to industrialization, almost all people worked in or on the grounds of a house, and both men and women worked in tandem to perform life-sustaining chores.

[465] Emgin, "Hizmetçi Prenses: Erken Cumhuriyet Döneminde Evlerin Elektriklendirilmesi," 187.

[466] Emgin, "Hizmetçi Prenses: Erken Cumhuriyet Döneminde Evlerin Elektriklendirilmesi," 191.

[467] Gooday and Sandwell, "Rethinking the Agency of Women in Energy Management Early British Debates on Electrification," 20.

One of the most profound effects of industrialization was the separation of "workplaces" from "home places"[468] The transformation of the domestic culture and space of the upper class has begun even before the Republic, since the Imperial Edict of Gülhane in 1839, and showed itself as the introduction of new furniture, decoration, and a new understanding of family.[469] In this period, modern house design and nationalism were also inextricably linked, with the "modern house" serving as one of the most potent symbols of a nation's progress and its detachment from the past.[470] Not only the plan schemes and stylistic choices but also the permanence of the material used for the construction was a matter of the representational power of the modern house as a symbol of the break from the past.[471] The aesthetic vocabulary of modernism characterized by simplicity, functionality, and rationality formed a desirable contrast to the "heavily ornamented eclecticism" of late Ottoman architecture. This shift was not merely a matter of taste; it was a political and cultural demand to search for a contemporary lifestyle that complemented the image of a civilized, secular nation.[472] Also, the construction of the modern house, and the mass housing projects had their own problems and discussed in other studies.[473]This study examines the daily experience of the domestic spaces, houses, interiors, appliances, and the life in and around them. Nationalist discourse framed the modern house as a microcosm of the national space.[474] The act of building permanent, modern homes (using iron, stone, and concrete) was compared to the establishment of firm national

[468] Ruth Schwartz Cowan, *More work for mother: The ironies of household technology from the open hearth to the microwave* (Plunkett Lake Press, 2023), 5.

[469] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 212.

[470] Gülsüm Baydar, "Tenuous boundaries: women, domesticity and nationhood in 1930s Turkey," *The Journal of Architecture* 7, no. 3 (2002).

[471] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 214.

[472] Baydar, "Tenuous boundaries: women, domesticity and nationhood in 1930s Turkey."; Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic."

[473] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 236.

[474] Baydar, "Tenuous boundaries: women, domesticity and nationhood in 1930s Turkey."

borders.[475] Inhabiting the house and inhabiting the nation were conceived as one and the same; the modern house embodied the imaginary link between the individual citizen and the state.

In the case of Turkey, electricity underwent a double domestication. As an imported technology, the meaning and applications of electricity had to be translated into the economic, social, and cultural conditions and agenda of the country. Only after the appropriation of electricity within the republican ideology was it reconciled with the cultural expectations of femininity and domesticity. This research focuses on the ways the prominent mediators of domestic electricity put the cultural expectations of domesticity and femininity in dialogue with the progressive definition of electricity in republican discourses.[476] Architecture was a carrier of modernization not only in the public realm but also in the very private arena of the family, in the houses.[477]

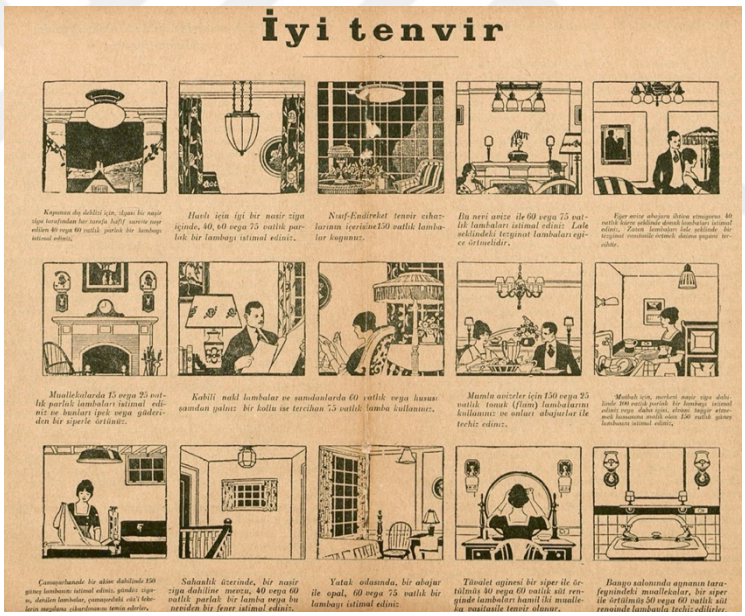


Figure 84 Infographic about "good illumination" (*Amel-i Elektrik*, 1928, no. 25)

[475] Sibel Bozdoğan, "Industrial Architecture and Nation-Building in Turkey: A Historical Overview," *Workplaces: The Transformation of Places of Production* (2010): 214.

[476] Bahar Emgin, "Princesses Versus Maids: Domesticating Electricity in the Early Republican Period in Turkey," *Home Cultures* 16, no. 2 (2019): 184.

[477] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 215.

The journal of the Electric Company, *Amel-i Electric*, offered manual-like guidance to its subscribers through its issues, particularly on the proper illumination of rooms within the ideal home. While serving both educational and commercial purposes, these instructions also expose the gendered assumptions of the period, revealing how energy technologies were embedded in and reinforced specific roles within domestic life. Various rooms of a contemporary house are depicted in a pictographic manner, sometimes with the female and male figures of the house either in associated rooms or together. Starting from the front door of the house, the manual gives specific directions about the power of the bulb that needs to be used. In the respective images, again, different types of light sources including lampshades, indirect lamps, overhead lights and wall lamps are introduced.[478]

The Turkish modernization involved many steps in terms of the changing lifestyle of the women, the structure of the families, and the houses they live in. The betterment of the education of the women and their participation in the labor force, replacement of the traditional families with nuclear families, and the changing plans of the houses were some of the prominent shifts.[479] Similarly, the "modern house" and the "modern woman" were promoted together as potent symbols of national progress.[480] The home provided the support for the revolution, with the "enlightened mother" at its center.[481] New energy sources like electricity were "domesticated" by framing them as subservient assistants to the housewife.[482] In Turkey, electricity was anthropomorphized as a "servant princess", a docile power intended to protect the intimacy of the household.[483] Such an approach creates a technological paradox where while electricity was marketed as a "silent servant" to liberate women, it often raised

[478] "İyi tenvir," *Amel-i Elektrik*, no. 25 (1928).

[479] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 213.
[480] Baydar, "Tenuous boundaries: women, domesticity and nationhood in 1930s Turkey."

[481] İleri and Degirmencioglu, "Erken Cumhuriyet Dönemi Türkiyesi'nde Asri Ev Tartışmaları ve Elektrikli Tenvirat."

[482] Emgin, "Princesses Versus Maids: Domesticating Electricity in the Early Republican Period in Turkey."

[483] Emgin, "Princesses Versus Maids: Domesticating Electricity in the Early Republican Period in Turkey."

standards of domestic cleanliness, resulting in "more work for mother" rather than increased leisure.[484]

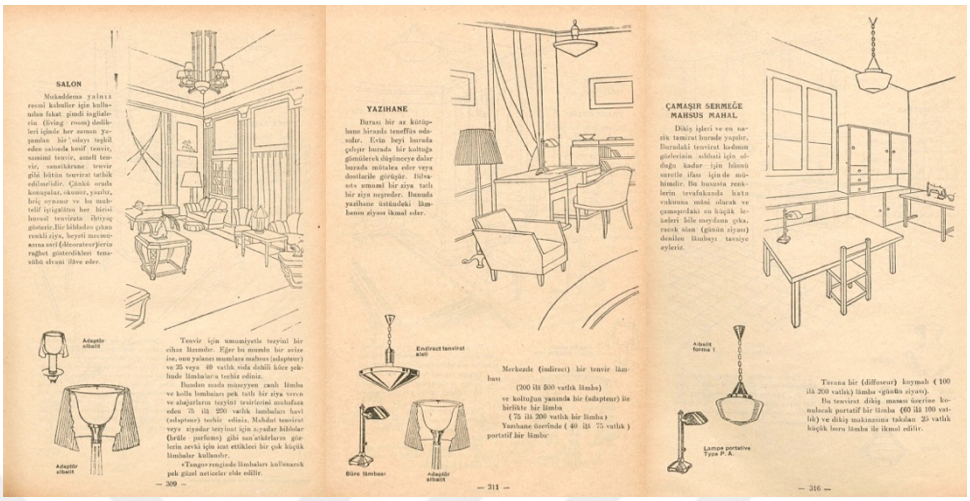


Figure 85 Illumination of the living room, study room, and laundry drying room (*Amel-i Elektrik*, no.51)

While the journal conveys technical information about which sort of lamp, shade, or bulb should be used in each room, it also associates these rooms with specific genders. For instance, the study room is for the gentlemen of the house to work, contemplate or host his guests under the indirect light of the overhead lamps.[485] On the other hand, the laundry drying room should have a “daylight” lamp to reveal any stains on the clothes for the lady of the house to clean, or to protect her eye-sight while doing chores such as repairing or sewing clothes.[486] Such narratives reveal the way energy structures the subjects into categories of race, class, or gender.[487] It also parallels a prominent goal of the period which was to raise the Turkish girls as enlightened wives, mothers, and household managers.[488]

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[484] Abigail Harrison Moore and Ruth Wells Sandwell, *In a New Light: Histories of Women and Energy* (McGill-Queen's Press-MQUP, 2021).

[485] "Yazıhane," *Amel-i Elektrik*, no. 51 (1931).

[486] "Çamaşır sermeğe mahsus mahal," *Amel-i Elektrik*, no. 51 (1931).

[487] Wellum, "The Use of Energy History."

[488] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 102.

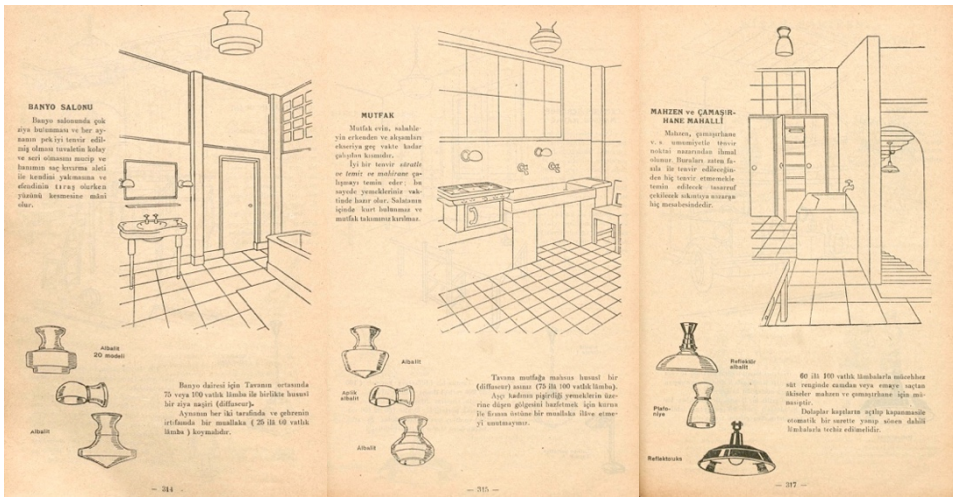


Figure 86 Illumination of the bathroom, kitchen and laundry room (*Amel-i Elektrik*, no.51)

The light in the bathroom should be enough for the lady to not burn herself while curling her hair, and for the gentlemen to not cut himself while shaving.[489] The bathtubs, sinks, and water closets were starting to become the normative fixtures of the modern houses, parting from the traditional versions.[490] Topics such as Topics such as the proper arrangement of the kitchen and what measures to use during cooking were prominent areas of discussion in the process of constructing the modern nation-state.[491] The kitchen, that is used from the early morning to the late night, can be used in a clean and skillful manner by the help of a good lighting to avoid bugs in the food or breaking of the plates by mistake.[492] In an advertisement of bulbs, again, it is emphasized that the housewife should pay attention to the lighting of the kitchen to work and cook more efficiently.[493] The "contemporary kitchen" is also presented with an electric water heater, an electric stove and an oven.[494] Although the electric

[489] "Banyo salonu," *Amel-i Elektrik*, no. 51 (1931).

