DEVELOPMENT OF ELECTRIC POWER INDUSTRY IN COLORADO

1916 - 1936

COLORADO STATE PLANNING COMMISSION

DEVELOPMENT OF ELECTRIC POWER INDUSTRY IN COLORADO

1916 - 1936

THE COLORADO STATE PLANNING COMMISSION

Mr. John T. Barnett, Chairman
Mr. Edward D. Foster, Director
Hon. William H. Adams
Mr. Frank Delaney
Miss Vena Pointer
Dr. E. P. Sandsten
Mr. J. M. Dille
Dr. M. F. Coolbaugh
Dr. Elmore Petersen
Mr. Harry V. Pyle
Mr. Charles D. Vail
Mr. C.M.Hinderlider
Mr. Tolbert R. Ingram, Deputy Director

* * *

NATIONAL RESOURCES COMMITTEE

Mr. Irvin J. McCrary, Consultant

* * *

ALL TECHNICAL DATA
By
W. M. McMECHEN

* * *

Prepared and Published by the Colorado State Planning Commission as a report on Official Project No. 465-84-3-126, Work Project No. 3089, conducted under the auspices of the Works Progress Administration.

September, 1938

FOREWORD

It is only thru study of the past that the reasonable expectancies of the future can be forecasted. Trends do not follow uniform, continuing curves, but they provide the only basis upon which probable future events may be anticipated.

The Planning commission undertook this study of the development of the electric power industry up to the present time for a very definite reason. There is no question that the state is going to enjoy in the near future, a program of irrigation development of tremendous magnitude. Already one great project --- the Colorado- Big Thompson --- is under way. Others will follow, some dealing with transmountain diversion and others with intrabasin development.

Each of these projects has another element no less significant than that of stabilizing the rivers of the state and putting them to their maximum possible use for irrigation. Accompanying each is the possibility of the development of cheap electric power. Therefore it is of immediate importance to know what has been done in Colorado up to this time in the way of power development; what that development has meant to industry, and, conversely, what impetus industrial development has given the electric power industry.

Where will a market be found for this cheap power when it is available? Will it come from increased operation of manufacturing plants, from a revival of mining, from increased use in agriculture? Because it is impossible to project the past into the future with assurance, no attempt is made in this volume to venture into the field of confident prediction. The only purpose of this study is to compile and make available for those who are interested all factual data related to the development of the electric power industry in Colorado, with our analysis of the industries and other factors which have contributed toward its growth and which it, in turn, has encouraged. With the aid of these data the reader can reach his own conclusions.

Acknowledgment of co-operation and assistance is due the Public Utilities Commission, the Public Service Company of Colorado and others who are mentioned on Page 2 of this report as having contributed toward its completion, and to the staff of the Works Progress Administration project operated throughout this study by the Planning commission.

THE COLORADO STATE PLANNING COMMISSION.

September, 1938.

TABLE OF CONTENTS

INDEX TO CHARTS AND MAPS

"ELECTRIC POWER INDUSTRY IN COLORADO"

Introductory Statement

The demand for information relating to the elctric power industry in Colorado other than that now available in published form was brought to the attention of The Colorado State Planning Commission. It was believed that much unpublished data could be secured from various sources, and that these data would be of definite value when assembled and presented for use. Accordingly this was undertaken as a study sponsored by The State Planning Commission with a staff provided by the Works Progress Administration under Project No. 465-84-3-126, and was supervised throughout by Mr. Wm. M. McMechen, Civil Engineer. The study was developed along the following lines:

I HISTORY of the growth of the industry from its beginning, 60 years ago. Within this section is a directory of the privately and municipally owned electric utilities, setting forth ownership, the territory served and the trading or purchasing arrangements where these exist between one electric utility and another. The map associated with this section indicates the location and type of all plants in the state and their related transmission lines and points of distribution. A separate list of cities and towns, indicating briefly the manner in which they are served, has been incorporated in the section, as have those charts showing in detail the corporate structure of the Public Service Company of Colorado, the Southern Colorado Power Company, and the Western Colorado Power Company, brought up to date as of December, 1937.

II GENERATION of electric energy from 1916 through 1936. This section treats the installed kilowatt capacities of all plants generating electric energy for public consumption. The chart of "Installed Capacities" indicates the 10 river basins into which the state was divided for the convenience of the study. Tables setting forth physical data of the generating units are presented, as well as a chart showing annually the total installed capacity in kilowatts, and the output therefrom in kilowatt-hours.

III DISTRIBUTION of electric energy, classified into the several forms of consumer use, accompanied by numerous charts and tables, graphically illustrating the consumer districts into

which the state was divided for the further convenience of the study; the electric energy consumer within these districts, and trends in agriculture, mining, and manufacturing production through the study years. The district sales curves are not intended to show any reflection in their accompanying commercial curves; the sales being actual and the commercial curves expressing trends only. With respect to the several tables, wherever the factor "Zone" is used, this zone is defined as "That area lying between two lines each parallel to the transmission line, each line being five miles on either side of said transmission line," or in the case of isolated plants, then "The circular area surrounding the particular plant within a radius of five miles therefrom." Data relating to electric sales and population within these zones have been assembled and presented in a series of tables.

IV THE FUTURE of the industry has been touched on lightly, and a few projections of trends to show future possibilities are included.

Sources of data used in this study are the publications or records of

Colorado Public Utilities Commission
Federal Power Commission
United States Census Reports
Public Service Company of Colorado
Southern Colorado Power Company
Western Colorado Power Company
Follansbee Report on Conservation and Utilization
   of water in the Upper Colorado River Basin.
Hafen-Baker History of Colorado
Colorado State Planning Commission

and other reliable institutions and individuals, whose assistance and cooperation are hereby gratefully acknowledged.

HISTORY OF THE DEVELOPMENT OF THE ELECTRIC POWER INDUSTRY IN COLORADO

The history of the development of electric power production in Colorado is particularly interesting in that it was the first modern type of industry to develop in the state. The pioneer industries of trapping and trading had flourished from the early days of the Santa Fe Trail up to the discovery of gold in the Colorado Rockies. Following the beginning of mining came the pioneer development of agriculture, stock-grazing and lumbering.

The first use of water power was by the belt connected water wheel installed to run a five stamp mill at Montezuma, in Summit county in 1865. This method later developed into the hydroelectric power plant.

In 1866 William N. Byers, John Q. Charles and John Pierce promoted the Denver Gas Company in Denver. The company was incorporated, but was never operated. In November 1869, a group of Denver men took over the corporation, financed it with $100,000 and after obtaining a fifty year franchise constructed a gas plant. That plant was the first unit of a system that afterwards developed into the present Public Service Company of Colorado. The first modern type wheel with a fifteen foot head, was installed at Ouray in 1882.

The first hydroelectric plant in Colorado was erected at Aspen in 1885. It consisted of a Pelton water wheel, with a seventy foot head, connected to a 50 light dynamo. In 1886 a second installation was made consisting of a Victor turbine under a 55 foot head. In 1886 the Consumers Light and Power Company installed at Hunter's Creek, near Aspen, a hydroelectric plant, under a 125 foot head. By these plants Aspen became one of the first towns in the world to have its streets and buildings electrically lighted.

In 1888 the second high head water power plant in the state was constructed near Aspen. The installation consisted of nine Pelton wheels, each having a capacity of 150 hp. connected to two 1150 light Brush D. C. dynamos; three 1200 light Westinghouse alternating current dynamos, and one 110 kw. 550 volt Edison generator. The power was chiefly used for elevating mine hoists, the one in the Veteran Tunnel being the first electric hoist in the country, and possibly, the first in the world.

The plant of the Roaring Fork Water, Light and Power Company, at Aspen, was constructed in 1892. The Glenwood Light and Power Company installe its first plant in 1889. The plant, with a 100 hp. Pelton wheel was installed to light the town. A feature of its construction was the use of a municipal water supply to generate power.

While the Aspen plants were pioneering in the generation of hydroelectric power for town lighting and mining, another phase of the power industry began development in the adjacent Grand Valley region, for the use of electric power in pumping water for irrigation and industrial purposes. The first water power plant for such usage was at snipes, in Plateau Valley, for a flour mill, and another for a flour mill at Glenwood Springs.

In the early 80's the development of irrigated lands began near the town of Grand Valley, and long ditches were avoided by pumping the water to required levels. The first plant was constructed by James Smith in 1886, at a point three miles above Grand Junction. The second plant was installed by Frank Bungar, seven miles east of Palisade in 1888. The next was the plant of C. N. Cox in 1888. This plant had a ditch of 1000 second feet capacity, one-half mile long, creating a head of 12 feet. A 159 hp. Victor turbine attached to a Smith-Vaile pump raised water 84 feet to irrigate 400 acres. These plants were discontinued early in the century when the small areas they irrigated were incorporated into larger areas.

One of the most important developments in the production of hydroelectric power was proceeding about the same time in the San Juan mining region. This development was notable as it was there that the first attempts to transfer energy at high voltage over relatively long distances at high altitudes was made. It is true that at Portland, Oregon in 1889 a plant was installed that transmitted alternating current, but the energy was for lighting only.

In 1890 a hydroelectric plant was installed at the Caroline mine near Mt. Sneffles on Canyon Creek, four miles below the mine. A 500 volt transmission line was found to be too expensive so the experiment of using a tension of 900 volt higher than had ever been used in that kind of work, was adopted. The Revenue Tunnel plant No. 2 is still in existance. From it for the first time, power lines were run into the mine to supply power to operate electric motors and drills.

The famous Ames plant was installed in 1890 at the junction of Lake and Howard forks, near Telluride. The plant consisted of a six foot Pelton wheel, 100 hp. capacity, under 230 foot head. The cost of a D. C. line being prohibitive, a single-phase alternating current system of 3,000 volts was used. It was the first hydroelectric plant (at least in the west) to transmit alternating current at high voltage, though, as related above, the Oregon experiment preceded it in transmission of alternating current for lighting.

The Ames plant was used by both the Westing house and General Electric Companies as a field laboratory, in which problems of high tension transmission were solved. Its successful operation astounded the electrical world, as many experienced electrical men had predicted failure for the attempt. In 1892 the transmission line was extended 10 miles to a mill on Bear Creek, where a 250 hp. motor was used. The Ames plant was rebuilt with the present two-phase equipment, operating at 11,000 volts in 1896, and the transmission line was extended across the San Juan mountains to Camp Bird, an additional distance of 17 miles.

While the [illegible] plant [illegible] of the generation of [illegible] power for town lighting and [illegible] of the [illegible] development [illegible] for the use of electric power in pumping water for agricultural and [illegible] purposes. The first [illegible] for such [illegible] at [illegible] for a [illegible] and another for a flour mill at Diamond Springs.

In the early [illegible] the development of [illegible] levels. The first plant was constructed [illegible] in [illegible] The second plant [illegible] This plant had a [illegible] a head of [illegible] [illegible]

One of the most important developments in the generation of [illegible] power [illegible]

In [illegible]

The [illegible]

The [illegible]

Turning to other portions of the state, we find repeated the fact that Colorado was a pioneer in electric transmission and street lighting. Denver was the first city in the state to have lelectric street lighting. These lights consisted of 8 arcs mounted on 8 steel towers, erected in 1881.

Leadville was the second town in the state to have electric lights. These were arc lights installed in 1883. The first installation in Colorado of high speed, steam pressure turbines direct-connected to generators was made in Leadville in 1893 by the Citizen's Electric Light Company. The first incandescent lighting in Colorado was in Denver in 1887, when between four and five thousand lights were installed. In Western Colorado mining districts the development of uses of power in the mining industry were begun and modern high tension transmission were pioneered.

The eastern slope region developed the first use of electric energy for lighting purposes in Colorado. By the middle 80's several towns had electric lighting. Leadville in 1883; Fort Collins in 1887: Salida, Black Hawk, Central City and Golden in 1888; Georgetown in 1890 and Idaho Springs in 1891: Boulder in 1887; Longmont, Canon City, Florence and Trinidad between 1890 and 1895. Alamosa first had electric service in 1902. Littleton and Engelwood in 1903 and 1904 respectively. Loveland in 1901.

Up to about 1905 the electric power industry had been developed in the metal mining districts, and in a number of towns where small plants were installed, private companies supplied lighting to the local community. From 1905 to 1915, the most extensive electrical development in the history of industry in Colorado occurred.

In this decade the growth of the industry changed from the individual mining and town plant, to that of the interconnected transmission system. The four principal privately owned electric utilities corporations, Public Service Company of Colorado; the Southern Colorado Power Company; the Trinidad Electric, Traction, Railroad and Gas Company, and the Western Colorado Power Company, were in the process of formation. These four corporations have produced, from 1916 to 1936 inclusive, about 93 percent of all the electric power gerneated by all electric utilities serving public demand.

The Central Colorado Power Company built the Shoshone and Boulder plants, which were and still are the largest hydroelectric plants in the state. The energy from the Shoshone plant is transmitted over a 90 kilovolt line, and after serving the Central Mining Area of the state continues on to Denver, a total distance of 150 miles.

Over fifty companies were merged into the Public Service Company of Colorado in 1924, and since that time 23 other companies have become part of this institution. Since 1924 four units have separated from the Public Service Company of Colorado, namely:- the Longmont, Loveland and Fort Collins municipal systems, and the Home Gas and Electric Company of Greeley, which is wholly a distributing system.

The first unit of the Valmont Steam plant was completed in 1923 with installed capacity of 20,000 kw; this was followed in 1925 and again in 1937 with installations of 25,00 kw. each, thus making this the largest steam plant in the state with a present 70,000 kw. capacity.

The Southern Colorado Power Company developed from the Pueblo Street Railroad Company, formed in 1879. The Arkansas Valley Railway, Light and Power Company was formed in 1911 from the Pueblo and Suburban Traction and Lighting Company, and the Colorado Light and Power Company, bringing together a dozen predecessor companies. The Arkansas Valley Railway, Light and Power Company became the present Southern Colorado Power Company in 1922. See Chart of Corporate Development. It operates both steam and hydroelectric plants.

The Trinidad Electric, Traction, Railway and Gas Company was formed in 1911 - consolidating steam plant systems built in 1907 at Trinidad, Hastings and Walsenburg. The Hastings plant was abandoned, the power now being supplied by the plants at Trinidad and Walsenburg. No Corporate Chart is shown.

The Western Colorado Power Company, a subsidiary of the Utah Power and Light Company was formed in 1913, from existing systems at Durango and Telluride; the Durango plant dating back to 1886. In 1914 it absorbed plants at Ouray, Montrose, Delta and Ridgway. Since 1927 it has acquired plants at Rico, Cedaredge, Somerset, Paonia and Hotchkiss as well as the Oliver steam plant. Delta withdrew from the system in 1937 and has built its own municipal plant.

The complete system of transmission lines and plants locations, both private and municipal, are shown on the transmission line map. Accompanying the charts and map is a complete list, as of 1937, showing in detail the history and important factors of both privately owned and municipally owned electric power utilities.

As stated, the period from 1905 to 1915 was the period of greatest expansion in the electric field, over 40 companies being formed. This rapid expansion probably induced the activity that finally culminated in the formation of the large privately owned electric utilities. Between 1925 and 1935 over 30 companies were acquired by the large private systems, and it is only since 1925 that creation of new municipal systems has been carried out. Loveland, Fort Collins and Delta became municipal in 1928-1935 and 1937 respectively. La Junta voted to erect a municipal internal combustion plant in 1938.

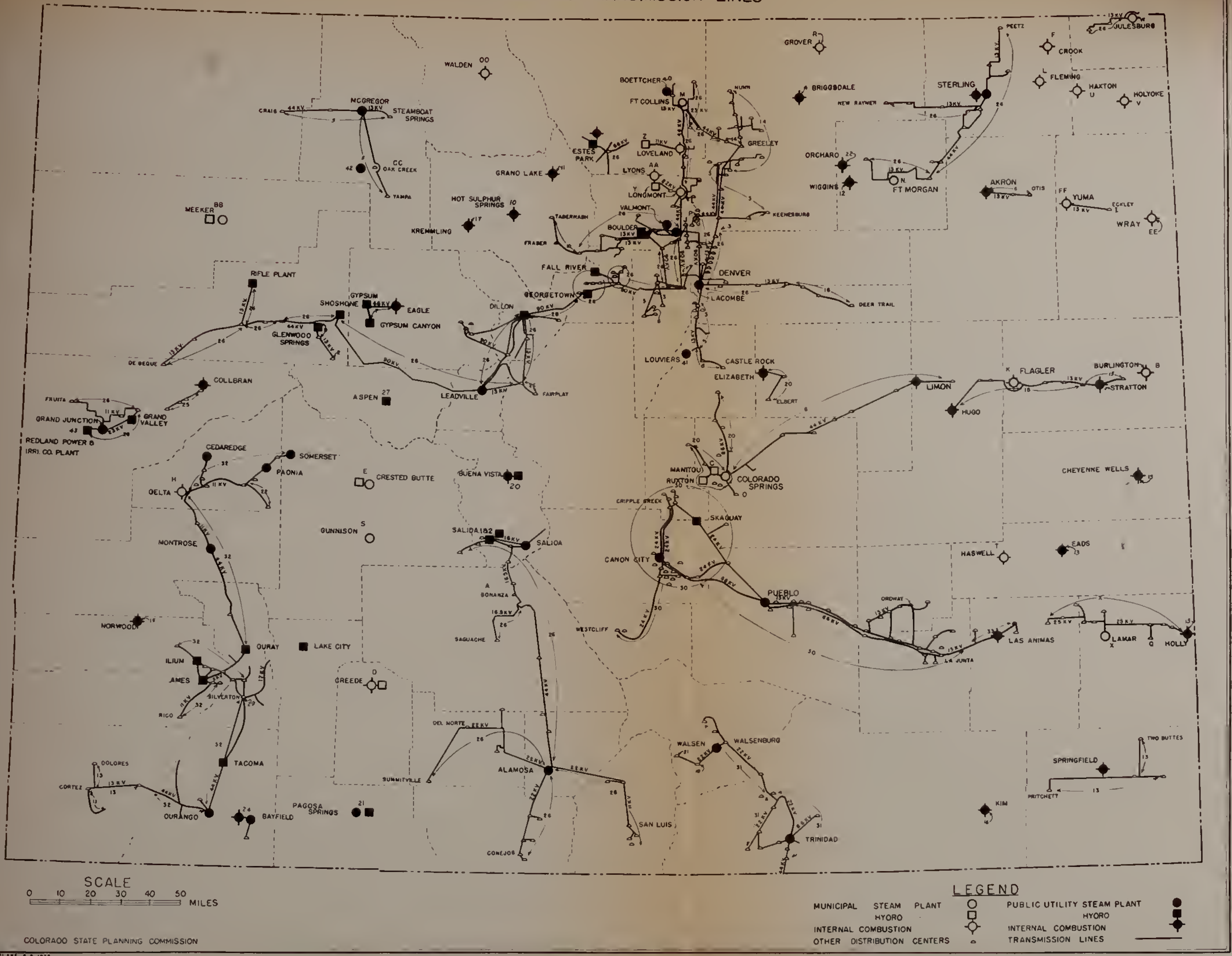
While the demand for electric energy has been largely supplied, during the period under study, by the four large privately owned electric utility companies, and six principal municipally owned electric utilities, namely Lamar, Colorado Springs, Loveland, Longmont, Fort Morgan and Fort Collins in 1935, there are six privately owned companies that serve most of the remaining field of distribution, namely:

Name of Company	Date of Service
Colorado Utilities Corp.	1926
Commonwealth Utilities Corp.	1926
Highland Utilities Corp.	1922
Home Gas & Electric Co.	1909
Inland Utilities Co.	1924
Mountain Utilities Corp.	1933

These companies are subsidiaries of large corporations located outside the state.

The accompanying charts of corporate development of the electric industry in Colorado, express graphically some interesting facts surrounding the growth of this great modern industry, clearly setting forth the fact that the industry in Colorado goes back into the early pioneering period of the state.

ELECTRIC GENERATING PLANTS, DISTRIBUTION CENTERS AND TRANSMISSION LINES



CORPORATE HISTORY
OF
ELECTRIC PUBLIC UTILITIES OF COLORADO
AS OF
JANUARY 1, 1938

PART 1

PRIVATELY OWNED ELECTRIC UTILITIES
AND
PRIVATELY OWNED INDUSTRIAL PLANTS
SELLING TO ELECTRIC UTILITIES

PART 2

MUNICIPALLY OWNED ELECTRIC UTILITIES

Note: The numbers and letters preceding the company name are key numbers used on map entitled: "Electric Generating Plants, Distribution Centers and Transmission Lines."

Privately Owned Electric Utilities.

Business Started

No. 1 The Arvada Electric Company. 1908
Electricity sold at retail to Arvada and Westminster. Power purchased from Public Service Company of Colorado.

2 The Carbondale Light and Power Company. July 1911
Electricity sold at retail in Carbondale, Colorado. Power purchased from Public Service Company of Colorado.

3 Colorado Central Power Company. 1926
(Controlled by Crescent Public Service Company).
Incorporated in Delaware, Oct. 29, 1926.
Supplies electric light and power to 16 communities in Colorado, including Golden, Morrison, Englewood, Littleton, Sheridan, Ft. Lupton, Johnstown, Milliken, Platteville, Hudson, Keenesburg, Ft. Logan and Lookout Mountain. Evergreen is supplied through the sale of power to the Evergreen Public Service Co. Purchases all power from the Public Service Company of Colorado.

4 Colorado Light and Power Company.
Supplies electric light and power in Briggsdale where company owns an oil engine plant.

5 Colorado Utilities Corporation. 1926
(Controlled by Commonwealth Power Company).
Incorporated under Colorado laws in March 1926.
Supplies electric light and power in Routt and Moffat counties. Principal cities served: Craig, Hayden, Steamboat Springs, Phippsburg, Yampa, Oak Creek (outside corporate limits) and McGregor (mines). Company has a steam power plant at McGregor and two undeveloped water power sites. Management is under direction of Central States Public Service Company.

6 Commonwealth Utilities Corporation. 1926
(Controlled by Commonwealth Power Company).
Incorporated under Colorado laws in 1926.
Supplies electric light and power to Akron, Otis, and Platner from its Akron oil engine plant; to Calhan, Genoa, Limon, Matheson, Peyton, Ramah and Simla with power purchased at wholesale from the City of Colorado Springs, with a standby plant at Limon; and to Castle Rock and Sedalia with power purchased from the Colorado Central Power Company.

7 The Eagle River Electric Company. March 1923
(Controlled by Commonwealth Utilities Corporation).
Supplies electric light and power to Eagle and Gypsum. Has an oil engine plant at Eagle and hydro plants at Gypsum and Gypsum Canyon.

8 Evergreen Public Company. Aug.1, 1920

Supplies electric and power in Evergreen, Kittredge, Troutdale, Brook Forest, and Marshdale. Purchases power from the Colorado Central Power Company.

9 The Glenwood Light and Power Company. 1909

Incorporated in Nevada in 1909.
In 1914 sold its water-works to the City of Glenwood Springs, Colorado, and on November 15, 1916, purchased the property of the Mutual Light Heat and Power Company. Furnishes electric light and power in Glenwood Springs and Cardiff. Owns a hydro plant in Glenwood Springs and purchases power, in part, from the Public Service Company of Colorado.

10 The Grand County Light Heat and Power Company. Jan.1,1932

Supplies electric light and power in Hot Sulphur Springs from their Hot Sulphur Springs oil engine plant; and to Fraser, Tabernash, Vasquez and West Portal with power purchased from the Public Service Company of Colorado.

11 Grand Lake Light Company. 1935

Supplies electric light and power to Grand Lake. Has an oil engine plant at Grand Lake.

12 Seth Harshman Electric Light Plant. Nov. 1926

Seth Harshman, owner, supplies electric light and power in Wiggins. Has an oil engine plant in Wiggins.

13 Highland Utilities Company. 1922

(A subsidiary of the North Continent Utilities Corporation).
Incorporated in November 1922.
The Highland Utilities Company operates in Colorado and Kansas.
In Colorado, it operates in three divisions:

Mesa Verde Division June 1, 1928

Supplies electric light and power to Cortez, Mancos and Dolores. Purchases power from the Western Colorado Power Company.

Baca County Division April 12, 1928

Supplies electric light and power in Springfield, Walsh, Two Buttes, Vilas and Pritchett. Owns an oil engine plant at Springfield.

Eads Division July 1, 1921

Supplies electric light and power in Eads. Owns an oil engine plant in Eads.

14 The Home Gas and Electric Company(Greeley). Jan.22,1909

(Controlled by Reconstruction Finance Corporation).
Supplies electric light and power in Ault, Eaton, Peckham, Lucerne, Evans, Gilcrest, Garden City, Greeley, Kersey, LaSalle, Galeton, Gill, Nunn, Pierce and adjacent rural territory. Power is purchased from the Public Service Company of Colorado.

15 The Inland Utilities Company. Kansas City, Kan. 1924
Incorporated in Kansas, April 1, 1924
(Controlled by Fairbanks.Morse and Company, Chicago).
Began selling service in Colorado in July 1929.
Supplies electric light and power in Byers, Deertrail and Strasburg with power purchased from the Public Service Company of Colorado; to Holly and Cheyenne Wells from company owned oil engine plants in each town; and to Arriba, Bethune, Hugo, Siebert, Stratton and Vona from company owned oil engine plants in Hugo and Stratton.

16 Kim Light and Power Company. 1928
R.H. Quinn, owner.
Supplies electric service in Kim, Colorado.

17 Kremmling Light and Power Company. Dec. 30, 1930
Supplies electric light and power in Kremmling, Colorado.
Oil engine plant. Population served - 370.

18 The LaVeta Light Heat and Power Company. July 4, 1908
Supplies electric and power in LaVeta, Colorado.
Purchases power from the Trinidad Electric Transmission Railway and Gas Company.

19 Montezuma Light and Power Company.
Company owns an oil engine plant and supplies electric light and power to Norwood, Colorado.

20 Mountain Utilities Corporation. 1933
Incorporated in July 1933. Took over and assumed the electric power business of Dwight Chapin, Jr. of Wichita, Kansas.
Company supplies electric light and power in Buena Vista, from an oil engine and hydro plant located in that town; Elizabeth, Kiowa and Elbert are served with electricity from an oil engine plant at Elizabeth; Palmer Lake, Monument, Larkspur, Greenland and Woodland Park are served with electricity purchased at wholesale from the Colorado Springs Municipal System.

21 New Light and Power Company. 1919
Supplies electric light and power to Pagosa Springs where the company owns a steam and hydro plant.

22 Orchard Power Light Water and Gas Company. Aug. 15, 1931
Company owns an oil engine plant in Orchard, Colorado, where it supplies electric lights and power.

24 Pine River Power Company (not incorporated). June 18, 1929
Supplies electric light and power in Bayfield and Ignacio.
The Company owns a steam and oil engine plant in Bayfield.

25 The Plateau Valley Light and Power Company. Jan. 2, 1932
Company owns an oil engine plant and supplies electric light and power in Collbran, Colorado.