[490] Meltem Ö Gürel, "Designing and consuming the modern in Turkey," in *The Routledge Companion to Design Studies* (Routledge, 2016), 468.

[491] Yael Navaro-Yaşın, "'Evde taylorizm': Türkiye cumhuriyeti'nin ilk yıllarında evişinin rasyonelleşmesi (1928-40)," *Toplum ve Bilim* 84 (2000): 51.

[492] "Mutfak," *Amel-i Elektrik*, no. 51 (1931).

[493] "Mutfağını daha iyi tenvir et," *Amel-i Elektrik*, no. 51 (1931).

[494] "Asri bir mutfak," *Amel-i Elektrik*, no. 61 (1933).

refrigerators were often promoted on the media, they were too expensive for many, and the kitchens were too small to accommodate them, which again brings about the issues around access and the fractured experience of modernity.[495]

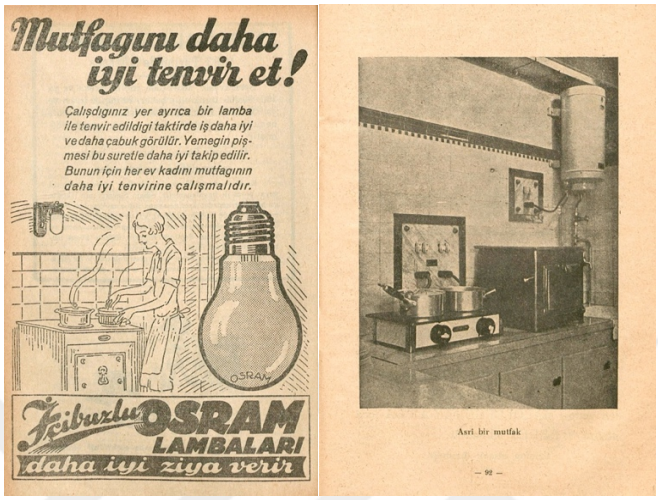


Figure 87 Contemporary kitchen images (*Amel-i Elektrik*, 1931, no.51; *Amel-i Elektrik,* 1933, no.61)

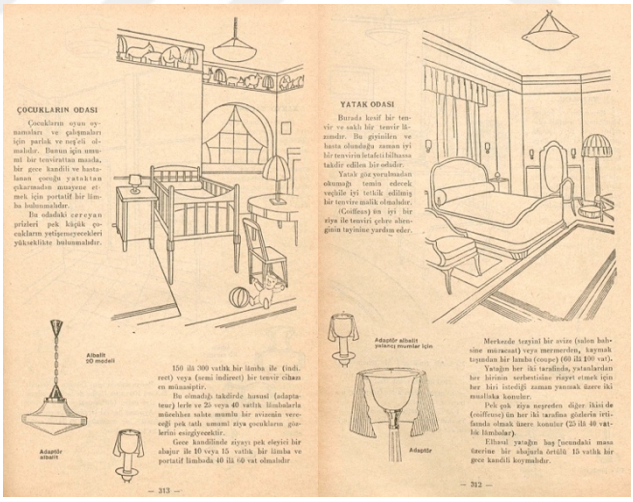


Figure 88 Bedrooms and children's rooms (*Amel-i Elektrik*, no.51)

[495] Gürel, "Designing and consuming the modern in Turkey," 471.

The children's room requires bright and lively lighting to support play, while power outlets should be positioned above a certain height to ensure safety. [496] In contrast, the main bedroom calls for more compact and discreet lighting that also enables comfortable reading in bed. Light fixtures placed on both sides of the bed allow for independent use. In both rooms, a combination of overhead, table, and portable lamps was recommended. [497]

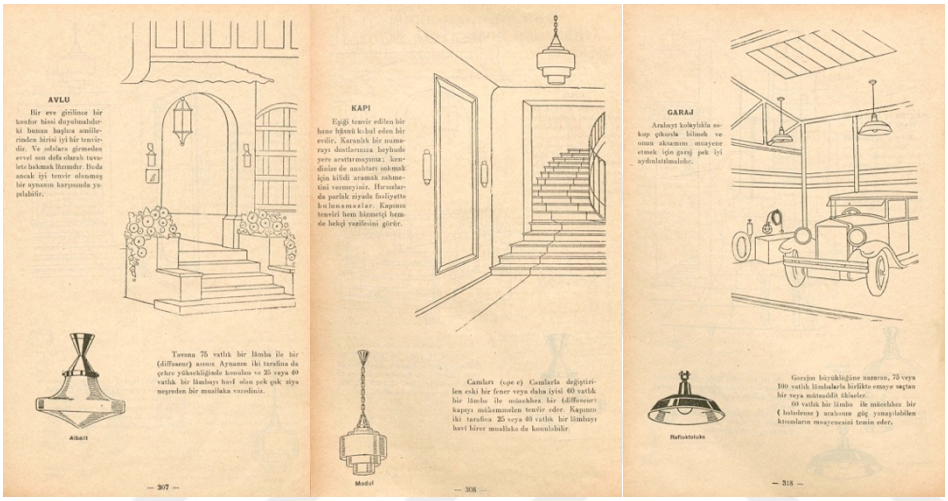


Figure 89 Illumination of the garage, courtyard, and the doorway (*Amel-i Elektrik*, no.51)

Even the exterior spaces of the house, including the garage, courtyard, and the doorway are instructed in detail to have the feelings of comfort, safety, and efficiency.[498] The good lighting of the doorway works both as a maid to facilitate to find the number of the guests, and a watchman to prevent burglary.[499]The recommendations of the light fixtures for each space include the power, color, shape and direction of the lamp, as well as the material of the lamp such as glass or enamel.[500]

[496] "Çocukların odası," *Amel-i Elektrik*, no. 51 (1931).

[497] "Yatak odası," *Amel-i Elektrik*, no. 51 (1931).

[498] "Garaj," *Amel-i Elektrik*, no. 51 (1931).

[499] "Kapı," *Amel-i Elektrik*, no. 51 (1931).

[500] "Mahzen ve çamaşırhane mahalli," *Amel-i Elektrik* 51 (1931).

These instructional manuals and advertisements on domestic electrification did not merely introduce new technologies but actively reconfigured the spatial, social, and sensory organization of the home. Through detailed prescriptions on the placement, intensity, and maintenance of lighting, they functioned as micro-technologies of energo-power, regulating everyday practices and bodily habits. Each room—living room, kitchen, bedroom, children's room, and even auxiliary spaces such as entrances and garages—was redefined through specific illumination requirements, transforming lighting into a primary agent of spatial differentiation. At the same time, these prescriptions reinforced gendered divisions of labor, associating women with productive and efficiency-oriented lighting environments, particularly in kitchens and workspaces, while male-oriented spaces were framed through calmer and more contemplative light regimes. By linking illumination to hygiene, health, and efficiency, these representations produced new socio-natural environments in which visibility and cleanliness became central to domestic life. Together, they reveal that electrification was not simply a technological addition to the home but a comprehensive reorganization of domestic space, time, and social relations.

In this period, factories, offices, and workshops became the designated "place" for men to earn wages[501] The home was redefined as the "domain" of women, a set of behaviors and ideas known as the "doctrine of separate spheres"[502] Industrialization did not necessarily lighten the domestic burden for women; instead, it often eliminated tasks previously performed by men and children while increasing the complexity of women's work.[503] Households continued to "produce" healthy children and well-fed adults, with housewives serving as the primary workers responsible for this "social metabolism".[504] Inventions like cast-iron stoves and piped water meant that wood no longer had to be chopped, water carried, or grain hauled to mills, tasks traditionally assigned to men.[505] Technologies like the stove allowed for complex, multi-dish meals

[501] Moore and Sandwell, *In a New Light: Histories of Women and Energy*, 10.

[502] Cowan, *More work for mother: The ironies of household technology from the open hearth to the microwave*, 18.

[503] Baydar, "Tenuous boundaries: women, domesticity and nationhood in 1930s Turkey."

[504] Moore and Sandwell, *In a New Light: Histories of Women and Energy*, 36.

[505] Cowan, *More work for mother: The ironies of household technology from the open hearth to the microwave*, 62.

that replaced simple one-pot cooking, increasing the time women spent preparing food.[506]

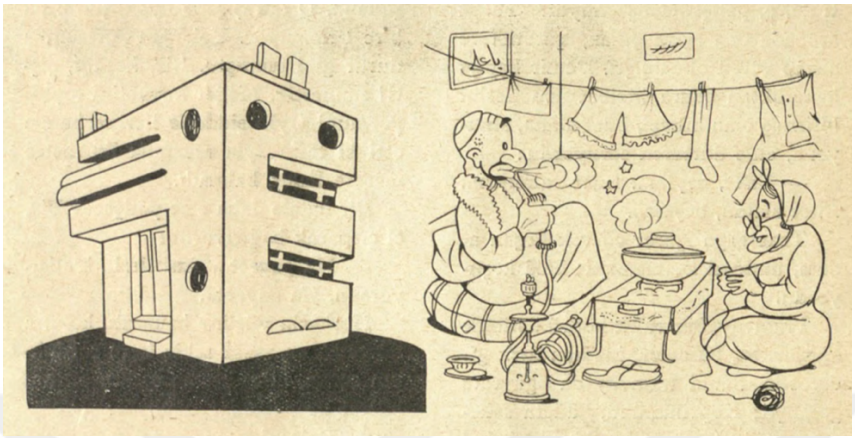


Figure 90 Juxtaposition of a "cubic" modern house exterior and a backwards interior without contemporary furniture and appliances (*Akbaba*, 1935, no.375)



Figure 91 Caricature depicting an alternative use of antenna (*Akbaba*, 1935, no.70).

[506] Cowan, *More work for mother: The ironies of household technology from the open hearth to the microwave*.

The “cubic house” was a prominent discussion topic within the modernization project of the Republic. Disseminating a new standard of taste to the people and exemplifying modern life these houses became significant emblems of the new vision of living.[507] Besides the official agend, popular magazines also promoted examples of these “ideal” houses by emphasizing their difference from the “gloomy darkness and heavy air” of the apartments in Istanbul. Yet, despite having such a recognition and strong representation through media, these houses were not affordable and accessible for the most of the people.[508] While it had the progressive and rational connotations that were coherent with the ideals of the regime, the cosmopolitan and “international” indicatives were harder to embrace.[509]The juxtaposed images of a cubic villa and an interior where the couple sits on the ground with no contemporary furniture, has a mangal in the middle of the room, and clothes hanging from wall to wall seems far from the contemporary images of the modern housing, and represents the conflicting images of a family house.[510] Another caricature mocks that the antenna is used for hanging clothes, not for the radio.[511]In another household, where the technology of radio is not even present, the family room is illustrated again in contrast with the hygienic, rational, and modern house.[512] Some instructions on how to arrange the proper lighting for reading were published in scientific and rational diagrams in the period journals.[513] An article in *Arkitekt* on how to illuminate the interiors was published as early as in 1931, by an electrical engineer Hassan Halet. Detailed instructions are given about the lighting of each room in a house and the materials of the lamps, and how the most efficient lighting can be provided without tiring the eyes.[514] On the other hand, the lived reality was depicted as a child studying without a

[507] Bozdogan and Akcan, *Turkey: Modern architectures in history*, 86.

[508] Bozdogan and Akcan, *Turkey: Modern architectures in history*, 90.

[509] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 254.

[510] Akbaba, 1934, Issue 375.

[511] Akbaba, 1935, Issue 70.

[512] Akbaba, 1935, Issue 56.

[513] "Göze ışık nasıl gelmelidir?."

[514] Hasan Halet, "Evlerin Elektrik Tertibatı," *Arkitekt*, no. 5 (1931/05 1931).

light and furniture, sitting on the ground next to the mangal in the middle of the room, while two women smoke.[515]Such an image represents a daily experience far from the modern house where the young and healthy generations would be raised.[516] In the state ideals, the modernization of the women was seen as equal to the modernization of society, and women were educated to be good housewives and good mothers.[517] Yet similar to the unchallenged experience of the modernist vocabulary both in practice and discourse levels of architecture, the new technologies and their appropriation was heterogenous.[518]

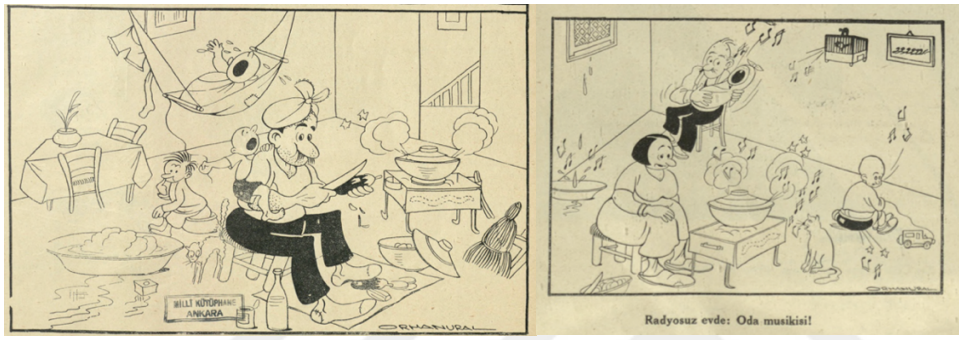


Figure 92 Domestic space depiction with a cooking mother, children and mangal (*Akbaba,* 1935, no.56)

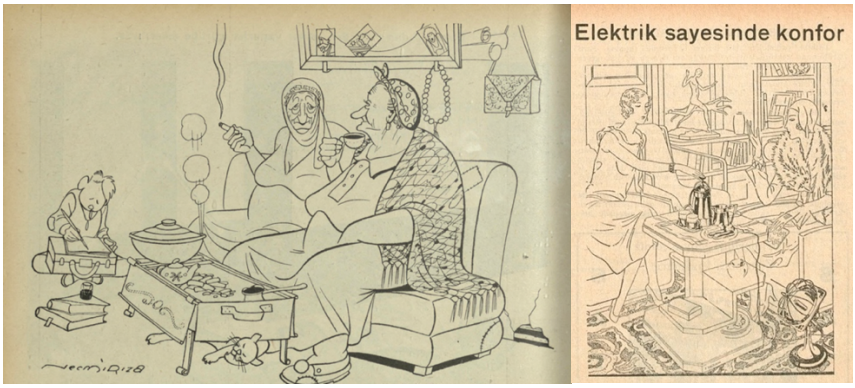


Figure 93 Simultaneous yet contradicting domestic scenes (*Akbaba*, 1938, no.253; *Amel-i Elektrik*, 1932, no.53)

[515] Akbaba, 1938, Issue 253.

[516] Emgin, "Hizmetçi Prenses: Erken Cumhuriyet Döneminde Evlerin Elektriklendirilmesi."

[517] Emgin, "Hizmetçi Prenses: Erken Cumhuriyet Döneminde Evlerin Elektriklendirilmesi."

[518] Gülsüm Baydar Nalbantoğlu, "Between Civilization and Culture: Appropriation of Traditional Dwelling Forms in Early Republican Turkey," *Journal of Architectural Education* 47, no. 2 (1993): 67.

The issues around energy-agency-homes, women-fear-fossil fuel are discussed by different authors in the current literature. Such an approach brings a new perspective to historiography that involves both the environmental and gender issues while thinking about space and energy.[519] Women have always been seen as the "home safety managers".[520]Although there are various roles of women in the energy transitions, it was generally hidden in the household where they were responsible of the open flames used for cooking, lighting, heating and open hearths.[521] The public health and incidents aspects of the energy also includes fires, explosions, toxic air, and interior air pollution.[522] These can be interpreted within the disparities revolved around the energy where the gender roles lead the men to be on the coalfields and mines as the labor force, and women to be in the house and provide the safety from hazards. There is a repeating narrative in the advertisements of the appliances and the 1930s discourse of the "rationalized home" where technology powered by national energy reduces drudgery, aligns domestic labor with hygienic and modern ideals, and symbolically connects women to become efficient household managers in the new Republic.

The relationship between nationalism and design was deeply gendered, as the modern house and the modern Turkish woman were promoted together as the dual image of the new republic. Nationalist journals identified the owner of the modern house as the male citizen, a status institutionalized by the 1926 Civil Code, which named the husband the head of the family. While the man "had" the house, the woman was expected to "be" the house, and a literal nurturer of the "heroic masculine figure" associated with the nation.[523] Also, the concept of the "enlightened mother" was a central pillar of nationalist discourse in early Republican Turkey serving as a powerful ideological tool to link the domestic sphere to national progress and modernization.[524]

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[519] Moore and Sandwell, *In a New Light: Histories of Women and Energy*.

[520] Moore and Sandwell, *In a New Light: Histories of Women and Energy*, 69. Also, see: Baydar, "Tenuous boundaries: women, domesticity and nationhood in 1930s Turkey."

[521] Moore and Sandwell, *In a New Light: Histories of Women and Energy*, 36, 73.

[522] Moore and Sandwell, *In a New Light: Histories of Women and Energy*, 68.

[523] Baydar, "Tenuous boundaries: women, domesticity and nationhood in 1930s Turkey," 233.

[524] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic."

The contemporary nuclear family consisting of a working husband, an educated wife, and their healthy children, and their physical space had modern representations.[525] Modern design elements like fresh air and sunlight were intended to "enlighten" the woman within the house so she could better conduct her domestic and maternal duties for the higher good of the nation. Popular journals of the 1930s promoted trade schools that educated women on the "scientific" conduct of housework, sewing, and gardening. This was intended to produce "efficient women of the efficient modern house.[526] Nationalist discourse defined the ideal modern woman as a patriotic agent whose primary duty was to the state rather than to herself. Kemal Atatürk articulated this by stating that the Turkish woman should be the "most enlightened, the most virtuous and the most dignified woman in the world". Her specific national duty was to raise future generations with the vigor , intelligence, and strength necessary to protect and defend the nation.[527] Design elements such as fresh air, sunlight, and books were framed as tools to "flow inside" the home to enlighten the mother. This was not meant for her personal development, but so that she could conduct her domestic and maternal duties with greater precision and knowledge. Despite the rhetoric of progress, the "enlightened mother" was a figure created and controlled by men to ensure national stability.

One of the most prominent representatives of the modernization and electrification process of the country, Sümerbank used illustrations of villagers and city-dwellers next to each other in harmony in their advertisements for the appliances and industrial products.[528] Although it was represented as if there was no conflict between those two sides, the lived reality and the representation of more modern and traditional, young and elder women in the periodicals carry another message. The interiors were repeatedly illustrated as more traditional, messy, and destructed spaces with broken walls and ceilings, with no proper furniture, and no electricity and appliances.[529] These images also came with an elderly woman in the middle of the

[525] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 214.

[526] Baydar, "Tenuous boundaries: women, domesticity and nationhood in 1930s Turkey," 238.

[527] Baydar, "Tenuous boundaries: women, domesticity and nationhood in 1930s Turkey," 237.

[528] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 150.

[529] Akbaba, 1936, Issue 137., Akbaba, 1936, Issue 116.

room, generally in a messy condition, and using a mangal instead of a contemporary kitchen oven. The critical caricature depicts the conflicting situations of the “inner face” and “outer face” of life where one shows a broom, a shakedown, and a floor table while the latter depicts a more proper room, a well-groomed woman with contemporary furniture and a chandelier.[530] The images illustrate the coexistence of these two realities where some of the houses are traditional, wooden, and using gas lamps and mangals while the others have contemporary furniture, lifts, and electric lighting.[531] In this period, electricity does not completely replace coal but reorganizes its spatial and perceptual presence.