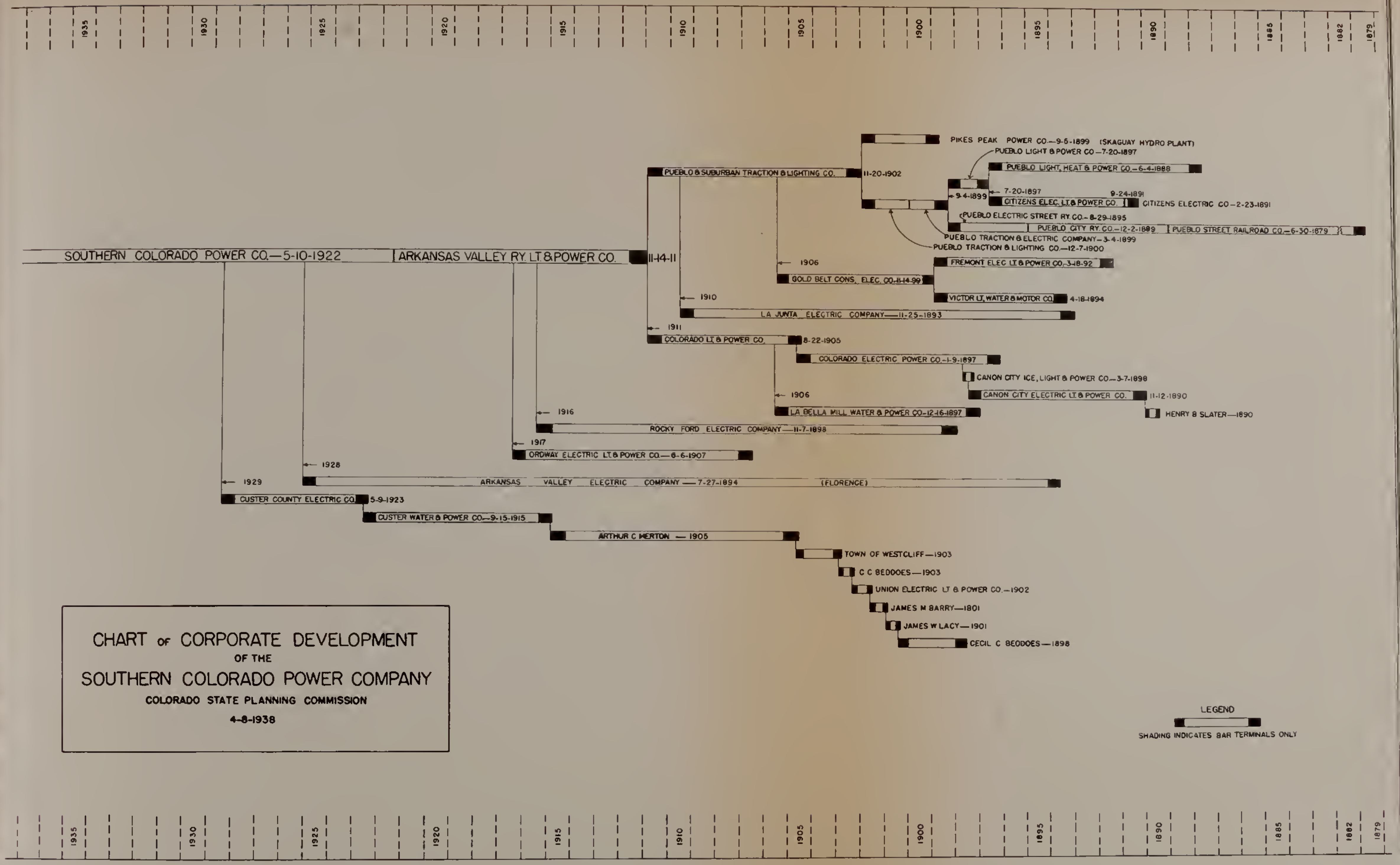


CHART OF CORPORATE DEVELOPMENT OF THE SOUTHERN COLORADO POWER COMPANY

COLORADO STATE PLANNING COMMISSION

4-8-1938

F.E. BLAKE

26 Public Service Company of Colorado. 1924

(A subsidiary of Cities Service Power and Light Company).

Incorporated in Colorado September 3, 1924.

Successor by merger to company of the same name (incorporated Aug. 2, 1923) and the Colorado Power Company (incorporated April 2, 1913; the former succeeded by merger the Denver Gas and Electric Light Company (incorporated Nov. 29, 1909) and the Western Light and Power Company (incorporated April 3, 1906 as the Northern Colorado Power Company, name changed 1914), and its subsidiary, the Cheyenne Light Fuel and Power Company of Cheyenne, Wyoming.

For detailed corporate history see: "Chart of Corporate Development of the Public Service Company of Colorado."

The company supplies electric light and power to 126,403 customers in 120 communities with a population of 403,000 and also supplies electricity at wholesale to 52 communities with a combined population of 57,600.

Names of Cities and Towns Served Retail:

Adams City
Alamosa
Antonito
Atwood
Aurora

Bennett
Berkeley Gardens
Berthoud
Black Hawk
Blanca
Boulder
Breckenridge
Brighton
Broomfield
Brush

Campion
Canfield
Center
Central City
Chama
Clifton
Conejos
Crisman

DeBeque
Del Norte
Denver
Denver Suburban
Derby
Dillon
Dumont
Dupont

East Lake
Edgewater
Eldorado Springs
Empire
Estes Park

Firestone
Ft. Collins Suburban
Ft. Garland
Fruita

Garfield
Georgetown
Gilman
Gold Hill
Grand Junction
Grand Valley

Hazeltine
Henderson
Hillrose
Hooper

Idaho Springs
Iliff
Irondale

Kokomo

Lafayette
La Jara
Lakewood
La Porte
Lawson

Leadville
Longmont Suburban
Louisville
Loveland Suburban

Malta
Manassa
Marshall
Maysville
Mead
Merino
Minturn
Moffat
Monarch
Monte Vista
Montezuma
Mount Air
Mosca
Mountain View

Nederland
Nevadaville
New Castle
Niwot

Ovid
Olinger Gardens

Padroni
Palisade
Peetz
Poncha Springs
Puritan
Raymer
Red Cliff

Richfield
Rifle
Rinn
Rollinsville
Romeo
Russell Gulch

Saguache
Salida
Sanford
San Luis
San Pablo
Sargent
Sedgwick
Severance
Shoshone
Silver Plume
Silt
Snyder
Sterling
Stoneham
Superior

Timnath
Tungsten

Valmont
Watkins
Welby
Weldona
Wellington
Wheatridge
Willard
Windsor

26 Continued

For use in Fort Collins Suburban district, the company purchases power from the Colorado Portland Cement Company and for distribution at Sterling purchases power from the Western Public Service Company.

For use in Grand Junction District, power is purchased in part from Redlands Water Power and Irrigation Company.

Names of Cities and Towns Served Wholesale:

Alma
Arvada
Ault

Bonanza
Byers

Carbondale
Cardiff
Cherrylyn
Climax

Dacona
Deertrail

Eaton
Englewood
Erie
Evans
Evergreen

Fairplay
Fitzsimmons
Fort Logan
Fort Lupton
Fraser
Frederick

Galeton
Garden City
Gilcrest
Gill
Glenwood Springs
Golden
Greeley

Indian Hills

Johnstown

Keenesburg

Kersey
Kittredge
La Salle
Littleton
Lucerne

Marshdale
Milliken
Morrison

Nunn

Peckham
Petersburg
Pierce
Platteville

Sheridan
Starbuck
Strasburg

Summitville

Tabernash
Troutdale

Vasquez

Westminster
West Portal
Wolhurst

Company owns the Following Plants:

Valmont near Boulder	(steam)	Salida #1	(hydro)
Lacombe Station, Denver	(steam)	Salida #2	(hydro)
West Station, Denver	(steam)	Rifle	(hydro)
Lafayette (Louisville)	(steam)	Alamosa	(sream)
Shoshone, Glenwood Sprgs.	(hydro)	Salida	(steam)
Boulder Canyon	(hydro)	Brush	(steam, oil fired)
Georgetown	(hydro)	Sterling	(steam, oil diesel)
Dillon	(hydro)	Leadville	(steam)
Estes Park	(hydro-oil)	Grand Junction	(steam)
*Fall River	(hydro)	Grand Valley(near Palisade)	(hydro)

*Plant leased from the U.S. Bureau of Reclamation

27 Roaring Fork Water Light and Power Company. Jan. 1, 1928

Supplies electric light and power in Aspen, Colorado where the company owns a hydro plant. The company was successor to the Roaring Fork Electric Light and Power Company, incorporated May 1, 1887; a consolidation of the Aspen Electric Co.(1885) and the Consumers Light and Power Company (1886). These early plants made the first hydro-electric development in Colorado and by lighting Aspen made it one of the first towns in the world to have its streets and buildings generally lighted.

*Plant leased from the U.S. Bureau of Reclamation.

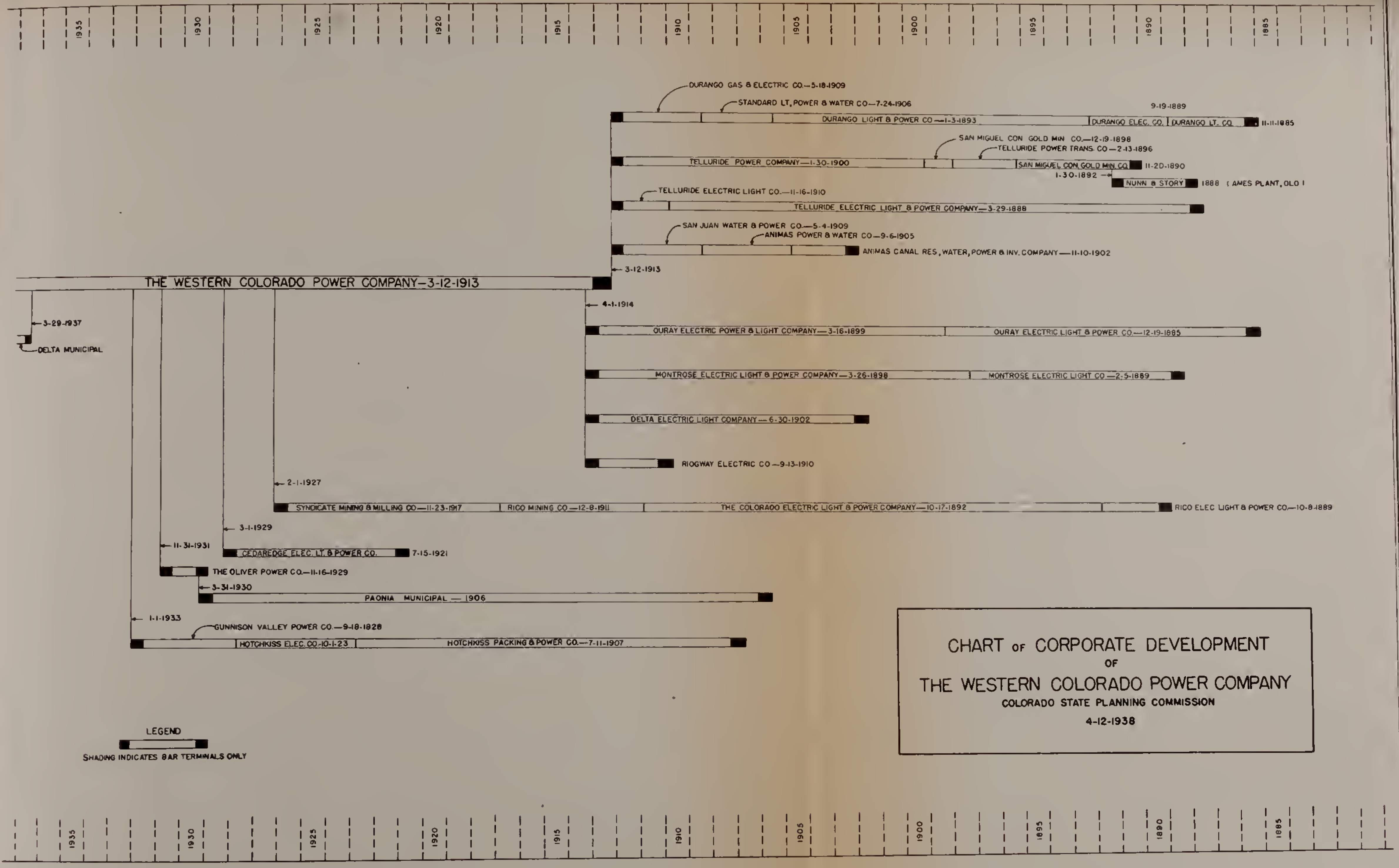


CHART OF CORPORATE DEVELOPMENT
OF
THE WESTERN COLORADO POWER COMPANY
COLORADO STATE PLANNING COMMISSION
4-12-1938

F.E. BLAKE

29 Silverton Electric Light Company.
System leased from the town of Silverton. Power purchased from Western Colorado Power Company.

30 Southern Colorado Power Company. 1911
(Controlled by Standard Gas and Electric Company).
Incorporated under the laws of Colorado November 14, 1911 as the Arkansas Valley Railway Light and Power Company, a consolidation of the Pueblo and Suburban Traction and Lighting Company, La Junta Electric Company, the Colorado Light and Power Company, La Bella Mill Water and Power Company and the Gold Belt Consolidated Electric Company. Name changed as above May 10, 1922.
For detailed corporate history see: "Chart of Corporate Development of the Southern Colorado Power Company." The company owns and operates modern steam and hydro plants serving an estimated population of 105,000 persons in the south and central parts of Colorado.

The company operates in three divisions known as Pueblo, Valley and Mountain, connected by high tension lines.

Towns supplied with electric light and power include: Canon City, Florence, Cripple Creek, Victor, Goldfield, Pueblo, Fowler, Manzanola, Rocky Ford, Cheraw, Swink, La Junta, Ordway, Sugar City, Crowley, Westcliffe and wholesale to Western Public Service Company for use in Las Animas.

Operates steam plant at Pueblo and Canon City and a hydro plant at Skaguay.

31 Trinidad Electric Transmission Railway and Gas Company. 1911
(Controlled by stock ownership by Federal Light and Traction Company; a subsidiary of Cities Service Power and Light Company; Cities Service System).

Incorporated under Colorado laws August 7, 1911; successor to Colorado Railway Light and Power Company.

In 1912 company absorbed the Walsenburg Light Power and Ice Company.

Supplies electric light and power in Trinidad, Aguilar and Walsenburg, including numerous coal mining towns in that locality, serving an estimated population of 25,000 people. Also supplies power to Raton district in New Mexico.

Owns steam plants at Trinidad and Walsen and also purchases some power from New Mexico.

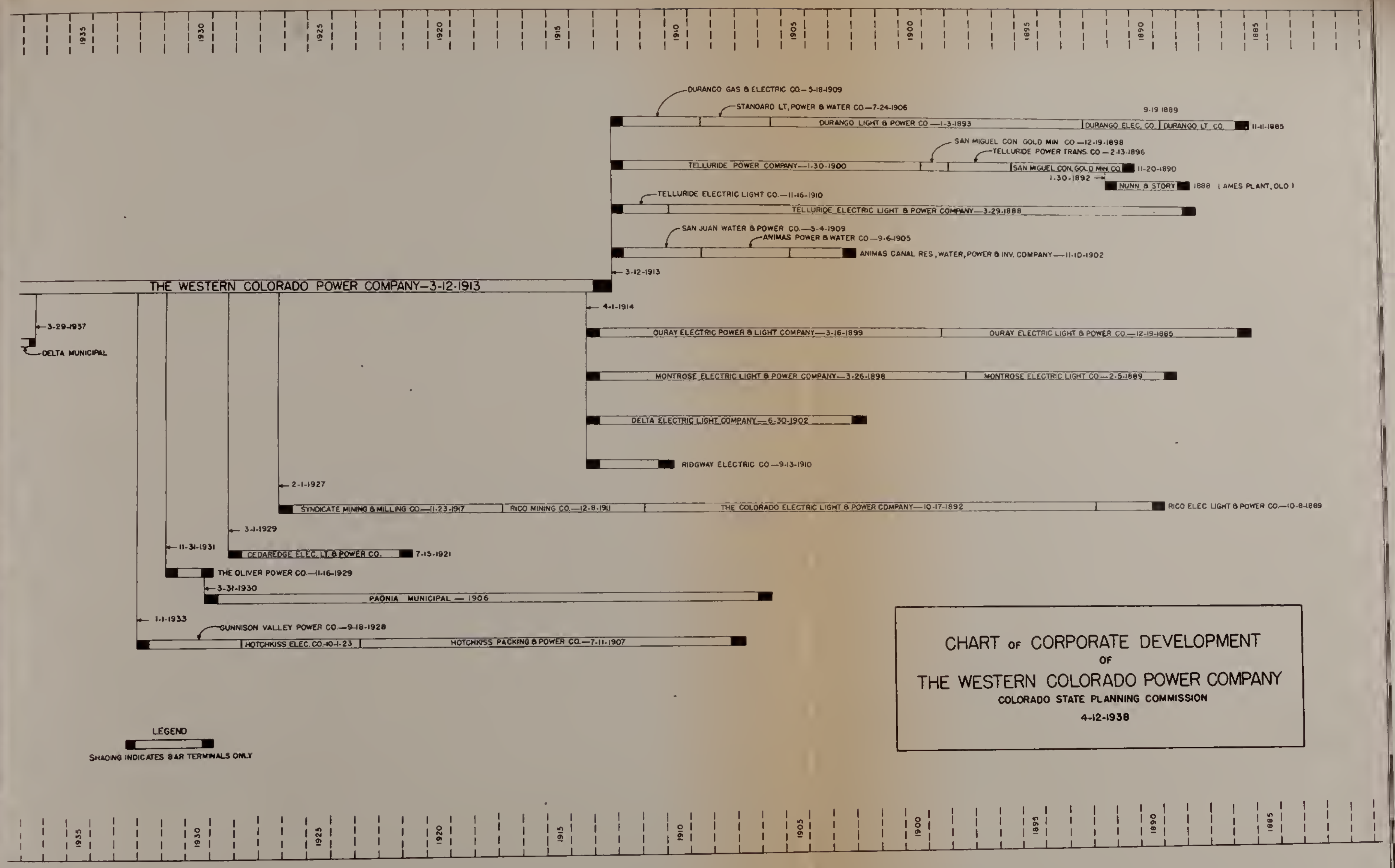


CHART OF CORPORATE DEVELOPMENT OF THE WESTERN COLORADO POWER COMPANY

COLORADO STATE PLANNING COMMISSION

4-12-1938

F.E. BLAKE

32 The Western Colorado Power Company. March 12, 1913
(A subsidiary of the Utah Power and Light Company, controlled by Electric Power and Light Corporation). For detailed corporate history see: "Chart of Corporate History of The Western Colorado Power Company).

Supplies electric light and power to Durango, Telluride, Rico, Montrose, Olathe, Ouray, Ridgeway, Cedaredge, Paonia, Animas City, Austin, California Mesa, Garnet Mesa, Midway, Roger's Mesa, Hotchkiss and Crawford.

Supplies current indirectly to Silverton through the Silverton Electric Light Company; to Mancos, Cortez and Dolores through Highland Utilities Company and to Somerset through the Calumet Fuel Company.

33 The Western Public Service Company (Las Animas)
The Las Animas plant first operated by the Intermountain Railway Light and Power Company in 1912.

Supplies light and Power in Las Animas and Fort Lyon.

The steam plant was retired in 1930 and oil equipment put in service December 15, 1930.

Power is purchased in part from the Southern Colorado Power Co.

Power is also sold to the Public Service Company of Colorado from the plant at Big Springs, Nebraska.

Private Industrial Plants Furnishing some Power for Public Use:

40 Colorado Portland Cement Company.
Boettcher plant sells on demand to the Public Service Company of Colorado, power for the Fort Collins Suburban district.

41 Du Pont E.I. de Nemours and Company Inc.
Louviers Plant until recently furnished power to the Commonwealth Utilities Corporation.

42 Moffat Coal Company.
Plant at Oak Creek furnishes power at Wholesale to the town of Oak Creek.

42 Redlands Water Power and Irrigation Company.
Hydro plant furnishes some power to the Public Service Company of Colorado for use in the Grand Junction district.

Note: The numbers and letters preceding the company name are key numbers used on map entitled: "Electric Generating Plants, Distribution Centers and Transmission Lines."

Municipally Owned Electric Utilities
Part II

A Bonanza (Saguache County).

Municipality supplies electric light and power to the town of Bonanza, Colorado. Population 445
Electricity sold is all purchased wholesale from the Public Service Company of Colorado.

B Burlington (Kit Carson County). Oct.1, 1917.

Burlington Municipal Light and Power Company furnishes light and power to the town of Burlington. Population 1380. Has an oil engine plant.

C Colorado Springs (El Paso County). July 1, 1925.

City of Colorado Springs Light and Power Department supplies electric light and power to Colorado Springs, Manitou, Cascade and adjacent territory.

The city acquired the Cascade Public Service Company electrical system August 31, 1936.

Colorado Springs sells wholesale to the Town of Fountain Municipal System.

It also sells electricity wholesale to the Commonwealth Utilities Corporation for use in Limon district and to the Mountain Utilities Corporation for use in the Palmer Lake and Woodland Park districts.

The city owns a steam plant at Colorado Springs and hydro plants at Manitou and Ruxton Park.

D Creede (Mineral County). 1926.

The City of Creede Electric Light and Supply Department supplies electric light and power to the city of Creede. Population 400. City owns a hydro and an oil engine plant.

E Crested Butte (Gunnison County).

Municipal plant supplies electric light and power to the city of Crested Butte. Population 1260. The city owns a hydro and a steam plant.

F Crook (Logan County).

Municipal plant supplies electric light and power to the city of Crook. Population 255. City owns an oil engine plant.

G Dacono (Weld County).

Municipality supplies electric light and power to the town of Dacono. Population 275. Electricity is purchased wholesale from the Public Service Company of Colorado.

H Delta (Delta County).

Municipal plant supplies electric light and power to the city of Delta. Population 2950. City owns an oil engine plant.

I Eckley (Yuma County). July 1, 1922

Municipality supplies electric light and power to the town of Eckley. Population 360. Electricity is purchased at wholesale from the Yuma Municipal plant.

J Erie (Weld County). July 1900

Town of Erie Municipal Lighting System supplies electric light and power to the town of Erie. Population 930. Electricity is purchased from the Public Service Company of Colorado at wholesale.

K Flagler (Kit Carson County). 1920

Flagler Municipal Water Works supplies electric light and power to the town of Flagler. Population 540. The city owns an oil engine plant.

L Fleming (Logan County).

Municipality supplies electric light and power to the town of Fleming. Population 365. Town owns an oil engine plant.

M Fort Collins (Larimer County) April 25,1935

Fort Collins Light and Power Department Supplies electric light and power to the city of Fort Collins. Population 11,490. Steam plant was put in service May 1936. Prior to this date the city was supplied with electricity by the Public Service Company of Colorado.

N Fort Morgan(Morgan County). 1906

The City of Fort Morgan supplies electric light and power to the city of Fort Morgan. Population 4,425. City owns a steam plant.

O Fountain (El Paso County). Sept. 1919.

Fountain Municipal System supplies electric light and power to the town of Fountain. Population 580. Electricity is purchased wholesale from the Colorado Springs Municipal plant.

P Frederick (Weld County)

Municipality supplies electric light and power to the town of Frederick. Population 600. All electricity is purchased at wholesale from the Public Service Company of Colorado.

Q Granada (Prowers County). 1923

Municipality supplies electric light and power to the town of Granada. Population 352. All power is purchased from the Lamar Municipal plant at wholesale.

R Grover (Weld County). April 1920

Municipality supplies electric light and power to the town of Grover. Population 165. Electricity is supplied from its municipally owned oil engine plant.

S Gunnison (Gunnison County)

Municipality supplies electric light and power to the city of Gunnison. Population 1,415. City owns a steam plant.

T Haswell (Kiowa County).

Municipality supplies electric light and power to the town of Haswell. Population 157. Town owns an oil engine plant.

U Haxtun (Phillips County). 1918.

Haxtun Municipal Electric Light Plant supplies electric light and power to the city of Haxtun. Population 1027. City owns an oil engine plant.

V Holyoke (Phillips County).

Municipality supplies electric light and power to the city of Holyoke. Population 1,226. City owns an oil engine plant.

W Julesburg (Sedgwick County).

Municipality supplies electric light and power to the city of Julesburg. Population 1,467. City owns an oil engine plant.

X Lamar (Prowers County).

City of Lamar supplies electric light and power to a population of 7,000.

Power and light is supplied to Bristol, Hartman, Hasty, Korman, May Valley, McClave, Millwood, Sugardale and Wiley in addition to the City of Lamar.

Lamar sell wholesale to the Town of Granada Municipal and to the inland Utilities Company for Holly.

City of Lamar owns a steam plant.

Y Longmont (Boulder County). 1911

City of Longmont municipal plant supplies electric light and power to the city of Longmont. Population 6030. City owns an oil engine plant at Longmont and a hydro plant at Lyons.

Z Loveland (Boulder County).

City of Loveland Electrical Department supplies electric light and power to the city of Loveland. Population 5,500. The city owns an oil engine and a hydro plant.

AA Lyons (Boulder County).

Municipality supplies electric light and power to the town of Lyons. Population 570. Town owns an oil engine plant.

BB Meeker (Rio Blanco County) May 1,1922

Municipality supplies electric light and power to the city of Meeker. Population 1,100. City owns a steam and a hydro plant.

CC Oak Creek (Routt County) Jan.1,1932

The town of Oak Creek supplies electric light and power to Oak Creek. Population 1,211. All power is purchased wholesale from the Moffat Coal Company.

DD Walden (Jackson County). Feb.18,1918

Town of Walden supplies electric light and power to town of Walden. Population 285. Town owns an oil engine plant.

EE Wray (Yuma County). 1913

Wray Municipal Light and Power Company supplies electric light and power to the city of Wray. Population 1,785. City owns an oil engine plant.

FF Yuma (Yuma County). 1915

Town of Yuma supplies electric light and power to Yuma. Population 1,360. Town owns an oil engine plant. Town also supplies electricity at wholesale to the town of Eckley.

PUBLIC UTILITY COMPANIES
INDEX OF OWNERSHIP AND TERRITORY SERVED
Explanatory Note

The following list of Public Utility companies include all companies reporting to the Colorado Public Utilities Commission from 1916 to 1936 inclusive.

Towns shown after the company name are, generally speaking, only those towns in which the company owned power plants.

The date following the name of the towns reflects the date of incorporation, or the date that service was first furnished by the company.

Any change of ownership of the utility furnishing electricity is next shown by the name of the succeeding company and the date of its incorporation, or the date service was first rendered in that particular location.

Original Name of Company	Place Served	Service Started	Present Ownership	Date of Merger
Aguilar L.&P.Co.	Aguilar	6-1-08	to Trinidad Elec.T.R.& G.Co.	1928
Akron Elec. L. & P.	Akron	4-1-16	Commonwealth Util.	1927
Arapahoe Elect. L. & P. Co.	Engelwood)	1903	Colo. Central Power	1927
	Littleton)			
Arkansas Valley Elec. Co.	Florence)			
	Rockvale)	1894	So.Colo.Power	1926
Arkansas Valley R.L.& P.Co.	Canon City)			
	Cripple Cr.)			
	La Junta)			
	Ordway)	12-1-11	So. Colo. Power	May 10,1922
	Pueblo)			
	Rocky Ford)			
	Skagway)			
Arriba, Town of	Flagler	8-24-22	Inland Util.	1930
Arvada Electric Company	Arvada	1908	same ownership	1936
Austin Elec. L. Works	Austin	5-1-17	Western Colo. Power	about 1925 ?
Baca City Power Co.	Springfield	1-1-27	Highland Util.	1928
Brighton Ice L.& Power Co.	Brighton	4-22-11	Public Service Co.of Colo.	1925
Broadmoor Elec.L.System	Colo. Springs	1-1-10	Broadmoor Hotel Water & P. Co.	1926
Broadmoor Hotel Water & P.Co.	Colo. Springs	1926	Colo. Springs Munic.	1932
Brush L. & Power Co.	Brush	June 1909	Brush Munic. Light Plant	1921
Brush Munic. Light Plant	Brush	1921	Public Service Co. of Colo.	1926
Buena Vista Elec. L.& P. Co.	Buena Vista	1-1-89	Mountain Util. Corp.	1935
Burlington L.& P. Co.	Burlington	1908	Burlington Munic.	Oct. 1, 1917
Carbondale L.& P. Co.	Carbondale	July 1911	same ownership	1926
Cardiff L.& Power Co.	Cardiff	Dec. 1910	Glenwood L. & W. Co.	1924
Cascade Public Service Co.	Cascade	July 1926	Colo. Springs Munic.	Aug.31,1936
Castle Rock, Town of	Castle Rock	Nov. 1922	Commonwealth Utilities	1928
Cedaredge Elec. L.& P. Co.	Cedaredge	Aug. 1921	Western Colo. Power Co.	1929
Dwight Chapin Jr.	Elbert)			
	Elizabeth)			
	Kiowa)	Nov.1,1931	Mountain Utilities Corp.	1933
	Monument)			
	Palmer Lake			