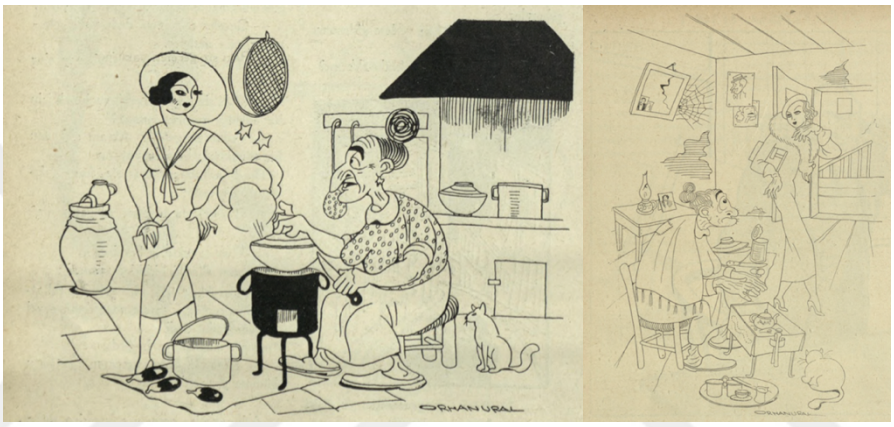


Figure 94 Old and younger women in domestic scenes (Akbaba, 1934, no.140; Akbaba, 1936, no.116)

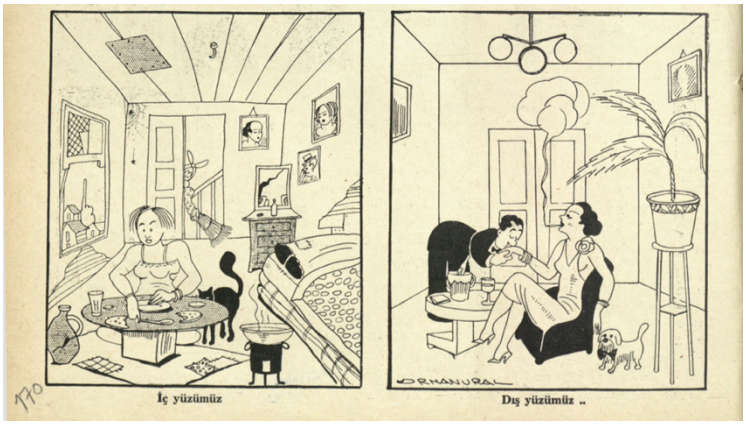


Figure 95 The contradiction of the "inner face" and "outer face" (Akbaba, 1934)

[530] Akbaba, 1934, Issue 140.

[531] Değirmencioğlu, "Erken Cumhuriyet İstanbul'unda Mekan, Mimari ve Elektrik Işığı," 158.

Although the ideals of the period included saving the Turkish women from the hegemony of the traditions, the idealized woman was still represented in the domestic realm as a wife and mother.[532] Even the more critical publications of the period mostly represented women in the houses while most of the street views included two men talking to each other. These representations carried different messages and symbols, and revealed the fractures, contradictions, and the simultaneity of circumstances in different forms. While the ideology of statism acted as a unifying script that enrolled diverse participants into a common goal of making coal the lifeblood of national development, the lived reality was a contested web of influences. Although the states imply a singular and standard morality and a right way of doing things, the practices and daily life experiences involve multiple types of performance.[533]

Gendered use of energy and fractioned modernity reveal how energo-power operated within the intimate scale of the house, organizing space, labor, and social relations through coal, fossil fuels, and electricity. The modern house and the modern woman were promoted together as symbols of national progress, where inhabiting the house and inhabiting the nation were conceived as one and the same. Electricity, as an imported technology, was translated into the economic, social, and cultural agenda of the Republic and reconciled with expectations of femininity and domesticity. In this socio-nature configuration, energy was not merely technical power but a medium of governance that shaped daily practices, hygiene standards, and domestic discipline.

While electricity was framed as a silent servant and a liberating force, it frequently reinforced domestic roles by increasing the volume and standards of household labor. The doctrine of separate spheres positioned factories and coalfields as the place for men and the home as the domain of women, who managed the risks of smoke, open flames, and interior air pollution. Caricatures of cubic houses with mangals and smoky interiors exposed the fractures between the rationalized home and lived reality. These conflicting representations reveal that statism as a unifying script encountered heterogeneous practices, contested experiences, and the simultaneity of ideal modernity and everyday socio-natures.

[532] Bozdoğan, "Modernism and nation building: Turkish architectural culture in the early republic," 216.

[533] Migdal, "The state in society," 19.

CHAPTER 5

CONCLUSION

This dissertation has examined the spatial experiences of energy in Turkey in the 1930s for their material, physical, institutional, representational, and sensory aspects through different scales. Using the lens of energy helped positioning coal and electricity not merely as technical resources or instruments of economic development, but as socio-material forces that reorganized territory, reshaped everyday life, and mediated the reciprocal transformation of state and society. The study aimed to position itself within the recent scholarship which examines infrastructures as active agents in the reorganizing of historical interpretation, rather than framing energy as a backdrop of the historical events. It also created an extended architectural history where not only the physicality of architectural space, stylistic categories, or planned doctrines but also the social and daily life practices of energy infrastructures are seen as actors in the making of space.

The aim of this dissertation was to question how modernization and industrialization in the 1930s can be understood beyond institutional reforms and monumental representations by foregrounding the material infrastructures that enabled, constrained, and complicated them. By focusing on coal extraction, electricity production, distribution networks, pricing mechanisms, environmental disputes, and domestic appliances, the study sought to reveal how energy functioned simultaneously as political instrument, economic necessity, territorial technology, and lived experience. The scope of the research deliberately moved across scales of national, urban, and domestic spheres to reveal that energy infrastructures themselves operate across these scalar registers. Coal basins, railways, depots, electric factories, streetlamps, switches, and appliances form a continuous yet uneven chain connecting extraction zones to interiors.

The conceptual framework developed in Chapter 2 defined energy as a socio-natural process rather than a neutral background resource. Coal, water force, climate, and electricity were approached as material forces embedded within social relations, technological systems, and political decisions. In this sense, socio-natures are not abstract theoretical constructs but observable conditions in which dust enters interiors, humidity affects machinery, rain interrupts hydroelectric production, and winter destabilizes domestic comfort. By rejecting a strict separation between nature and society, the dissertation has shown that modernization in the 1930s was neither purely ideological nor purely technological; it was materially negotiated through environmental conditions and infrastructural capacities. Moreover, rather than treating the state and society as opposing entities, this study has adopted a relational perspective in which state institutions, private actors, workers, households, non-human materials, and environmental and natural conditions interacted within shared energy regimes. Energy infrastructures emerged not as coherent, top-down instruments of control, but as fragmented and contested assemblages whose outcomes often diverged from official narratives of progress, illumination -- literally and metaphorically, and rational planning. While the opening of factories, power plants, and electrification projects were celebrated as milestones of national development, their uneven distribution, interruption, hazardous effects, and exclusions shaped differentiated experiences of modernity across regions, cities, and social groups.

Energo-power, as articulated in this study, refers to governing through energy systems. It is visible in the establishment of institutions such as MTA and Etibank, in nationalization policies, in the Five-Year Industrial Plans, and in the expansion of railways, ports, and electric grids. Energy infrastructures rendered territory measurable and administratively manageable. They connected peripheral coal basins to metropolitan centers and reorganized spatial hierarchies within the country. Through maps, charts, and public ceremonies, electrification and industrial expansion became both material and symbolic components of the national project. However, this dissertation has emphasized that energo-power did not operate as seamless domination. Institutional disagreements, municipal conflicts, court cases, and consumer complaints reveal a fragmented field of governance in which multiple actors participated in shaping outcomes.

The methodological choice to foreground newspapers, caricatures, advertisements, and public debates alongside institutional documents was central to this repositioning. Rather than relying exclusively on state-produced plans and official narratives, the dissertation treated print media as architectural evidence. Newspaper pages provided access to pricing disputes, environmental complaints, municipal failures, celebratory openings of electric factories, and domestic aspirations. Caricatures, in particular, revealed the moral atmospheres of the period—streetlamps that were broken or selectively installed, beggars and intoxicated bodies occupying illuminated public spaces, coal dust covering interiors, accidents and casualties caused by the lack of knowledge about the energy technologies, and households negotiating between mangals and electric appliances. These sources made visible the lived dimension of energy infrastructures and allowed the study to move beyond a purely institutional account.

The scalar approach adopted throughout the dissertation was not merely organizational but analytical. At the macro-scale, Chapter 3 demonstrated that energy infrastructures were integral to state formation and territorial integration. Coal policy, electrification projects, and infrastructural expansion functioned as mechanisms through which the early Republican regime extended its reach and articulated a national economic agenda. The global context of the interwar period and the pressures of the Great Depression further situate Turkey's emphasis on statism and industrialization within broader energy transitions. Energy infrastructures, therefore, were not isolated technical systems; they were central to the political economy of modernization.

Yet the micro-scale analysis in Chapter 4 revealed that these macro-scale ambitions coexisted with uneven lived experiences. Environmental concerns around the coal depots in an urban context exposed how the storage and circulation of coal localized pollution burdens specific areas and populations. Coal dust penetrating houses, lawsuits initiated by residents, and debates between municipalities and ministries demonstrate that territory is not only mapped but atmospherically experienced and legally contested. The depots territorialized the Bosphorus by reorganizing its ecological and residential patterns, showing that infrastructure reshapes environment as much as it supports industry.

Conditions and illumination of the streets similarly embodied a dual situation. On one hand, it symbolized hygiene, order, safety, governmental reach and civic progress; on the other, broken lamps, dark areas, and uneven upgrades revealed selective territorial investment. The repeated depictions of people allegorically discussing municipal neglect under the presence of streetlamps illustrates how energy infrastructures became sites of everyday critique. Illumination functioned as both infrastructural improvement and a moral indicator, marking certain neighborhoods as visible and others as marginal. In this sense, legibility was also distributed unevenly.

At the domestic scale, the introduction of electric appliances reorganized routines and choreographed everyday life. Advertisements aligned fans, irons, radios, refrigerators, and vacuum cleaners with a healthy, hygienic, and efficient nation ideals and modern citizenship. The domestic interior emerged as a micro-territory of modernization where climate control, cleanliness, and efficiency became normative expectations. Yet the coexistence of coal stoves, mangals, petroleum lamps, and electric devices reveals that modernization was fractured. Different classes accessed different fuels and technologies, and these differences generated moral hierarchies within the household. The switch that controlled electricity symbolized mastery over invisible infrastructures, yet its presence was not universal but rather limited to a privileged class. Moments of scarcity, coal shortages, blackouts, pricing disputes, further demonstrate the fragility of infrastructural governance. When electricity grids failed or fuel could not be secured, urban mobility, industrial production, and domestic comfort were disrupted. These interruptions expose the dependency of modern life on steady energy flows and reveal that modernization was contingent, seasonal, and materially constrained.

By bringing these scales together, the dissertation has argued that modernization in 1930s Turkey cannot be reduced to a linear narrative of illumination and industrial growth. Energy infrastructures simultaneously enabled state formation and produced environmental burdens, facilitated domestic comfort and reinforced class inequalities, symbolized national progress and revealed infrastructural fragility. The macro-scale expansion of infrastructure and the micro-scale experience of energy were not contradictory but coexisting dimensions of the same socio-natural process.

The contribution of this dissertation to architectural historiography lies in three interrelated moves. First, it shifts the analytical focus from built form to infrastructural

processes, demonstrating that energy regimes are fundamental to the production of space. Second, it integrates political economy and socio-natural conditions into the study of early Republican architecture, complicating narratives centered solely on ideology or style. Third, it expands the archive by treating newspapers and visual media as sources that reveal how modernization was experienced, negotiated, and contested in daily life. Writing architectural history through energy makes visible aspects of the 1930s that remain peripheral in conventional accounts. It reveals how coal dust, pricing debates, municipal decisions, domestic appliances, and infrastructural breakdowns were not marginal details but central to the spatial and social reorganization of the period. Energy infrastructures did not simply support architecture; they produced territorial hierarchies, moral atmospheres, and embodied routines.

This dissertation does not claim to provide a comprehensive or exhaustive history of energy in early Republican Turkey. Rather than attempting to catalogue all infrastructural developments or institutional decisions of the period, it has adopted a selective archival strategy that prioritizes depth of analysis over total coverage. The primary sources including newspapers, caricatures, advertisements, public debates, and selected institutional documents were approached not as complete representations of the decade, but as situated fragments that reveal recurring tensions, spatial patterns, and socio-material negotiations. As discussed in the methodological framework, such sources have their limitations, and are inherently partial, inconsistent, and shaped by their own editorial, political, and cultural biases. They foreground certain voices while silencing others, and they often reflect urban perspectives more prominently than rural ones. Moreover, the searchable archival method, structured around keywords and thematic clusters, necessarily filters the material through present research questions, leaving aside dimensions that fall outside the chosen conceptual lens. For these reasons, the study does not present energy history as a closed or totalizing narrative. Instead, it offers a framework through which energy can be understood as a spatial and political mediator that reorganizes territory, environment, and daily life.

The analytical framework developed in this dissertation opens several possible directions for further research. First, a more limited regional and geographic frame that focuses on a certain city or rural area could deepen the understanding of uneven territorial integration and reveal how energy infrastructures shaped different

settlements beyond the nation-wide and representative cases examined here. Such a study could further develop into a comparative case study as well. The trace how local ecological conditions, labor relations, and infrastructural investments produced by a more extensive set of actors and distinct socio-natural configurations can contribute the literature around the energy infrastructures and their spatial and social consequences. Second, the methodological approach of reading newspapers, visual media, and everyday representations as architectural evidence to make experiences and relationship of ordinary people to the energy infrastructures may be applied comparatively to other national or geographic contexts undergoing industrial modernization. Such comparative studies could illuminate how energy infrastructures mediated the co-production of state, territory, and daily life across different political regimes and environmental conditions. Third, a longitudinal extension of this research into the post-war period would allow for an examination of how wartime shortages, demographic shifts, and subsequent industrial policies transformed the energy regime and reconfigured domestic and urban environments. A further study focusing particularly into the 1950s in Turkey would allow for an examination of how the transition from a coal-centered, statist industrial model to a more petroleum-based and liberal economic framework reconfigured the energy regime and its spatial consequences. Such a shift would enable a comparative analysis between the statist, nationally framed energy modernity of the 1930s and the more market-oriented, externally dependent energy system of the 1950s.

Energy in the 1930s was not only a matter of production and consumption; it was a medium through which territory was organized, citizenship was imagined, domestic routines were redefined, and environmental costs were distributed. To write architectural history through energy is therefore to acknowledge that space was not merely constructed—it was extracted, transported, wired, priced, debated, improvised, and lived. This dissertation concludes that the history of energy must be written not only at the level of policy and engineering but also at the level of embodiment and everyday negotiation.

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APPENDICES

A. CURRICULUM VITAE

PERSONAL INFORMATION

Surname, Name: Gür Zeynep

EDUCATION

Degree	Institution	Year of Graduation
PhD	Architectural History, Middle East Technical University, Ankara, TR	2026
MA	Architectural History, Middle East Technical University, Ankara, TR	2019
BArch	Kocaeli University, Kocaeli, TR	2016
High School	Selçuk Anadolu High School, Sivas, TR	2011

WORK EXPERIENCE

Year	Place	Enrollment
2020-Present	Department of Architecture, Faculty of Architecture, Ondokuz Mayıs University, Samsun, TR	Research Assistant

FOREIGN LANGUAGES

Turkish, English

PUBLICATIONS

Asar, Hande, Zeynep Gür, and Şermin Demirtaş. "Mekânsal Deneyimlerin Belgelenişi: Bir Kent Anlatısı." in *Mimarlık Alanında Akademik Araştırmalar*, edited by Hüseyin Samet Aşıkkutlu and Orhun Soydan, 41–68. Ankara: Platanus Publishing, 2025.

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B. TURKISH SUMMARY / TÜRKÇE ÖZET

Bu çalışma, 1930'lu yıllarda Türkiye'de enerjinin mekânsal deneyimlerini inceleyerek mimarlık tarihine yeni bir bakış açısı getirmeyi amaçlamaktadır. Çalışmanın temel çıkış noktası, mimarlık tarih yazımında son yıllarda ortaya çıkan dönüşümdür. Bu dönüşüm, mimarlığın yalnızca fiziksel yapılar, biçimsel özellikler ve tasarımcılar üzerinden ele alınamayacağını; bunun yerine çevre, altyapı, enerji ve maddi sistemler gibi unsurların da tarihsel analizde merkezi bir rol oynaması gerektiğini ortaya koymaktadır. Bu bağlamda çalışma, mimarlığı bağımsız bir nesne olarak değil, daha geniş ölçekli politik, ekonomik ve çevresel sistemlerin bir parçası olarak ele alır. Bu yaklaşım doğrultusunda enerji, çalışmada yalnızca bir konu değil, aynı zamanda bir analitik araç olarak kullanılır. Kömür ve elektrik, modernleşmenin arka planını oluşturan teknik unsurlar olarak değil; mekânı üreten, gündelik hayatı şekillendiren ve devlet ile toplum arasındaki ilişkileri kuran aktif güçler olarak değerlendirilir. Bu perspektif, enerjiyi mimarlık tarihine dışsal bir unsur olmaktan çıkararak, doğrudan mekânsal üretimin bir bileşeni haline getirir.

Çalışmanın metodolojik çerçevesi, mekânın sabit ve fiziksel bir varlık değil, toplumsal pratikler aracılığıyla sürekli olarak üretildiği fikrine dayanır. Bu doğrultuda, konuşma, gündelik alışkanlıklar, duygular, politik eylemler ve ekonomik ilişkiler gibi insan faaliyetleri mekânın oluşumunda belirleyici unsurlar olarak kabul edilir. Bu yaklaşım, mimarlık tarihini yalnızca inşa edilmiş çevre üzerinden değil, aynı zamanda bu çevreyle kurulan ilişkiler üzerinden okumayı mümkün kılar. Böylece mekân, yalnızca görülebilen değil, aynı zamanda deneyimlenen ve hissedilen bir olgu olarak ele alınır.

Çalışma ayrıca mikro ve makro ölçekler arasındaki ayrımı ortadan kaldırmayı hedefler. Enerji, hem devlet politikaları ve altyapı yatırımları gibi makro düzeyde, hem de gündelik yaşam pratikleri, ev içi kullanım ve bireysel deneyimler gibi mikro düzeyde incelenir. Bu iki ölçek birbirinden bağımsız değil, aynı enerji rejiminin farklı görünümleri olarak değerlendirilir. Bu sayede, devletin enerji politikaları ile bireylerin enerji deneyimleri arasındaki ilişkiler daha net bir şekilde ortaya konur.

Bu çerçevede kömür, enerji rejiminin maddi temelini oluştururken, elektrik bu rejimin mekânsal ve deneyimsel çıktısı olarak ele alınır. Kömürün çıkarılması, taşınması ve kullanımı fiziksel altyapıları oluştururken; elektrik, aydınlatma, ısınma ve gündelik yaşam pratikleri üzerinden mekânsal deneyimi yeniden şekillendirir. Bu iki enerji formu birlikte ele alındığında, modernleşmenin yalnızca ideolojik ya da estetik bir süreç olmadığı, aynı zamanda maddi ve altyapısal bir dönüşüm olduğu ortaya çıkar.

Çalışmanın temel argümanı, erken Cumhuriyet döneminde enerji altyapılarının yalnızca modernleşmeyi mümkün kılan araçlar olmadığı, aynı zamanda mekânsal algıyı, toplumsal hiyerarşileri ve siyasal aidiyeti yeniden üreten unsurlar olduğudur. Enerji, bu bağlamda yalnızca teknik bir kaynak değil; aynı zamanda bir yönetim aracı, bir temsil biçimi ve bir gündelik deneyim alanıdır. Enerji altyapıları, bireylerin davranışlarını yönlendiren, alışkanlıklarını şekillendiren ve mekânla kurdukları ilişkiyi yeniden tanımlayan disiplin edici ortamlar üretir.

Çalışmanın kapsamı, 1930'lu yıllar ile sınırlıdır. Bu dönem, devletin ekonomik ve mekânsal olarak daha etkin hale geldiği, altyapı yatırımlarının arttığı ve modernleşme politikalarının yoğunlaştığı bir zaman dilimidir. Aynı zamanda bu süreç, enerji politikalarının ulus-devlet inşası ile doğrudan ilişkilendiği bir dönemdir. Enerji üretimi, dağıtımı ve kullanımı, yalnızca ekonomik değil, aynı zamanda ideolojik ve siyasal anlamlar taşır.

Araştırma soruları, devletin enerji altyapılarını nasıl kullandığı, enerjinin nasıl temsil edildiği ve gündelik yaşamda nasıl deneyimlendiği üzerine odaklanır. Bu sorular aracılığıyla çalışma, resmi modernleşme söylemleri ile gündelik deneyimler arasındaki farkları ortaya koymayı hedefler.

Metodolojik olarak çalışma disiplinlerarası bir yaklaşım benimser. Mimarlık tarihi, çevre tarihi ve enerji çalışmaları bir araya getirilerek daha kapsamlı bir analiz yapılır. Kaynak olarak ise gazeteler, dergiler, reklamlar, arşiv belgeleri ve görsel materyaller kullanılır. Bu kaynaklar yalnızca bilgi sağlayan belgeler olarak değil, aynı zamanda mekânsal deneyimin bir parçası olarak değerlendirilir. Bu yaklaşım, gündelik hayatın ve sıradan deneyimlerin de tarih yazımında önemli bir yer tutmasını sağlar.

Literatür değerlendirmesi, erken Cumhuriyet dönemi çalışmalarında enerjinin genellikle arka planda kaldığını ortaya koyar. Mimarlık tarih yazımı çoğunlukla stil, ideoloji ve temsil üzerine odaklanırken, enerji altyapılarının mekânsal ve deneyimsel

boyutları yeterince incelenmemiştir. Bu çalışma, bu boşluğu doldurarak enerjiyi merkezi bir analiz kategorisi haline getirir. Son olarak, çalışmanın yapısı teorik çerçeveden tarihsel analize ve oradan gündelik deneyime doğru ilerler. Bu yapı, enerjinin hem planlanan hem de yaşanan boyutlarını birlikte ele almayı mümkün kılar. Böylece çalışma, enerji altyapılarının yalnızca teknik sistemler olmadığını, aynı zamanda mekânsal, toplumsal ve duygusal deneyimleri şekillendiren temel unsurlar olduğunu ortaya koyar.