Original Name of Company	Place Served	Service Started	Present Ownership	Date of Merger
Cheyenne Wells, Town of	Cheyenne Wells	1917	to Inland Utilities	1930
Citizens Light Company	Hot Sulphur Spgs.	Nov.1927	Grand County L.H.&.P.Co.	1932
Colo. Central Power Co.	Golden	1926	same ownership	1936
Colo. Light & Power Co.	Briggsdale	6-14-30	(Plant burned Dec.26,1937)	1936
Colorado Power Co.	Alamosa)			
	Atwood)			
	Boulder)			
	Center)			
	Dillon)			
	Georgetown)			
	Idaho Spgs.)			
	Iliff)	4-1-13	Public Service Co. of Colo.	1924
	La Jara)			
	Leadville)			
	Maysville)			
	Merino)			
	Monte Vista)			
	Salida)			
	Shoshone)			
	Wolfrum)			
Colo. Spgs. Interurban Ry. E. L. D.	Colo. Springs	8-1-25	Colorado Springs Municipal	1927
Colo. Spgs. L.H.& P. Co.	Colorado Spgs.)			
	Manitou)	6-26-10	Colorado Springs Municipal	July 1,1925
	Ruxton Park)			
Colo. Utilities Corp.	McGregor	1926	same ownership	1936
Colo. Yule Marble Co.	Marble	Accommodative to Employees (not for revenue)		
Commonwealth Util.	Akron)			
	Calhan)			
	Castle Rock)			
	Genoa)			
	Limon)			
	Matheson)	1926	Colorado Springs Municipal	1936
	Otis)			
	Peyton)			

Original Name of Company	Place Served	Service Started	Present Ownership	Date of Merger
Commonwealth Util.	Peyton)			
	Platner)			
	Ramah)			
	Sedalia)			
	Simla)			
	Steamboat Spgs.)			
Conejos Coop.Roller Mill & Mfg. Company	Antonito	1906	Public Serv. Co. of Colo.	1924
Cortez L.P. & Milling Co.	Cortez	Oct.1923	Highland Util	1928
Craig L.P. Co.	Craig	Feb.1,1922	Colo. Utilities Corp	1926
Creede, City of	Creede	Dec. 1912	same ownership	1936
Crested Butte L.&.W.Co.	Crested Butte	July 8,1889	same ownership	1936
Crook, City of	Crook	May 9,1923	same ownership	1936
Curtis Elec. Lt.Co.	Granby	July 13,1928		
Custer Water & Power Co.	Westcliff	Sept.15,1915	Custer County & Elec. Co.	Aug,1 1923
Custer County Elec. Co.	Westcliff	Aug.1, 1923	So.Colorado Power Co.	Sept. 1929
Dacona, Town of	Dacona	Oct.1817	same ownership	1936
Deertrail L. & P. Co.	Deertrail)	1922	Inland Utilities Co.	1929
(William, owner)	Byers)			
Del Norte Munic. Elec.Lt.Pl.	Del Norte	1891	Public Service Co. of Colo.	1924
Douglas, Bert A. Elec.Plant	Siebert	1916	Inland Utilities Co.	1929
Eads Elec. Light System	Eads	Oct.9,1920	Highland Utilities	1931
Eagle River Elec. Co.	Eagle)	Mar.25, 1923	same ownership	1936
	Gypsum 22)			
Eckley, Town of	Eckley	July 1, 1922	same ownership	1936
Elec. Light & Power Utility	Ault	1919	Home Gas & Electric Company	1921
Empire Water & Power Co.	Green Mt.Falls	1910	Colorado Springs Municipal	
Erie Municipal Elec. L. Plant	Erie	1900	same ownership	1936
Evergreen Public Service Co.	Evergreen	Sept.17, 1917	Evergreen Public Service	1923

Original Name of Company	Place Served	Service Started	Present Ownership	Date of Merger
Falcon Lead & Milling Co.	Rico		Western Colorado Power Co.	1927
Farmers Elec. & Power Co.	Eaton	Aug.1, 1914	Home Gas & Elec. Co.	1920
Firestone, Town of	Firestone	May 1914	Public Service Co. of Colo.	1934
Flagler Municipal Water Plant	Flagler	1920	same ownership	1936
Fleming, Town of	Fleming	June 9, 1921	same ownership	1936
Ft.Collins Light & Power Co.	Ft. Collins	April 25,1935	same ownership	1936
Ft. Lupton Light & Power Co.	Ft.Lupton	1912	Colo.Central Power Co.	1927
Ft. Lyon Elec. Co.	Ft.Lyon	June 1, 1922	Western Public Service Co.	1930
Ft.Morgan, City of	Ft.Morgan	Sept.1,1906	same ownership	1936
Fountain Munic.Light System	Fountain	Oct. 1919	same ownership	1936
Frederick, Town of	Frederick	1912	same ownership	1936
Garfield Mine Leasing Co.	New Castle	Mar.15,1914	Public Service Co.of Colo.	1924
Gem Elec. Co.	Idaho Spgs.	Sept.1,1916	Colorado Power Company	1919
(Colo.Power Co.)	Idaho Spgs.	1919	Public Service Co. of Colo.	1924
Gilpin County L.H. & P. Co.	Central City Black Hawk	1889	same ownership	1924
Glenwood Light & Water Co.	Glenwood Spgs.	1909	same ownership	1936
Granada, Town of	Granada	1923	same ownership	1936
Grand County L.H. & P.Co.	(Fraser) (Hot Sulphur Spgs.)	Dec.1,1932	same ownership	1936
Grand Junction Elec. Gas & Mfg. Co.	Grand Junction	Feb.17, 1907	same ownership	1926
Grand Lake Light Co.	Grand Lake	June 1, 1935	same ownership	1936
Grand Valley Ry. Co.	Grand Junction Fruita Palisade	Nov. 4, 1911	same ownership	1926

Original Name of Company	Place Served	Service Started	Present Ownership	Date of Merger
Grover, Town of	Grover	Apr. 1920	same ownership	1936
Gunnison, Town of	Gunnison	1906	same ownership	1935
Gunnison Valley Power Co.	Hotchkiss	July 1, 1928	Western Colo. Power Company	1933
Haswell, Town of	Haswell	1925	same ownership	1936
Haxtun Munic. Light Plant	Haxtun	Feb.11, 1918	same ownership	1936
Hayden Light & Power Co.	Hayden	Dec.6, 1916	Hofstetter & Sons	1918
Hayden Milling & Power Co.	Hayden	June 16, 1920	Colo. Utilities Corp.	1926
Highland Utilities Co.	Cortez)	1928	same ownership	1936
	Dolores)			
	Eads)			
	Kit Carson)	1931		
	Springfield)	1928		
Hinsdale Mining & Development Co.	Lake City	1907	(Out of business)	1922
(Reported in 1919 & 1922 as Lake City Power Co.)				
Hofstetter & Sons	Hayden	1918	Hayden Milling & Power Co.	1920
(Hayden M. & P. Co.)	Hayden	1920	Colo. Util. Corp.	1926
Holly, Town of	Holly	June 1, 1908	(1924 to 1929)Inland Util.Co.	1929
Holyoke, Town of	Holyoke	1906	same ownership	1936
Home Gas & Elec. Co.	Greeley	Jan. 21, 1909	same ownership	1936
Home Light & Power Co.	Kremmling	Aug.1, 1928	Kremmling Light & Power Co.	1930
Harshman Elec. Light Plant	Wiggins	Mar. 15, 1926	same ownership	1936
Hotchkiss Packing & Power Co.	Hotchkiss	1907	Hotchkiss Elec. Co.	1923
Hotchkiss Elec. Co.	Hotchkiss	1903	Western Colo. Power Co.	1933
Hugo Munic. Light Plant	Hugo	Nov. 18, 1920	Inland Util. Co.	1929
Inland Util. Co.	Cheyenne Wells)			
	Deertrail)			
	Holly)1929	1929	same ownership	1936
	Hugo)			
	Stratton			
Intermountain Ry.L. & P. Co.	Lamar)	June 1912	Lamar Municipal	1920
	Las Animas)	June 1912	Western Public Service	1922
Jefferson County L.& P. Co.	Golden	Mar. 1, 1915	Colo. Central Power Co.	1927

Original Name of Company	Place Served	Service Started	Present Ownership	Date of Merger
Julesburg, Town of	Julesburg	Aug. 1, 1907	same ownership	1936
Kim L. & P. Co.	Kim.	Mar. 11, 1935	same ownership	1936
Kit Carson L. & P. Co.	Kit Carson	July 7, 1930	Highland Utilities Co.	1931
Kremmling L. & P. Co.	Kremmling	Dec. 1, 1930	same ownership	1936
La Jara Elec. & Creamery Co.	La Jara	June 1912	Public Service Co. of Colo.	1928
Lake City Power Co.	Lake City	(see Hindale Mining & Development Co.)		
Lamar Munic. L. & P. Plant	Lamar	April 20, 1920	same ownership	1936
La Veta L.H. & P. Co.	La Veta	July 4, 1908	same ownership	1936
Lieber, John	Hugo		Hugo Municipal	Nov. 18,1920
Limon, Town of	Limon	Oct. 15, 1917	Commonwealth Util.	1925
Longmont, City of	Longmont) Lyons)	Jan. 1, 1912	same ownership	1936
Loveland, City of	Loveland	Feb. 1925	same ownership	1936
Lyons, Town of	Lyons	Oct. 1, 1916	Longmont Munic.	1924
Meeker Elec. Co.	Meeker	Sept. 1, 1913	Meeker L. & Water Co.	1922
Meeker L. & W. Co.	Meeker	May 1, 1922	same ownership	1936
Montezuma Elec. Co.	Mancos	May 17,1912	Highland Util. Co.	1928
Moore L. & P. Co.	Pagosa Spgs.	Dec. 10, 1909	New Light & Power Co.	1919
Mountain Utilities Corp.	Buena Vista) Elizabeth) Palmer Lake)	July 1933	same ownership	1936
Mutual L.H.& P. Co.	Glenwood Spgs.	Oct.1, 1912	(No date 1916 - 1936)	
Newcastle, Town of	Newcastle	1909	Weller Bros.	Dec. 15,1921
New Light & Power Co.	Pagosa Spgs.	Jan. 29, 1919	same ownership	1936
Oak Creek Service Co.	Oak Creek	July 1912	Colo. Util Corp.	1926
(Colo. Util. Corp.	Oak Creek	1926	Oak Creek Munic.	Jan.1,1932

Original Name of Company	Place Served	Service Started	Present Ownership	Date of Merger
Oliver Power Co.	Oliver	Feb. 3, 1931	Western Colo. Power Co.	1931
Orchard P.L.W.& G. Co.	Orchard	Aug.15, 1931	same ownership	1936
Ordway L. & Power Co.	Ordway	May 3, 1907	Arkansas Val. L. & P. Co.	1919
(Ark. Valley L. & P. Co.)	Ordway	1919	Southern Colorado Power	1922
Otis, Town of, Elec. Co.	Otis	May 1, 1919	Commonwealth Utilities Corp.	1927
Ovid L. & P. Co.	Ovid	Mar. 1, 1921	Public Service Co. of Colo.	1926
Palisade Service Co.	Palisade	July 1, 1911	Grand Valley Railway Co.	1923
Paonia, Town of	Paonia	1906	Western Colo. Power	1930
Peetz, Town of	Peetz	Jan. 1, 1918	Public Service Co. of Colo.	1924
Park Power Co.	Fairplay	1928	Public Service Co. of Colo.	1937
Pine River Power Co.	Bayfield	June 18, 1929	same ownership	1936
Plateau Valley L. & P. Co.	Collbran	Jan. 2, 1932	same ownership	1936
Public Service Co. of Colo.	Alamosa	1924	same ownership	1936
	Boulder Canon	1924		
	Brush	1924		
	Dillon	1924		
	Estes Park	1928		
	Fall River	1929		
	Georgetown	1924		
	Grand Junct.	1926		
	Grand Valley	1932	3500 K W Hydro leased from U.S.B.R.	
	Lafayette	1923		
	Lacombe	1923		
	Leadville	1924	Not operated	
	Pierie	1930	Plant destroyed by fire 1933	
	Rifle	1928		
	Salida	1924		
	Salida *1			
	Salida *2			
	Shoshone	1924		
	Sterling	1924		

Original Name of Company	Place Served	Service Started	Present Ownership	Date of Merger
Public Service Co. of Colo.	Summit (near Dillon)	1928		
	Summit at Dillon	1929	Not operated	
	Valmont	1925		
	West Station Denver	1923	Not operated	
Rifle L.H.P. Co.	Rifle	12-31-09	to Public Service Co. of Colo.	1926
Roaring Fork E.L.& P.Co.	Aspen	5-1-87	Roaring Fork. W.L. & P. Co.	1928
Roaring Fork W.L.& P.Co.	Aspen	1-1-28	same ownership	1936
Robinson, H.H.	Green Mt. Falls	8-27-33	Mountain Utilities Corp.	1934
Rocky Mountain Fuel Co.				
Rocky Mountain Utilities	Hugo)	10-1-29	Inland Utilities Co.	1931
	Siebert)			
Roggen Light Co.	Roggen	2- 1918	Out of business	1925 ?
Rust, A. A.	Dolores	11-1-22	Highland Util. Co.	1928
San Luis Power Co.	San Luis	July 1917	Public Service Co. of Colo.	1928
Schumm Elec. L. & P. Co.	Gypsum	July 1912	Eagle River Elec. Co.	1923
Sedgwick, Town of	Sedgwick	3-1-20	Public Service Co. of Colo.	11- 24-1926
Seibert, Town of	Seibert	12-1-21	Inland Utilities Co.	1929
Silverton Elec. Light Co.	Silverton	10-1-15	same (municipal)	1936
Simla, Town of	Simla	8-20-22	Commonwealth Util. Corp	1927
Southern Colo. Power Co.	Canon City)			
	Cripple Creek)			
(Inc. Colo. 11-14-11 as	La Junta)			
Ark Val. Ry L. & P. Co.	Ordway)	5-10-22	same ownership	1936
name changed as above	Rocky Ford)			
5-10-22)	Skagway)			
	Valley Div.)			
	Victor)			
Springfield Elec. L. Co.	Springfield	8-1-17	Highland Utilities Co.	1928
Stanley Power Co.	Estes Park	1-1-15	Public Service Co. of Colo.	1928