Giriş sonrası ilk bölüm, çalışmanın teorik ve kavramsal temelini oluşturarak enerjinin mimarlık tarih yazımında nasıl bir analiz aracı olarak kullanılabileceğini tartışır. Bölümün temel amacı, enerjiyi yalnızca teknik bir konu ya da altyapısal bir unsur olarak değil, mekân üretimini, toplumsal ilişkileri ve tarihsel dönüşümleri anlamaya yarayan bir kavramsal çerçeve olarak konumlandırmaktır. Bu doğrultuda enerji, farklı disiplinlerden beslenen bir yaklaşımla ele alınır ve mimarlık tarihine yeni bir okuma biçimi sunar. Bölüm, öncelikle enerjinin disiplinlerarası doğasını ortaya koyarak başlar. Fizik, mühendislik, ekonomi ve çevre çalışmaları gibi alanlarda farklı anlamlar taşıyan enerji kavramı, bu çalışmada daha geniş bir bağlamda değerlendirilir. Enerji, yalnızca üretim ve tüketim süreçleriyle sınırlı değildir; aynı zamanda mekânın organizasyonunu belirleyen, toplumsal ilişkileri şekillendiren ve politik süreçlere dahil olan bir unsurdur. Bu nedenle enerji, hem maddi hem de kavramsal bir kategori olarak ele alınır.

Bu çerçevede bölümde öne çıkan ilk kavram sosyo-doğalardır. Sosyo-doğalar, doğa ile toplumun birbirinden bağımsız alanlar olmadığı, aksine tarihsel süreçler içinde birlikte üretildikleri fikrine dayanır. Bu yaklaşım, doğayı pasif bir kaynak olarak görmek yerine, toplumsal süreçlerle birlikte şekillenen bir alan olarak değerlendirir. Enerji kaynakları bu bağlamda yalnızca doğal varlıklar değil, aynı zamanda politik, ekonomik ve kültürel süreçler aracılığıyla anlam kazanan unsurlardır. Kömürün çıkarılması, taşınması ve kullanılması gibi süreçler, doğanın toplumsal olarak yeniden üretildiğini gösterir. Sosyo-doğalar kavramı, bu çalışmada enerjinin mekânsal boyutunu anlamak için kritik bir rol oynar. Enerji altyapıları, doğayı dönüştürerek yeni mekânsal düzenler oluşturur. Madenler, santraller, depolar ve dağıtım ağları, yalnızca teknik sistemler değil, aynı zamanda doğa ile toplum arasındaki ilişkinin somutlaştığı mekânlardır. Bu mekânlar, enerji üretimi ve tüketimi üzerinden yeniden organize edilirken, aynı zamanda çevresel ve toplumsal etkiler üretir.

Bölümde tartışılan ikinci temel kavram ise *energo-power* olmuştur. Bu kavram, enerjinin yalnızca ekonomik bir kaynak olmadığını, aynı zamanda bir yönetim ve denetim aracı olarak işlediğini ortaya koyar. *Energo-power*, devletin enerji altyapıları aracılığıyla toplumu düzenleme, yönlendirme ve kontrol etme kapasitesini ifade eder. Bu bağlamda enerji, yalnızca teknik bir sistem değil, aynı zamanda politik bir araçtır. *Energo-power* kavramı, özellikle devletin mekân üzerindeki etkisini anlamak için önemlidir. Enerji altyapıları, devletin fiziksel olarak ulaşamadığı alanlara nüfuz etmesini sağlar. Elektrik hatları, demiryolları ve üretim tesisleri aracılığıyla devlet, hem mekânı hem de bu mekânda yaşayan toplulukları organize eder. Bu süreçte enerji, bir tür yönetişim aracı haline gelir. Bireylerin gündelik hayatı, enerjiye erişim ve kullanım üzerinden şekillenir. Bu kavram aynı zamanda enerjinin disiplin edici bir rol oynadığını da ortaya koyar. Enerji sistemleri, belirli davranış biçimlerini teşvik ederken diğerlerini sınırlar. Elektrik kullanımına dair kurallar, abonelik sistemleri ve teknik standartlar, bireylerin enerjiyle kurduğu ilişkiyi düzenler. Bu durum, enerjinin yalnızca fiziksel değil, aynı zamanda davranışsal bir etki yarattığını gösterir. Bölümde ayrıca enerji ile mekân üretimi arasındaki ilişki ele alınır. Mekân, bu çalışmada sabit ve değişmez bir yapı olarak değil, sürekli olarak üretilen bir süreç olarak tanımlanır. Enerji, bu üretim sürecinin temel bileşenlerinden biridir. Enerji akışları, mekânsal organizasyonu belirler; hangi alanların aydınlatılacağı, ısıtılacağı ya da kullanılacağı enerjiye bağlıdır. Bu nedenle enerji, mekânın yalnızca kullanımını değil, aynı zamanda algılanışını da etkiler.

Bu noktada enerji ile deneyim arasındaki ilişki de vurgulanır. Enerji, mekânın duyusal ve algısal boyutlarını şekillendirir. Işık, ısı, ses ve hareket gibi unsurlar, enerji kullanımıyla doğrudan ilişkilidir. Bu durum, enerjinin yalnızca görünmeyen bir altyapı olmadığını, aynı zamanda hissedilen ve deneyimlenen bir olgu olduğunu ortaya koyar. Bu nedenle çalışmada enerji, hem maddi hem de deneyimsel bir kategori olarak ele alınır. Bölüm, ayrıca enerjinin temsil boyutuna da değinir. Enerji yalnızca fiziksel olarak değil, aynı zamanda görsel ve söylemsel olarak da üretilir. Haritalar, grafikler, sergiler ve reklamlar, enerjiyi belirli şekillerde temsil eder. Bu temsiller, enerjinin nasıl algılandığını ve nasıl anlamlandırıldığını etkiler. Özellikle modernleşme söylemleri içinde enerji, ilerleme, kalkınma ve medeniyet ile ilişkilendirilir.

Bu bağlamda enerji, aynı zamanda bir meşruiyet aracı olarak işlev görür. Devletin enerji yatırımları, modernleşme politikalarının bir göstergesi olarak sunulur.

Elektrifikasyon projeleri, yalnızca teknik gelişmeler değil, aynı zamanda ideolojik mesajlar içerir. Enerji, bu süreçte ulusal kimlik ve ilerleme söylemleriyle iç içe geçer. Bölümün bir diğer önemli katkısı, enerji ile ölçekler arası ilişkiyi ele almasıdır. Enerji, hem makro düzeyde (devlet politikaları, altyapı sistemleri) hem de mikro düzeyde (gündelik kullanım, bireysel deneyim) incelenir. Bu iki ölçek birbirinden ayrı değil, birbirini tamamlayan süreçler olarak değerlendirilir. Bu yaklaşım, enerjinin çok katmanlı yapısını ortaya koyar. Sonuç olarak bu bölüm, çalışmanın teorik altyapısını oluşturarak enerjinin mimarlık tarihine nasıl dahil edilebileceğini gösterir. Sosyo-doğalar ve energo-iktidar kavramları aracılığıyla enerji, mekân üretimi, toplumsal ilişkiler ve politik süreçler arasında bir bağ kurar. Bu kavramsal çerçeve, sonraki bölümlerde yapılacak tarihsel ve deneyimsel analizlerin temelini oluşturur.
Böylece enerji, yalnızca incelenen bir konu değil, aynı zamanda tüm çalışmayı şekillendiren bir analiz biçimi haline gelir. Bu yaklaşım, mimarlık tarih yazımında yeni bir perspektif sunarak, mekânın üretimini daha geniş bir bağlam içinde değerlendirmeyi mümkün kılar.

Üçüncü bölüm, çalışmanın tarihsel arka planını oluşturarak enerjinin 1930'lu yıllarda Türkiye'de nasıl bir dönüşüm geçirdiğini ve bu dönüşümün hangi politik, ekonomik ve mekânsal koşullar içinde gerçekleştiğini ele alır. Amaç, enerjiyi yalnızca teknik bir gelişme olarak değil, devletin örgütlenmesi, ekonomik politikalar ve mekânsal düzenlemelerle birlikte ortaya çıkan bir süreç olarak incelemektir. Bu bağlamda bölüm, Osmanlı'dan Cumhuriyet'e geçiş sürecini ve erken Cumhuriyet döneminde enerji politikalarının nasıl şekillendiğini analiz eder.

Bölüm, öncelikle 1930'lu yılların küresel bağlamını ele alır. Bu dönem, dünya genelinde ekonomik krizlerin, devlet müdahalelerinin ve planlı kalkınma modellerinin öne çıktığı bir zaman dilimidir. 1929 Büyük Buhranı sonrasında birçok ülkede devletin ekonomik alandaki rolü artmış, sanayileşme ve altyapı yatırımları kamu politikalarının merkezine yerleşmiştir. Türkiye'de de benzer bir eğilim gözlemlenir. Devlet, ekonomik gelişmeyi yönlendiren ve üretim süreçlerini organize eden temel aktör haline gelir. Bu süreç, enerji politikalarının da doğrudan devlet kontrolü altında şekillenmesine yol açar.

Osmanlı döneminden Cumhuriyet'e uzanan süreçte enerji altyapıları parçalı ve sınırlı bir yapı sergiler. Elektrik üretimi ve dağıtımı büyük ölçüde özel şirketler tarafından yürütülürken, kömür üretimi belirli bölgelerde yoğunlaşmıştır. Bu yapı,

hem mekânsal hem de ekonomik açıdan eşitsiz bir enerji dağılımına yol açar. Cumhuriyet'in ilanıyla birlikte bu durum değişmeye başlar. Devlet, enerji üretimi ve dağıtımını kontrol altına alarak daha merkezi ve planlı bir sistem kurmayı hedefler. 1930'lu yıllarda uygulanan devletçilik politikaları, enerji sektöründe belirleyici bir rol oynar. Sanayileşme hedefleri doğrultusunda hazırlanan kalkınma planları, enerji üretimini ve altyapı yatırımlarını öncelikli alanlar arasında konumlandırır. Bu dönemde enerji, yalnızca ekonomik büyümenin bir aracı değil, aynı zamanda ulusal bağımsızlığın ve modernleşmenin bir göstergesi olarak ele alınır. Kömür üretimi, elektrik santralleri ve dağıtım ağları, devletin hem ekonomik hem de politik gücünü temsil eden unsurlar haline gelir.

Bu bağlamda kömür, enerji rejiminin temel maddi kaynağı olarak öne çıkar. Zonguldak kömür havzası, hem üretim kapasitesi hem de stratejik önemi nedeniyle devletin doğrudan müdahale ettiği bir alan haline gelir. Kömür üretiminin artırılması, taşınması ve dağıtılması, yalnızca ekonomik bir faaliyet değil, aynı zamanda mekânsal bir organizasyon sürecidir. Demiryolları, limanlar ve depolama alanları, kömürün dolaşımını mümkün kılan altyapılar olarak bu sürecin parçası olur. Bu durum, enerjinin yalnızca üretildiği değil, aynı zamanda taşındığı ve dağıtıldığı bir sistem olarak ele alınmasını gerektirir. Elektrik ise bu dönemde daha çok kentsel mekânla ilişkilendirilen bir enerji formudur. Elektrifikasyon projeleri, şehirlerin modernleşmesinin önemli bir göstergesi olarak sunulur. Elektrik üretimi ve dağıtımı, yalnızca teknik bir altyapı değil, aynı zamanda modern yaşamın bir parçası olarak temsil edilir. Bu temsil, elektrikli aydınlatma, ev aletleri ve sanayi üretimi üzerinden kurulur. Ancak bu süreç her yerde aynı şekilde gerçekleşmez. Elektriğin yaygınlaşması, coğrafi, ekonomik ve teknik sınırlamalara bağlı olarak farklı hızlarda ilerler.

Bölümde ayrıca enerji altyapılarının kurumsal boyutu ele alınır. Elektrik şirketlerinin devlet tarafından devralınması, kömür havzalarının millileştirilmesi ve yeni kurumların kurulması, enerji sektörünün yeniden yapılandırıldığını gösterir. Bu süreç, devletin yalnızca düzenleyici değil, aynı zamanda doğrudan üretici ve dağıtıcı bir aktör haline geldiğini ortaya koyar. Enerji altyapıları bu bağlamda devletin mekânsal ve ekonomik gücünün somutlaştığı araçlar olarak işlev görür.

Enerji politikalarının bir diğer önemli boyutu, temsil ve söylem üretimidir. Enerji, yalnızca fiziksel altyapılar aracılığıyla değil, aynı zamanda görsel ve söylemsel araçlar

üzerinden de üretilir. Haritalar, grafikler, sergiler ve basın yayın organları, enerjiyi belirli bir anlatı içinde sunar. Bu anlatı genellikle modernleşme, ilerleme ve kalkınma kavramları etrafında şekillenir. Enerji projeleri, ulusal başarıların ve devletin gücünün bir göstergesi olarak temsil edilir.

Bu bağlamda özellikle Beynelmilel Kömür Sergisi, enerjinin temsil edilme biçimini anlamak açısından önemli bir örnek sunar. Sergi, kömür üretimini ve kullanımını yalnızca teknik bir faaliyet olarak değil, ulusal bir başarı hikâyesi olarak sunar. Kömürün çıkarıldığı yerler, taşınma süreçleri ve kullanım alanları görselleştirilerek izleyiciye aktarılır. Bu durum, enerjinin yalnızca maddi değil, aynı zamanda görsel ve ideolojik bir üretim süreci olduğunu gösterir. Bölüm, ayrıca enerji altyapılarının mekânsal etkilerini ele alır. Enerji üretim ve dağıtım sistemleri, yalnızca ekonomik faaliyetleri değil, aynı zamanda mekânsal düzeni de şekillendirir. Sanayi tesisleri, enerji üretim alanları ve dağıtım ağları, şehirlerin ve bölgelerin organizasyonunu etkiler. Bu süreçte bazı bölgeler gelişirken, bazıları geri kalır. Bu durum, enerjinin mekânsal eşitsizlikleri yeniden üreten bir unsur olduğunu gösterir.

Enerji altyapıları aynı zamanda merkez ve çevre ilişkisini de yeniden tanımlar. Büyük şehirler enerjiye daha kolay erişirken, kırsal bölgeler bu süreçten daha sınırlı ölçüde faydalanır. Bu durum, modernleşmenin homojen bir süreç olmadığını, aksine farklı bölgelerde farklı biçimlerde deneyimlendiğini ortaya koyar. Enerji, bu bağlamda mekânsal farklılıkları görünür kılan bir araç haline gelir. Son olarak bölüm, enerjinin tarihsel süreçte nasıl bir dönüşüm geçirdiğini ve bu dönüşümün hangi aktörler tarafından şekillendirildiğini ortaya koyar. Devlet, özel sektör, mühendisler ve kullanıcılar, enerji sistemlerinin oluşumunda farklı roller üstlenir. Bu çok aktörlü yapı, enerjinin yalnızca yukarıdan aşağıya işleyen bir sistem olmadığını, aynı zamanda farklı düzeylerde müzakere edilen bir süreç olduğunu gösterir. Sonuç olarak bu bölüm, 1930'lu yıllarda Türkiye'de enerji altyapılarının nasıl kurulduğunu, nasıl temsil edildiğini ve nasıl bir mekânsal düzen ürettiğini ortaya koyar. Enerji, bu süreçte yalnızca teknik bir unsur değil, aynı zamanda politik, ekonomik ve mekânsal bir dönüşümün temel bileşeni olarak karşımıza çıkar. Bu tarihsel bağlam, bir sonraki bölümde ele alınacak olan gündelik deneyimlerin anlaşılması için gerekli zemini hazırlar.

Dördüncü bölüm, enerjinin gündelik hayatta nasıl deneyimlendiğini kentsel ve konut ölçeğinde ele alır. Önceki bölümlerde kurulan kavramsal çerçeve ve tarihsel

bağlam doğrultusunda bu bölüm, enerjinin yalnızca planlanan ve temsil edilen bir sistem olmadığını, aynı zamanda hissedilen, müzakere edilen ve çoğu zaman kesintiye uğrayan bir deneyim alanı olduğunu ortaya koyar. Bu doğrultuda bölüm, enerjiyi gündelik hayatın farklı katmanlarında inceleyerek modernleşmenin somut karşılıklarını analiz eder.

Bölüm iki ana ölçekte yapılandırılmıştır: kentsel deneyim ve konut içi deneyim. Bu iki ölçek birbirinden bağımsız değil, aynı enerji rejiminin farklı düzeylerdeki yansımaları olarak ele alınır. Böylece enerji, hem kamusal mekânda hem de özel alanda deneyimlenen bir süreç olarak incelenir. Kentsel ölçekte enerji deneyimi, dört ana başlık altında ele alınır: erişim ve fiyatlandırma, sokak aydınlatması, çevresel etkiler ve kentsel enerji düğümleri. Bu başlıklar, enerjinin şehirde nasıl dolaştığını, nasıl temsil edildiğini ve nasıl deneyimlendiğini birlikte ortaya koyar. Bu çerçeve, enerjiyi yalnızca teknik bir altyapı olarak değil, aynı zamanda gündelik hayatın örgütlenmesini belirleyen bir mekânsal ve toplumsal süreç olarak ele almayı mümkün kılar.

İlk olarak erişim ve fiyatlandırma, enerjinin kentsel mekândaki eşitsiz dağılımını görünür kılar. Elektrik, dönemin söylemlerinde modern ve erişilebilir bir hizmet olarak sunulsa da, gündelik hayatta bu erişim oldukça sınırlı ve parçalıdır . Elektrik ücretleri, abonelik sistemleri ve kullanım koşulları, farklı sosyal gruplar için farklı deneyimler üretir. Özellikle düşük gelirli kesimler için enerjiye erişim, yalnızca teknik altyapının varlığıyla değil, ekonomik kapasiteyle de belirlenir. Bu durum, modernleşmenin yalnızca teknik bir süreç olmadığını, aynı zamanda ekonomik olarak belirlenen bir deneyim alanı olduğunu gösterir. Kömür tüketiminde de benzer bir eşitsizlik söz konusudur. Büyük miktarda kömür satın alabilmek için gerekli depolama alanlarının olmaması, düşük gelirli kullanıcıların daha küçük miktarlarda ve dolayısıyla daha pahalıya enerjiye erişmesine neden olur. Bu durum, enerjiye erişimin yalnızca arz meselesi olmadığını, aynı zamanda mekânsal ve ekonomik koşullarla şekillendiğini ortaya koyar. Enerji, bu bağlamda bir tüketim nesnesi olmanın ötesinde, toplumsal sınıf farklılıklarını yeniden üreten bir araç haline gelir.

İkinci olarak sokak aydınlatması, enerjinin kentsel mekândaki en görünür etkilerinden birini oluşturur. Elektrikli aydınlatma, modern şehir imgesinin temel unsurlarından biri olarak sunulur . Aydınlatılmış sokaklar düzen, güvenlik ve ilerleme ile ilişkilendirilirken, karanlık alanlar geri kalmışlık, ihmal ve düzensizlik ile

bağdaştırılır. Bu karşıtlık, yalnızca teknik bir farkı değil, aynı zamanda mekânsal bir değer hiyerarşisini ifade eder. Ancak bu temsil, çoğu zaman gündelik deneyimle çelişir. Gazete haberleri ve karikatürler, sık sık arızalanan lambaları, yetersiz aydınlatmayı ve bunun yarattığı sorunları görünür kılar. Bu bağlamda aydınlatma, yalnızca bir teknik sistem değil, aynı zamanda başarısızlıkları ve kesintileriyle deneyimlenen bir süreçtir. Bu durum, modernleşmenin kesintisiz bir ilerleme değil, aksine kırılgan ve süreksiz bir süreç olduğunu ortaya koyar.

Bu noktada kazalar ve tehlikeler, enerji deneyiminin ayrılmaz bir parçası olarak ortaya çıkar. Elektrik tesisatındaki hatalar, gaz kaçakları ve kömür depolarının yarattığı riskler, enerjinin yalnızca konfor üretmediğini, aynı zamanda tehlike de ürettiğini gösterir . Gazete haberlerinde yer alan patlamalar, yangınlar ve elektrik çarpmaları, modern enerji sistemlerinin güvenli olmadığına dair bir deneyim üretir. Bu olaylar, enerjinin gündelik hayatta hem çekici hem de korkutucu bir unsur olduğunu ortaya koyar. Kazalar, aynı zamanda enerjinin kontrol edilebilirliği meselesini de gündeme getirir. Modern enerji sistemleri, düzen ve kontrol vaadiyle sunulurken, bu tür olaylar bu kontrolün sınırlı olduğunu gösterir. Bu nedenle enerji, yalnızca güvenlik ve ilerleme değil, aynı zamanda belirsizlik ve risk üzerinden de deneyimlenir.

Üçüncü olarak çevresel etkiler, özellikle kömür depoları üzerinden analiz edilir. Kuruçeşme örneğinde olduğu gibi kömürün kent içindeki varlığı, hava kirliliği, toz ve yaşam koşullarında bozulma gibi sonuçlar doğurur . Bu durum, enerjinin yalnızca fayda sağlayan bir sistem olmadığını, aynı zamanda çevresel yükler üreten bir süreç olduğunu gösterir. Enerji altyapıları, doğayı dönüştürürken aynı zamanda yeni çevresel sorunlar yaratır. Kömür depoları, kentsel mekânda doğa ile toplum arasındaki ilişkinin somutlaştığı alanlar olarak ortaya çıkar. Bu alanlar, sosyo-doğalar kavramının gündelik hayattaki karşılığını oluşturur. Doğa, bu bağlamda dışsal bir unsur değil, kentsel yaşamın içinde yeniden üretilen bir bileşen haline gelir. Enerji sistemleri, bu yeniden üretim sürecinin temel araçlarıdır.

Son olarak kentsel enerji düğümleri, enerjinin şehirde nasıl aracılık edildiğini gösterir. Bu düğümler, elektrik şirketlerine ait yapılar, sergi mekânları ve hizmet noktaları gibi farklı işlevlere sahip mekânları kapsar. Bu yapılar, enerji altyapısı ile kullanıcı arasında bir arayüz oluşturur. Abonelik işlemleri, cihaz tamiri, eğitim faaliyetleri ve ürün tanıtımları gibi işlevler bu mekânlarda gerçekleşir. Bu düğümler, enerjinin yalnızca teknik bir sistem olmadığını, aynı zamanda öğrenilen ve

deneyimlenen bir pratik olduğunu ortaya koyar. Kullanıcılar, enerjiyi bu mekânlar aracılığıyla tanır, öğrenir ve gündelik hayatlarına dahil eder. Bu durum, enerjinin yalnızca dağıtılan bir kaynak değil, aynı zamanda toplumsal olarak üretilen bir deneyim olduğunu gösterir.