Original Name of Company	Place Served	Service Started	Present Ownership	Date of Merger
Steamboat Service Co.	Steamboat Spgs.	1901	Colo. Utilities Corp.	1926
Strasburg L. & P. Co.	Strasburg	12-26-28	Inland Utilities Co.	1931
Sterling Cons. Elec. Co.	Sterling	1909	Colo. Power Co.	1916
(Colo. Power Co.)		1916	Public Service Co. of Colo.	1923
Stevens Barr Lumber Co. (Private Plant)	Fraser		Grand County L.H. & P. Co.	1932
Suburban L. & P. Co.	Autota	11-1-12	Public Service Co. of Colo.	1926
Shultz, Geo. H.	Elbert	1-1-27	Mountain Utilities Corp.	1936
Summit County Power Co.	Dillon	Dec. 1908	Public Service Co. of Colo.	1928
Syndicate Mine & Mill Co. & Rico Mine L. & P. Co.	Rico	10-25-11	Western Colo. Power Co.	1925 ?
Tonopah Placers Co.	Breckenridge	Dec. 1913	Public Service Co. of Colo.	1926
Trinidad E. Trans. R. & Gas Company	Hastings Trinidad Walsenburg	8-7-11	same ownership	1936
Two Buttes Elec. L. Co.	Two Buttes	1927	Highland Utilities Co.	1930
Walden, Town of	Walden	2-8-18	same ownership	1936
Weller Bros.	New Castle	12-15-21	Public Service Co. of Colo.	1928
Werner, W.J.	Saguache	Feb. 1917	Colo. Power Co.	1922
Western Colo.Power Co.	Ames Cedaredge Delta Durango Ilium Montrose Oliver Paonia Tacoma	4-1-13	same ownership	1936
Western Light & Power Co.	Lafayette	July 1914	Public Service Co. of Colo.	1923

Original Name of Company	Place Served	Service Started	Present Ownership	Date of Merger
Western Light & Power Co.	Boulder			
Western Public Service Co.	Las Animas	July 1912	same ownership	1936
Wray Light & Power Co. (Municipal)	Wary	Jan. 1, 1909	same ownership	1936
United Hydro-Electric Co.	Idaho Spgs. Georgetown	Mar 1, 1906	Colo. Power Co.	1916
Colo. Power Co.		Jan.1, 1916	Public Service Co. of Colo.	1924
Yuma, Town of	Yuma	Dec. 1, 1915	same ownership	1936

COLORADO CITIES AND TOWNS
RECEIVING ELECTRIC SERVICE
January, 1938.

Town or City	Distributing Company	Index to Distributing Company	Purchasing Wholesale from:	Service from:
Ackmen				
Adams City	P.S.Co.of Colo.	26		Central System
Agate				
Aguilar	Trinidad E. & G.Co.	31		System
Akron	Com.Util. Corp.	6		Oil Engine Plant
Alamosa	P.S.Co.of Colo.	26		Steam Plant
Alcreek				
Allison				
Alma	P.S.Co.of Colo.	26		Central System
Altman	S.Colo.P.Co.	30		Mtn.System
Ames	West Colo.Power Co.	32		Hydro Plant
Anaconda				
Animas City	W.Colo.P.Co.	32		System
Animas Forks	W.Colo.P.Co.	32		System
Anthracite				
Antonito	P.S.Co.of Colo.	26		Alamosa System
Arapahoe				
Arickaree				
Arlington				
Aroya				
Arriba	Inland Utilities Co.	15		Stratton System
Arriola				
Arrowhead				
Arvada	Arvada Elec.Co.	1	P.S.Co.Colo.	Central System
Aspen	Roaring Fork W.L.& P.Co.	27		Hydro Plant D.C. & A.C.
Atchee				
Atwell				
Atwood	P.S.Co.of Colo.	26		Sterling System
Ault	Home Gas & E. Co.	14	P.S.Co.Colo.	Central System
Aurora	P.S.Co.of Colo.	26		Central System
Austin	W.Colo.P.Co.	32		
Avondale	S.Colo.P.Co.	30		Pueblo System
Bailey				
Barnsville				
Barr Lake				
Basalt	Frying Pan L.& P.Co		(Franchise only)	
Bayfield	Pine River P.Co.	24		Steam Plant Oil Engine Plant
Bennett	P.S.Co.of Colo.	26		Central System
Bergen Park	Evergreen Pub.Serv.Co.	8		
Berkeley Gardens	P.S.Co.of Colo.	26		
Berthoud	P.S.Co.of Colo.	26		Central System
Berwind	C.F.& I.Co. (Not Pub. Ut.)		Trinidad E.T.R.& G.Co.	System
Bethune	Inland Util.Co.	15		Stratton System
Beulah				
Big Bend	Lamar-Municipal	X		System
Blackhawk	P.S.Co.of Colo.	26		Central System

Town or City	Distributing Company	Index to Distributing Company	Purchasing Wholesale From	Service From
Blanca	P.S.Co.of Colo.	26		Alamosa System
Blende	S.Colo. P.Co.	30		Pueblo System
Bonanza	Municipal	A	P.S.Co.Colo.	Salida System
Boone	S. Colo.P.Co.	30		Pueblo System
Boulder	P.S.Co.of Colo.	26		Central System
* Bowen				
Bowie				
Boyero				
Brandon				
Branson				
Breckenridge	P.S.Co.of Colo.	26		Central System
Brewster	S.Colo.P.Co.	30		Mtn.System
Briggsdale	Colo.L.& P.Co.	4		Oil Engine Plant
Brighton	P.S.Co.of Colo.	26		Central System
Bristol	Lamar Municipal	X		System
Broadacres	S.Colo.P.Co.	30		Pritate line
Broadmoor	Colo.Spgs.Mun.	C	System	
	Broadmoor H.P.& W.Co.			Colo.Spgs.Mun.
Brookforest	Evergreen P.S.Co.	8	Colo.Cent. Power Co.	P.S.Co.of Colo. System
Brookside	S.Colo.P.Co	30		Mtn.System
Broomfield	P.S.Co.of Colo.	26		Central System
Brush	P.S.Co.of Colo.	26		Sterling System Steam Plant
Buckingham				
Buena Vista	Mountain Util.Corp.	20		Hydro & Oil Eng.
Buffalo				
Burlington	Municipal	B		Oil Engine Plant
Byers	Inland Util.Co.	15	P.S.Co.Colo.	Deertrail System
Calcite				
Calhan	Com.Util.Corp	6	Colo.Spgs.Mun.	Colo.Spgs.
Campion	P.S.Co.of Colo.	26		Central System
Canfield	P.S.Co.of Colo.	26		Central System
Canon City	S.Colo.P.Co.	30		Steam Plant Sys.
Capulin				
Carbondale	Carbondale L.& P.Co.	2	P.S.Co.Colo. thru Glenwood L. & W. Co.	Central System
Carbonera				
Cardiff	Glenwood L &.W.Co.	9	P.S.Co.of Colo.	
Carr				
Cascade	Colo.Spgs.Mun.	C		
Castle Rock	Com.Util.Corp.	6	Colo.Cent.Power Co.	
Cedaredge	W.Colo.P.Co.	32		System & Steam
Center	P.S.Co.of Colo.	26		Alamosa System
Central City	P.S.Co.of Colo.	26		Central System
Chama	P.S.Co.of Colo.	26		Alamosa System
Chandler	S.Colo.P.Co.	30		
Cheraw	S.Colo.P.Co.	30		Mtn.System
Cherrelyn	Colo.Cent.P.Co.	3	P.S.Co.Colo.	Central System
Cherry				
Cheyenne Wells	Inland Util.Co.	15		Oil Engine Plant
Clifton	P.S.Co.of Colo.	26		Grand Jct.System

* Abandoned Mining Camp.

Tpwn or City	Distributing Company	Index to Distributing Company	Purchasing Wholesale From	Service From
Climax			P.S.Co.Colo.	
Coal Creek	S.Colo.P.Co.	30		System Mtn.
Coaldale				
Coalmont				
Cokedale				
Collbran	Plateau Val.L.& P.Co.	25		Diesel Plant
Colona				
Colorado Spgs.	Municipal	C		Steam & Hydro Plants
Como				
Concrete	S.Colo.P,Co.	30		
Conejos	P.S.Co.of Colo.	26		Alamosa System
Cope				
Cornish				
Corona				
Cortez	Highland Util.Co.	13	W.Colo.P.Co.	
Craig	Colo Util.Corp.	5		System
Crawford	W.Colo.P.Co.	32		System
Creede	Municipal	D		Oil & Hydro Plants
Crested Butte	Municipal	E.		Hydro & Steam Plants
Crestone				
Cripple Creek	S.Colo.P,Co.	30		Mtn.System
Crisman	P.S.Co.of Colo.	26		
Crook	Municipal	F		Oil Engine Plants
Crowley	S.Colo.P.Co.	30		System (Val.)
Dacona	Municipal	G	P.S.Co.Colo.	Central System
Dailey				
De Beque	P.S.Co,of Colo.	26		Central System
Deckers				
Deertrail	Inland Util.Co.	15	P.S.Co.Colo.	
Dalagua	Victor Amer.Fuel Co. (Not Pub. Util.)		Trinidad E.T.R & G. Co.	System
Del Norte	P.S.Co,of Colo.	26		Alamosa System
Delta	Municipal	H		Oil Engine Plant
Denver	P.S.Co.of Colo.	26		2 Steam Plants & Central System
Denver Surb.	P.S.Co.of Colo.	26		Central System
Derby	P.S.Co.of Colo.	26		Central System
Devine	S.Colo.P.Co.	30		Pueblo System
Dillon	P.S.Co.of Colo.	26		Hydro Plant & Central System
Divide				
Dolores	Highland Util.Co.	13	W.Colo.P.Co.	Mesa Verde System
Doyle or Doyleville				
Drennan				
Dumont	P.S.Co.of Colo.	26		Central System
Dunton				
Dupont	P.S.Co.of Colo.	26		Central System
Durango	W.Colo. P.Co.	32		Steam Plant & System
Eads	Highland Util. Co.	13		Oil Engine Plant

Town or City	Distributing Company	Index to Distributing Company	Purchasing Wholesale From	Service From
Eagle	Eagle River E.Co.	7		Oil Plant System
East Canon	S.Colo.P.	30		Mtn.System
East Lake	P.S.Co.of Colo.	26		Central System
Eastonville				
Eaton	Home G.& E.Co.	14	P.S.Co.Colo.	Central System
Eckley	Municipal	I	Yuma Municipal	
Eckert	W.Colo.P.Co.	32		
Edgewater	P.S.Co.of Colo.	26		Central System
Elbert	Mtn.Util.Corp.	20		Elizabeth Plant
Eldora				
Eldorado Spgs.	P.S.Co.of Colo.	26		Central System
Elizabeth	Mountain Util.Corp.	20		Oil Plant
Elkton	S.Colo.P.Co	30		Mtn.System
El Moro				
Empire	P.S.Co.of Colo.	26		Central System
Englewood	Colo.Cent.P.Co.	3	P.S.Co.Colo.	Central System
Erie	Municipal	J	P.S.Co.Colo.	Central System
Estes Park	P.S.Co.of Colo.	26		Hydro Plant & Oil Plant
Eureka	W.Colo.P.Co	32		System
Evans	Home G. &.E.Co.	14	P.S.Co.Colo.	Central System
Evans Mine				
Evergreen	Evergreen P.S.Co.	8	Colo.Cent.P. Co.	P.S.Co.of Colo. Central System
Eversman	P.S.Co.of Colo.	26		Central System
Falcon				
Fairplay	P.S.Co.of Colo.	26		Central System
Farmers Spur	Home G. & E.Co.	14	P.S.Co.Colo.	Central System
Fallriver				Hydro Plant P.S.Co.
Firestone	P.S.Co.of Colo.	26		Central System
First View				
Fitzsimmons	U.S.Government	(Not Pub.Util.)	P.S.Co.Colo.	
Flagler	Municipal	K		Oil Engine Plant
Fleming	Municipal	L		Oil Engine Plant
Florence	S.Colo.P.Co.	30		Mtn.System
Florissant				
Fondis				
Fort Collins	Municipal	M		Steam Plant
Fort Collins	P.S.Co.of Colo.	26	Colo Portland Cement Co.	Boettcher Plant
Fort Garland	P.S.Co.of Colo.	26		Alamosa System
Fort Logan	U.S.Government	(Not Pub.Util)	Colo.Cent. P. Co.	P.S.Co.of Colo. Central System
Fort Lupton	Colo.Cent.P.Co.	3	P.S.Co.Colo.	Central System
Fort Lyon	W.P.S.Co.	33		Plant & System
Fort Morgan	Municipal	N		Steam Plant

Town or City	Distributing Company	Index to Distributing Company	Purchasing Wholesale From	Service From
Fountain	Municipal	O	Colo.Sprgs. Muni.	
Fountain Valley School 3 Mi. N.				
Fowler	So. Colo. P. Co.	30		System (Val.)
Franktown				
Fraser	Grand Co. LH&P.Co.	10		Plant
Frederick	Municipal	P	P.S.Co.of Colo.	Central System
Frisco				
Fruita	P.S.Co. of Colo.	26		Grd. Jct. System
Fruitmere	So.Colo.P. Co.	30		Mtn. System
Galeton	Home G. & E. Co.	14	P.S.Co.of Colo.	Central System
Garden City	Home G. & E. Co.	14	P.S.Co.of Colo.	Central System
Gardner				
Garfield	P.S.Co. of Colo.	26		Salida System
Genoa	Com. Util. Corp.	6	Colo.Sprgs.Muni.	System
Georgetown	P.S. Co.of Colo.	26		Central System Hydro Plant
Gilcrest	Home G. & E. Co.	14	P.S. Co.of Colo.	Central System
Gill	Home G. & E. Co.	14	P.S. Co. of Colo.	Central System
Gillette	So. Colo. P. Co.	30		System
Gilman	P.S.Co.of Colo.	26		Central System
Gladstone	W.Colo. P. Co.	32		System
Glenwood Springs	Glenwood L&W. Co.	9	P.S. Co.of Colo. (in part)	G.L.&W. CO. Hydro-Plt.&PS Co. Central System
Golden	Colo. Cent. P. Co.	3	P.S. Co. of Colo.	Central System
Goldfield	So. Colo. P. Co.	30		Mtn. System
Gold Hill	P.S. Co. of Colo.	26		Central System
Granada	Municipal	Q	Lamar Muni.	System
Granby				
Grand Jct.	P.S. Co. of Colo.	26	Redlands Power & Irrig. Co.	Steam Plant & P.S.Co. of Colo.
Grand Lake	Grand Lake Light Co.	11		Oil Plant
Grand Valley	P.S. Co. of Colo.	26		Central System Hydro Plant
Great Divide				
Greeley	Home G. & E. Co.	14	P.S.Co. of Colo.	Central System
Greenland	Mountain Util. Corp.	20	Colo.Sprgs. Muni.	System
Green Mtn. Falls	Colo. Sprgs. Municipal	C R		System
Grover	Municipal	R		
Guffey				
Gunnison	Municipal	S		Steam Plant
Gypsum	Eagle River Elec. Co.	7		2 Hydro Plants
Happyville				
Hartman	Lamar Municipal	X		System