Dördüncü bölümün ikinci kısmı, enerjinin konut içindeki deneyimine odaklanır. Bu bağlamda enerji, ev içi modernizm, konfor ve hijyen, gündelik pratikler ve toplumsal cinsiyet üzerinden ele alınır . Öncelikle ev içi modernizm, enerjinin konut mekânını nasıl dönüştürdüğünü ortaya koyar. Elektrik, ev içinde yeni bir düzen kurma aracı olarak sunulur. Aydınlatma, ısınma ve elektrikli cihazlar, modern yaşamın temel unsurları olarak tanımlanır. Reklamlar ve dergi yazıları, elektrikli evin daha temiz, daha düzenli ve daha konforlu bir yaşam sunduğunu vurgular. Bu bağlamda elektrik, yalnızca bir enerji türü değil, aynı zamanda bir yaşam tarzının göstergesidir. Modern ev, enerji kullanımı üzerinden tanımlanır. Ancak bu ideal, her kullanıcı için aynı şekilde gerçekleşmez. Elektrik kullanımı, ekonomik ve mekânsal koşullara bağlı olarak farklı biçimlerde deneyimlenir. Birçok evde elektrik, kömür ve gaz gibi diğer enerji türleriyle birlikte kullanılır. Bu durum, modernleşmenin parçalı yapısını ortaya koyar. Enerji sistemleri birbirinin yerini tamamen almaz, aksine birlikte var olur. Bu çoklu yapı, modernleşmenin süreklilik ve kopuş arasında ilerleyen bir süreç olduğunu gösterir. Konfor ve hijyen, ev içi enerji kullanımının temel söylemlerinden biridir. Elektrik, temiz ve sağlıklı bir yaşamın aracı olarak sunulur. Aydınlatma, havalandırma ve elektrikli cihazlar, hijyenik bir yaşamın unsurları olarak temsil edilir. Ancak bu söylem, aynı zamanda belirli bir yaşam standardını norm haline getirir. Elektrik kullanımı, “doğru” ve “modern” yaşam biçimi olarak sunulurken, diğer enerji türleri geri kalmışlıkla ilişkilendirilir. Bu durum, enerjinin yalnızca teknik bir tercih değil, aynı zamanda kültürel bir değer sistemi olduğunu gösterir. Gündelik pratikler, enerjinin somut karşılıklarını ortaya koyar. Yemek pişirme, temizlik, aydınlatma ve ısınma gibi faaliyetler enerji kullanımıyla doğrudan ilişkilidir. Elektrikli cihazlar bu pratikleri dönüştürse de, bu dönüşüm her zaman sorunsuz değildir. Yeni teknolojilerin kullanımı, öğrenme, bakım ve uyum gerektirir.

Bu süreç, enerjinin yalnızca kolaylık sağlayan bir unsur olmadığını, aynı zamanda yeni sorumluluklar ve bağımlılıklar ürettiğini gösterir. Kullanıcılar, enerji sistemlerine uyum sağlamak zorundadır. Bu durum, enerjinin gündelik hayatı yeniden düzenleyen bir güç olduğunu ortaya koyar. Toplumsal cinsiyet, konut içi enerji

deneyiminin en önemli boyutlarından biridir. Ev içi enerji kullanımı büyük ölçüde kadınların sorumluluğunda olan alanlarla ilişkilidir. Elektrikli cihazlar, ev işlerini kolaylaştıran araçlar olarak sunulsa da, bu durum kadınların rolünü ortadan kaldırmaz. Aksine, kadınlar modern evin yöneticileri ve enerji kullanıcıları olarak yeniden konumlandırılır. Bu durum, enerjinin toplumsal ilişkileri yeniden düzenlediğini gösterir. Ev içi modernleşme, yalnızca teknik bir dönüşüm değil, aynı zamanda toplumsal bir yeniden yapılanmadır.

Bu bölümün ortaya koyduğu en önemli sonuç, enerjinin tek boyutlu bir deneyim üretmediğidir. Enerji, farklı mekânlarda ve farklı kullanıcılar için farklı anlamlar taşır . Bu durum, modernleşmenin homojen değil, parçalı ve müzakere edilen bir süreç olduğunu gösterir. Enerji, hem konfor hem risk, hem ilerleme hem eşitsizlik üretir. Bu çelişkili yapı, modernleşmenin karmaşık doğasını ortaya koyar. Enerji altyapıları, yalnızca teknik sistemler değil, aynı zamanda toplumsal ve mekânsal ilişkileri kuran yapılardır. Bu nedenle enerji, mimarlık tarihi içinde merkezi bir analiz kategorisi olarak ele alınmalıdır. Enerji üzerinden yapılan bu okuma, mekânın yalnızca fiziksel değil, aynı zamanda toplumsal, çevresel ve deneyimsel bir süreç olduğunu ortaya koyar.

Sonuç olarak, bu çalışma, 1930'lu yıllarda Türkiye'de enerjinin mekânsal deneyimlerini farklı ölçeklerde ele alarak, mimarlık tarihini enerji üzerinden yeniden düşünmeyi amaçlamıştır. Çalışmanın temel amacı, modernleşme ve sanayileşme süreçlerini yalnızca kurumsal reformlar, ideolojik söylemler veya anıtsal yapılar üzerinden değil; bu süreçleri mümkün kılan, aynı zamanda sınırlandıran ve karmaşıklaştıran maddi altyapılar üzerinden incelemektir. Bu doğrultuda kömür ve elektrik, teknik kaynaklar olarak değil, mekânı yeniden örgütleyen, gündelik hayatı şekillendiren ve devlet ile toplum arasındaki karşılıklı dönüşümü aracılık eden sosyo-materyal güçler olarak ele alınmıştır. Çalışmanın kapsamı, ulusal, kentsel ve konut ölçeklerini birlikte ele alan ölçekler arası bir yaklaşım üzerine kurulmuştur. Bu yöntem sayesinde kömür havzalarından demiryollarına, depolardan elektrik fabrikalarına, sokak aydınlatmalarından ev içi cihazlara uzanan kesintisiz ancak eşitsiz bir enerji zinciri ortaya konmuştur. Bu yaklaşım, enerjinin yalnızca belirli bir ölçekte değil, farklı mekânsal düzeylerde eşzamanlı olarak işleyen bir süreç olduğunu göstermiştir. Araştırma soruları, enerjinin modernleşme sürecinde nasıl bir rol oynadığı, nasıl temsil edildiği ve gündelik hayatta nasıl deneyimlendiği üzerine odaklanmış; bu sorulara

verilen yanıtlar, modernleşmenin homojen ve doğrusal değil, parçalı, eşitsiz ve müzakere edilen bir süreç olduğunu ortaya koymuştur. Çalışmanın kavramsal çerçevesi, enerjiyi sosyo-doğal bir süreç olarak tanımlamış ve doğa ile toplum arasındaki ayrımı reddetmiştir. Bu bağlamda kömür, iklim, nem, su gücü ve elektrik, yalnızca doğal kaynaklar değil; toplumsal ilişkiler, teknolojik sistemler ve politik kararlarla birlikte şekillenen unsurlar olarak değerlendirilmiştir. Energo-iktidar kavramı ise enerjinin bir yönetim aracı olarak işleyişini açıklamış; enerji altyapılarının devletin mekânı ölçülebilir, yönetilebilir ve müdahale edilebilir hale getirmesinde oynadığı rolü ortaya koymuştur. Ancak bu çalışma, energo-iktidarın kesintisiz ve bütüncül bir kontrol mekanizması olmadığını, aksine farklı aktörlerin katılımıyla şekillenen parçalı ve çoğu zaman çelişkili bir süreç olduğunu göstermiştir. Metodolojik olarak çalışma, arşiv belgelerinin yanı sıra gazeteler, karikatürler, reklamlar ve kamusal tartışmaları mimarlık tarihinin bir parçası olarak ele almıştır. Bu yaklaşım, enerjinin yalnızca kurumsal düzeyde değil, gündelik hayatta nasıl deneyimlendiğini görünür kılmıştır. Fiyat tartışmaları, çevresel şikayetler, belediye hizmetlerindeki aksaklıklar, kazalar ve ev içi kullanım pratikleri, enerji altyapılarının yaşanan boyutunu ortaya koyan önemli veriler sunmuştur. Bu yöntem, arşivin yalnızca resmî belgelerle sınırlı olmadığını, aynı zamanda parçalı, çelişkili ve çoğu zaman eksik kaynaklar üzerinden de okunabileceğini göstermesi açısından metodolojik bir katkı sunmaktadır.

Çalışmanın bulguları, enerji altyapılarının aynı anda birden fazla etki ürettiğini ortaya koymaktadır. Enerji sistemleri bir yandan devletin mekânsal örgütlenmesini ve ulusal bütünleşmesini desteklerken, diğer yandan çevresel yükler üretmiş, kentsel eşitsizlikleri derinleştirmiş ve gündelik hayatta kesintiler, riskler ve belirsizlikler yaratmıştır. Sokak aydınlatmaları modernliğin simgesi olarak sunulurken, arızalar ve karanlık alanlar bu söylemi sorgulamış; kömür depoları ekonomik gereklilik olarak meşrulaştırılırken, çevresel etkileri kent yaşamını olumsuz etkilemiştir. Konut ölçeğinde ise elektrikli cihazlar modern yaşamın göstergesi olarak sunulmuş, ancak farklı enerji türlerinin birlikte kullanımı modernleşmenin parçalı doğasını ortaya koymuştur.

Bu çalışma, mimarlık tarihyazımına üç temel katkı sunmaktadır. İlk olarak, analizi yapısal biçimlerden altyapısal süreçlere kaydırarak enerjiyi mekân üretiminin merkezine yerleştirmektedir. İkinci olarak, erken Cumhuriyet dönemini yalnızca

ideolojik veya estetik bir çerçevede değil, politik ekonomi ve sosyo-doğal koşullar üzerinden ele alarak mevcut anlatıları genişletmektedir. Üçüncü olarak ise gazeteler ve görsel materyaller gibi kaynakları mimari kanıt olarak kullanarak arşivi genişletmekte ve gündelik deneyimi tarih yazımının bir parçası haline getirmektedir. Sonuç olarak çalışma, enerjinin yalnızca üretim ve tüketim meselesi olmadığını; mekânın örgütlenmesi, vatandaşlığın kurulması, gündelik hayatın düzenlenmesi ve çevresel yüklerin dağıtılması süreçlerinde merkezi bir rol oynadığını göstermektedir. Enerji üzerinden mimarlık tarihini okumak, mekânın yalnızca inşa edilmediğini; aynı zamanda çıkarıldığını, taşındığını, dağıtıldığını, tartışıldığını ve deneyimlendiğini ortaya koymaktadır.

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