Town or City	Distributing Company	Index to Distributing Company	Purchasing Wholesale From	Service From
Hastings	Victor-American F.Co.(Not P.Util)		Trinidad E.T.R.& G.Co.	System
Hasty	Lamar Municipal	X		System
Haswell	Municipal	T		Oil Eng.Plant
Haxtun	Municipal	U		Oil Eng.Plant
Hayden	Colo.Util.Corp.	5		System
Hazeltine	P.S. Co. of Colo.	26		Central System
Henderson	P.S. Co. of Colo.	26		Central System
Hereford				
Hesperus				
Hillrose	P.S. Co. of Colo.	26		Sterling System
Hill Top				
Hoehne	Trinidad ETR&G.Co.	31		System
Holbrook	So. Colo. P. Co.	30		Valley System
Hollandville				
Holly	Inland Util. Corp.	15		Deisel Plant
Holyoke	Municipal	V		Oil Eng. Plant
Hooper	P.S. Co. of Colo.	26		Alamosa System
Hotchkiss	W.Colo.P.Co.	32		System
Hot Sulphur Springs	Grand Co. L.H. & P. Co.	10		Oil Eng. Plant
Howard				
Hudson	Colo. Cent. P. Co.	3		Central System
Hugo	Inland Util.Corp.	15		Oil Eng. Plant
Hygiene				
Idaho Springs	P.S. Co. of Colo.	26		Central System
Idalia				
Ideal				
Ignacio	Pine River P. Co.	24		System
Iliff	P.S. Co. of Colo.	26		Sterling System
Illium	Western Colo. P. Co.	32		Hydro Plant
Independence	So. Colo. P. Co.	30		Mtn. System
Indian Hills	Colo. Cent. P. Co.	3	P.S.Co. of Colo.	Central System
Irondale	P.S. Co.of Colo.	26		System
Ivywild	Colo. Springs Muni.	C		System
Jamestown				
Jansen	Trinidad ETR&G Co.	31		System
Jaroso				
Joes				
Johnstown	Colo. Cent. P. Co.	3	P.S. Co. of Colo.	Central System
Julesburg	Municipal	W		Steam Plant
Keenesburg	Colo. Cent. P. Co.	3	P.S. Co. of Colo.	Central System
Keota				
Kersey	Home G. & E. Co.	14	P.S. Co. of Colo.	Central System
Kim	Kim Light Co.	16		

Town or City	Distributing Company	Index to Distributing Company	Purchasing Wholesale From	Service From
King Center	So. Colo. P. Co.	30		Valley System
Kiowa	Mountain Util. Corp.	20		System
Kit Carson				
Kittredge	Evergreen P.S. Co.	8	Colo.Cent. Power Co.	Pub.Serv. Co. of Colo. Cent. System
Kline				
Kokomo	P.S. Co. of Colo.	26		
Korman	Lamar Municipal	X		System
Kremmling	Kremmling L. & P. Co.	17		Oil Engine Plant
Lafayette	P.S Co. of Colo.	26		Central System Steam Plant
Laird				
La Jara	P.S. Co. of Colo.	26		Alamosa System
La Junta	So. Colo. P. Co.	30		System (Val.)
Lake City				
Lakeside	P.S. Co. of Colo.	26		Central System
Lakewood	P.S. Co. of Colo.	26		Central System
Lamar	Municipal	X		Steam Plant
La Porte	P. S. Co. of Colo.	26		Central System
Larkspur	Mountain Util. Corp.	20	Colo.Sprgs. Municipal	
La Salle	Home G. & E. Co.	14	P.S. Co. of Colo.	Cent. System
Las Animas	Western P.S. Co.	33	So. Colo. P. Co.	System Diesel Eng. Plant
La Veta	La Veta L.H.& P. Co.	18	Trinidad E.T.R. & G. Co.	System
Lawson	P.S. Co. of Colo.	26		Central System
Leadville	P.S. Co. of Colo.	26		Steam Plant & System
Lebanon				
Lewis				
Limon	Com. Util. Corp.	6	Colo.Sprgs. Municipal	System - Standby Plant
Lincoln Park	So. Colo. P. Co.	30		Mtn. System
Littleton	Colo. Cent. P. Co.	3	P.S. Co. of Colorado	Central System
Livermore				
Loma				
Longmont	Municipal	Y	P.S. Co. of Colorado (Standby Serv.)	Muni. Hydro Plt. & P.S. Co. Cent. System
Longmont Subr.	P.S. Co. of Colo.	26		
Lookout Mtn.	Colo.Cent. P. Co.	3		System
Louisville	P.S. Co. of Colo.	26		Central System
Louviers	DuPont E.I.deNemours (Not Pub. Util)			
Loveland	Municipal	Z		Hydro Plant & Oil Plant
Loveland Subr.	P.S. Co. of Colo.	26		Central System
Lucerne	Home G. & E. Co.	14	P.S.Co.of Colo.	Central System
Lyons	Municipal	AA		Oil Engine Plant
Mack				
Malta	P.S.Co. of Colo.	26		

Town or City	Distributing Company	Index to Distributing Company	Purchasing Wholesale From	Service From
Maitland	Victor Amer.F.Co. (Not Pub. Util.)		Trinidad ETR&G Co.	System
Manassa	P.S.Co. of Colo.	26		Alamosa System
Mancos	Highland Util. Co.	13	W.Colo.P.Co.	Mesa Verde System
Manitou	Colo.Sprgs. Muni.	C		System
Manzanola	So. Colo. P. Co.	30		System (Val.)
Marble				
Marshall	P.S.Co. of Colo.	26		Central System
Marshdale	Evergreen P.S. Co.	8	P.S.Co. of Colo.	
Marvel				
Matheson	Com.Util.Corp.	6	Colo.Sprgs.Muni.	System
Maybell				
Maysville	P.S.Co. of Colo.	26		Salida System
May Valley	Lamar Municipal	X		System
McClave	Lamar Municipal	X		System
McCoy				
McPhee				
McGregor	Colo. Util. Corp.	5		Steam Plant
Mead	P.S.Co. of Colo.	26		Central System
Meeker	Municipal	BB		Steam & Hydro Plant
Mennonite	So. Colo. P. Co.	30		System (Val)
Merino	P.S. Co. of Colo.	26		Sterling System
Mesa	Plateau Val.Lt. Co.	25		System
Milliken	Colo. Cent. P. Co.	3	P.S.Co.of Colo.	Central System
Millwood	Lamar Municipal	X		System
Minnequa Hts.	So. Colo. P. Co.	30		Pueblo System
Minturn	P.S.Co. of Colo.	26		Central System
Model				
Moffat	P.S.Co. of Colo.	26		Alamosa System
Mogote				
Molina	Plateau Val.L.& P. Co.	25		System
Monarch	P.S.Co.of Colo.	26		Salida System
Monte Vista	P.S. Co. of Colo.	26		Alamosa System
Montezuma	P.S. Co. of Colo.	26		Central System
Montrose	W. Colo. P. Co.	32		System & Steam Plant
Monument	Mountain Util. Corp.	20	Colo.Sprgs.Muni.	System
Morley				
Morrison	Colo. Cent. P.Co.	3	P.S.Co. of Colo.	Central System
Mosca	P.S. Co. of Colo.	26		Alamosa System
Mount Air	P.S. Co. of Colo.	26		
Mt. Harris				
Mountain View	P.S.Co.of Colo.	26		Central System
Naturita				
Nederland	P.S. Co. of Colo.	26		Central System
Nepesta	So. Colo. P. Co.	30		Pueblo System
Nevadaville	P.S. Co. of Colo.	26		Central System
New Castle	P.S. Co.of Colo.	26		Central System
Newdale	S. Colo. P. Co.	30		System
Niwot	P.S. Co. of Colo.	26		Central System
N. Avondale	So. Colo. P. Co.	30		Pueblo System
N. La Junta	So. Colo. P. Co.	30		Valley System
N. Longmont	P.S. Co. of Colo.	26		Central System

Town or City	Distributing Company	Index to Distributing Company	Purchasing Wholesale From.	Service From
Norwood	Montezuma Lt.&P. Co.	19		Oil Engine Plant
Nucla				
Numa	So. Colo. P. Co.	30		Valley System
Nunn	Home G. & E. Co.	14	P.S. Co. of Colo.	Central System
Nyberg	So. Colo. P. Co.	30		Pueblo System
Oak Creek	Municipal	CC	Moffat Coal Co.	Steam Plant
Oak Creek Subr.	Colo. Util. Corp.	5		
Oakview				
Olathe	W. Colo. P. Co.	32		System
Oliver	W. Colo. P. Co.	32		Steam Plant
Olney Springs	So. Colo. P. Co.	30		Valley System
Olinger Gardens	P.S. Co. of Colo.	26		Central System
Omer				
Ophir				
Orchard	Orchard P.L.W.&G. Co.	22		Diesel Engine
Orchard City	W. Colo. P. Co.	32		System
Ordway	So. Colo. P. Co.	30		Valley System
Otis	Com. Util. Corp.	6		Akron System
Ouray	W. Colo. P. Co.	32		Hydro Plant & System
Ovid	P.S. Co. of Colo.	26	W.P.S.Co., Big Sprgs. Nebr	Nebr. System
Padroni	P.S. Co. of Colo.	26		Sterling System
Pagosa Springs	New L. & P. Co.	21		Steam Plant - & 1 Hydro.
Palisade	P.S. Co. of Colo.	26		Grd. Jct. System
Palmer Lake	Mountain Util. Corp.	20	Colo.Sprgs.Muni.	System
Paoli				
Paonia	W. Colo. P. Co.	32		Steam Plant
Paradox				
Parker				
Parshall				
Peckham	Home G. & E. Co.	14	P.S.Co. of Colo.	Central System
Peetz	P.S. Co. of Colo.	26		Sterling System
Penrose	S. Colo. P. Co.	30		Mtn. System
Petersburg	Colo. Cent. Power Co.	3	P.S.Co. of Colo.	System
Peyton	Com. Util. Corp.	6	Colo.Sprgs. Muni.	System
Phippsburg	Colo. Util. Corp.	5		System
Piedmont	Trinidad E.T.R.&Co.	31		System
Pierce	Home G. & E. Co.	14	P.S. Co. of Colo.	Central System
Pine				
Pine Drive				
Pitkin				
Placerville				
Plateau City	Plateau Val. L. & P.	25		System
Platner	Com. Util. Corp.	6		Akron System
Platteville	Colo. Cent. P. Co.	3	P.S. Co. of Colo.	Central System
Poncha Springs	P.S. Co. of Colo.	26		Salida System
Portland	Colo. Portland Cement Co. (not Pub. Util)			
Powerhorn				
Pritchett	Highland Util. Co.	13		Springfield
Primero	C.F.& I. Co. (Not Pub. Util.)		Trinidad E.T.R. & G. Co.	System

Town or City	Distributing Company	Index to Distributing Company	Purchasing Wholesale From	Service From
Skaguay	So. Colo. P. Co.	30		Hydro Plant
Smuggler				
Snyder	P.S.Co. of Colo.	26		Sterling System
Somerset	Calumet Fuel Co.		W.Colo.P.Co.	Steam Plant
Sopris	Trinidad Elec. TR&G Co.	31		System
th Canon	So. Colo. P. Co.	30		Mtn. System
Spiecer				
Springfield	Highland Util. Co.	13		Oil Engine Plant
Starbuck	Colo. Cent. P. Co.	3	P.S. Co. of Colo.	Central System
Starkville	Trinidad E.T.R.& G. Co.	31		System
Steamboat Springs	Colo. Util. Corp.	5		System
St. Elmo				
Sterling	P.S. Co. of Colo.	26		Stm. & Oil Plant
Stone City	So. Colo. P. Co.	30		
Stoneham	P.S. Co. of Colo.	26		Sterling System
Strasburg	Inland Util. Co.	15	P.S. Co. of Colo.	Deertrail System
Stratton	Inland Util. Co.	15		Oil Engine Plant
St. Vrain				Central System
Sugar City	S. Colo. P. Co.	30		System
Sugardale	Lamar Municipal	X		System
Sullivan				
Summitville			P.S. Co. of Colo.	
Superior	P.S. Co. of Colo.	26		Central System
Swink	So. Colo. P. Co.	30		Valley System
Tabernash	Grand County LH&P Co.	10	P.S. Co. of Colo.	System
Tacoma	W. Colo. P. Co.	32		Hydro Plant
Telluride	W. Colo. P. Co.	32		System
Timnath	P.S. Co. of Colo.	26		Central System
Tiny Town	Colo. Cent. Power Co.	3	P.S. Co. of Colo.	Central System
Tobe				
Tolland				
Toll Gate				
Tomichi				
Towaoc				
Towner				
Trinchera				
Trinidad	Trinidad E.T.R.& G. Co.	31		Steam Plt.& System
Troutdale	Evergreen P.S. Co.	8	Colo. Cent. P.Co.	P.S. Co. of Colo. Central System
Tungsten	P.S. Co. of Colo.	26		Central System
Two Buttes	Highland Util. Co.	13		
Valdex	Trinidad E.T.R.& G. Co.	31		
Valmont	P.S. Co. of Colo.	26		Central System
				Steam Plant
Van-Der-Koo				System
Vasquez	Grand Co. L.H.&P.Co.	10		
Victor	So. Colo. P. Co.	30		Mtn. System
Vilas	Highland Util. Co.	13		Springfield System
Vineland	So. Colo. P. Co.	30		
Vona	Inland Util. Co.	15		System
Vroman	So. Colo. P. Co.	30		Valley System

Town or City	Distributing Company	Index to Distributing Company	Purchasing Wholesale From	Service From
Prospect Heights	So. Colo. P. Co. ,	30		Mtn. System
Pueblo	So. Colo. P. Co.	30		Steam Plant & System
Puritan	P.S. Co. of Colo.	26		Central System
Ramah	Com. Util. Corp.	6	Colo.Spgs.Mun.	System
Ramona				
Rand				
Raymer	P.S. Co. of Colo.	26		Sterling System
Recen				
Red Cliff	P.S. Co. of Colo.	26		Central System
Richfield	P.S. Co. of Colo.	26		
Rico	W. Colo. P. Co.	32		System
Ridgway	W. Colo. P. Co.	32		System
Rifle	P.S. Co. of Colo.	26		Central System Hydro Plant
Rinn	P.S. Co. of Colo.	26		Central System
Roberta	S. Colo. P. Co.	30		Valley System
Rockvale	S. Colo. P. Co.	30		Mtn. System
Rocky Ford	S. Colo. P. Co.	30		Valley System
Roggen				
Rollinsville	P.S. Co. of Colo.	26		Central System
Romeo	P.S. Co. of Colo.	26		Alamosa System
Roswell	Colo.Sprgs. Muni.	C		System
Rouse				
Rugby				
Rush				
Russel Gulch	P.S. Co. of Colo.	26		Central System
Rye				
Saguache	P.S. Co. of Colo.	26		Alamosa System
Salem				
Salida	P.S. Co. of Colo.	26		1 Steam Plant, 2 Hydro Plants
San Acacio				
Sanford	P.S. Co. of Colo.	26		Alamosa System
San Luis	P.S. Co. of Colo.	26		Alamosa System
San Pablo	P.S. Co. of Colo.	26		Alamosa System
San Pedro				Alamosa System
Sargent	P.S. Co. of Colo.	26		
Sawpit				
Sedalia	Com. Util. Corp.	6	Colo.Cent.P.Co.	Castle Rock System
Sedgwick	P.S. Co. of Colo.	26		System
Segundo	Trinidad E.T.R. & G. Co.	31		System
Seibert	Inland Util. Co.	15		Stratton System
Severance	P.S.Co. of Colo.	26		Central System
Shahan				
Sheridan	Colo. Cent. P. Co.	3	P.S.Co. of Colo.	Central System
Shoshone	P.S. Co. of Colo.	26		Hydro Plant
Siloam				
Silt	P.S. Co. of Colo.	26		Central System
Silver Cliff	So. Colo. P. Co.	30		System
Silver Plume	P.S. Co. of Colo.	26		Central System
Silverton	Silverton E.L.Co.	29	W.Colo. P. Co.	System
Simla	Com. Util. Corp.	6	Colo.Spgs.Muni.	System

Town or City	Distributing Company	Index to Distributing Company	Purchasing Wholesale From	Service From
Walden	Municipal	DD		
Walsen	C.F. & I. Co. (Not Pub.Util.)		Trinidad E.T.R. & G. Co.	Steam Plant & System
Walsenburg	Trinidad E.T.R.& G. Co.	31		System
Walsh	Highland Util. Co.	13		Springfield System
Ward				
Watkins	P.S. Co. of Colo.	26		Central System
Waverly				
Welby	P.S. Co. of Colo.	26		Central System
Weldona	P.S. Co. of Colo.	26		Sterling System
Wellington	P.S. of Colo.	26		Central System
Westcliffe	So. Colo. P. Co.	30		Mtn. System
West Farm	So. Colo. P. Co.	30		Valley System
Westminster	Arvada Electric Co.	1	P.S. Co. of Colo.	Central System
Weston				
Wetmore				
Wheatridge	P.S. Co. of Colo.	26		Central System
White Rock				
Whitewater				
Wiggins	Seth Harshman	12		Oil Engine Plant
Wild Horse				
Wiley	Lamar Municipal	X		System
Willard	P.S. Co. of Colo.	26		Sterling System
Williamsburg	So. Colo. P. Co.	30		Mtn. System
Williams Fork				
Wilson	So. Colo. P. Co.	30	Over private line	Pueblo System
Windsor	P.S. Co. of Colo.	26		Central System
Wolhurst	Colo. Cent. Power Co.	3		
Woodland Pk.	Mtn. Util. Corp.	20	Colo. Sprgs.Muni.	System
Woodrow				
Wray	Municipal	EE		Oil Engine Plant
Yampa	Colo. Util.Corp.	5		System
Yuma	Municipal	FF		Oil Engine Plant

ELECTRIC GENERATION

Generation of electric energy in Colorado is carried on by Privately Owned Utilities Corporations and Municipally Owned Electric Utilities. Considerable information on the early operation of these plants was accumulated from various sources, but much of it had to be discarded because it was unreliable. While the large Private Utilities Corporations have at all time kept records, it was not until the last 20 years that plant and operating records were such that data could be assembled into presentable form, consequently this survey is generally pertinent to the years 1919 through 1936.

As stated in a previous chapter, four large Private Electric Utilities Corporations supply about 90 percent of the demand within the state, the remaining 10 percent being supplied by the Municipal and small Private Utilities. In January 1938 there were 90 plants in the state, 67 owned by Private Utilities Corporations and 23 Municipally Owned. Of these 90 plants nine employ two types of prime mover and consequently have dual installations. These dual installations by River Basins are as follows:

South Platte	4	San Juan	2
Arkansas	1	White & Yampa	1
Rio Grande	1		

The following table indicates the installed kilowatt capacity of all Privately and Municipally Owned Electric Utilities, by River Basins as of January 1, 1938:

INSTALLED KILOWATT CAPACITY OF PRIVATELY AND MUNICIPALLY OWNED GENERATING PLANTS JANUARY 1, 1938.

	No. of Plants			Capacity - Kilowatts			
River Basin	S.	H.	I.C.	Steam	Hydro	Int. Comb.	Total
EASTERN SLOPE							
South Platte	9	6	13	115700	24080	6422	146202
Republican	-	-	9	-	-	3838	3838
Arkansas	8	6	9	55881	7660	2056	65597
Rio Grande	1	1	1	2750	30	75	2855
TOTAL	18	13	32	174331	31770	12391	218492
Percent				79.8	14.5	5.7	100.0
WESTERN SLOPE							
San Juan	3	2	1	1050	4650	225	5925
Dolores	-	2	1	-	4800	100	4900
Gunnison	5	3	1	2196	910	978	4084
Colorado	1	9	5	2500	23537	566	26603
White & Yampa	2	1	-	3125	125	-	3250
TOTAL	11	17	8	8871	34022	1869	44762
Percent				19.8	76.0	4.2	100.0
STATE TOTAL	29	30	40	183202	65792	14260	263254
Percent				69.6	25.0	5.4	100.0

An inspection of the preceding table will show that of the total installed capacity of the plants 69.6 percent is steam operated as against 25.0 25.0 hydro and 5.4 operated by internal combustion engines, however a comparison of the eastern with the western side of the Divide discloses two entirely different installation set-ups so far as prime movers are concerned.

On the Eastern Slope 79.8 percent of the installed capacity is steam operated as against 14.5 percent hydro, while on the Western Slope only 19.8 percent is steam operated and 76.0 percent hydro.

Of the two rivers, namely the South Platte and the Colorado, showing the largest hydro development it should be noted that the Boulder Canon plant on the South Platte accounts for 20,000 kw. out of the 24,080 kw. indicated, and on the Colorado the Shoshone plant accounts for 14,400 kw. out of the 23,537 kw. installed capacity. These two plants are the largest hydro plants now operating within the state and both are owned by the Public Service Company of Colorado.

An indication of the status of the electric light and power industry in Colorado is shown in the comparison of the figures for installed kilowatt capacity per capita for the years 1920 and 1930:

Year	Population	Inst. Cap., Kilowatt	Inst. Cap., Kw. Per Capita
1920	939629	97300	0.103
1930	1035791	214300	0.207

During these years an increase of slightly more than 100 percent is shown.

Next is presented tables of ownership, location and installed capacity of both Municipally Owned and Private Utilities Plants. The type and horsepower of the prime movers, rating of the generators and total plant capacity is indicated. In the case of a few of the smaller plants the rating data of the units appear to be out of line; these plants however are never operated to capacity and insofar as this study is concerned these errata are considered negligible. A few of the larger plants are:

Name of Plant	Type of Prime Mover	Inst. Cap., Kw.
Valmont	S	70000
Boulder	H	20000
Lacombe	S	15900
Shoshone	H	14400
Pueblo	S	11468
Canon City	S	11288
Colorado Springs	S	10000
Walsenburg	S	9000

PRIVATE ELECTRIC UTILITIES

The following table shows the energy generated in kw.h. by all the Private Utilities Companies during the years 1919 through 1936, by steam, hydro or internal combustion plants. Inasmuch as over 97 percent of the energy was generated by seven companies, these companies were grouped together as Large Private Utilities Companies, and the smaller companies were regarded as Other Private Utilities Companies. The large companies are:

- Public Service Company of Colorado
- Colorado Power Company
- Western Colorado Power Company
- Arkansas Valley Railway Lt. & Power Co.
- Southern Colorado Power Company
- Trinidad Electric T.R. & G. Co.
- Western Light & Power Company

The Public Service Company of Colorado which commenced business in 1923 absorbed the Colorado Power Company the same year, and in a like manner the Southern Colorado Power Company, which started business in 1922, took over the Arkansas Valley Railway Light & Power Company in that year.

During the Public Service Company merger in 1923, complete records were not available; figures for that year were estimated.

NET KILOWATT-HOURS GENERATED
By
ALL PRIVATE UTILITIES COMPANIES
1919 Through 1936

LARGE PRIVATE SYSTEMS

	PRIME MOVER			
Year	Steam	Hydro	I.C.	Total Kw.H. Generated
1919	101026758	159503684	- -	260530442
1920	140260501	142480590	- -	282741091
1921	137152336	113787124	- -	250939460
1922	121908089	146784526	- -	268692615
1923	212936212	165311278	- -	378247490
1924	219161466	172303074	- -	391464540
1925	265081855	170222625	- -	435304480
1926	277396690	185662153	- -	463058483
1927	264982959	197663889	- -	462646848
1928	263602145	197830285	- -	461432430
1929	279834517	204155175	- -	483989692
1930	281438489	217372299	- -	498810788
1931	215026606	230112502	104020	445243128
1932	236111301	162084419	5220820	403416540
1933	234001900	161440245	5817430	401259575
1934	272593069	156829387	4982620	434405076
1935	294691301	178464030	2248440	475403771
1936	364478323	195525224	7849370	567852917
Total	4181684517	3157532509	26222700	7365439726
Other Private Systems	124021561	27199084	65277836	216498481
Total All Private Systems	4305706078	3184731593	91500536	7581938207
Percent Generated	56.8	42.0	1.2	100.0

An inspection of the above table indicates that the internal combustion type of prime mover came into use during the year 1931. The small private utilities companies used this type of plant extensively. The only internal combustion installations made by the large private utilities companies consist of two small units in Estes Park and one 2,250 kw. unit in Sterling, both owned by Public Service Company of Colorado.

The percentage of energy generated by steam as against hydro plants varied somewhat through the years, being governed largely by the availability of water for hydro-electric use. During the 18 year period 56.8 percent was generated by steam plants, 42.0 percent by hydro and 1.2 percent by I.C. plants.

MUNICIPAL UTILITIES

The following table covering Municipally Owned Utilities is treated in the same general way as was the Private Utilities Companies table insofar as large and small plants are concerned, the procedure being to take the six largest plants generating about 94 percent of the energy and group them together; then to class the remainder as Other Municipally Owned Plants. The large plants are:

Colorado Springs Light Heat & Power Dept.
City of Fort Morgan
City of Longmont
City of Lamar
City of Loveland
Fort Collins Light & Power Dept.

In the absence of absolute figures regarding the Colorado Springs Light Heat and Power Dept. for the years 1919, 1923 and 1924, estimates were made based on information believed to be most reliable.

NET KILOWATT-HOURS GENERATED
By
ALL MUNICIPALLY OWNED UTILITIES
1919 Through 1936

LARGE MUNICIPAL SYSTEMS

	PRIME MOVER			
Year	Steam	Hydro	I.C.	Total Kw.H. Generated
1919	8428228	12122702	- -	20550930
1920	8103960	13130000	- -	21233960
1921	14054490	9369660	- -	23424150
1922	14870310	9913540	- -	24783850
1923	12494424	12759464	- -	25253888
1924	13737230	11481305	- -	25218535
1925	14086594	11536088	- -	25622682
1926	15597949	11866701	- -	27464650
1927	14996602	14309371	- -	29305973
1928	18671540	15364840	- -	34036380
1929	21264650	18475010	31197	39770857
1930	23145304	19279933	- -	42425237
1931	24672800	.18280220	- -	42953020
1932	19926193	20946510	- -	40872703
1933	19272900	18173410	1585200	39031510
1934	19694300	19974270	1921083	41589653
1935	24668890	15518480	2190500	42377870
1936	26823450	21646580	2627400	51097430
Total	314509814	274148084	8355380	597013278
Other Municipal Systems	20929673	2915474	11607591	35452738
Total All Municipal Systems	335439487	277063558	19962971	632466016
Percent Generated	53.0	43.8	3.2	100.0

An inspection of the table indicates that internal combustion engines as prime movers were used as early as 1929, and again the small plants used them most extensively; Longmont and Loveland being the only users in the large municipal group.

The percentage of energy generated by the steam as against the hydro plants varied somewhat through the years, influenced again by the availability of water for hydro-electric use. During the 18 year period 53.0 percent was generated by the steam plants, 43.8 percent by hydro and 3.2 by I.C. plants.

S U M M A R Y

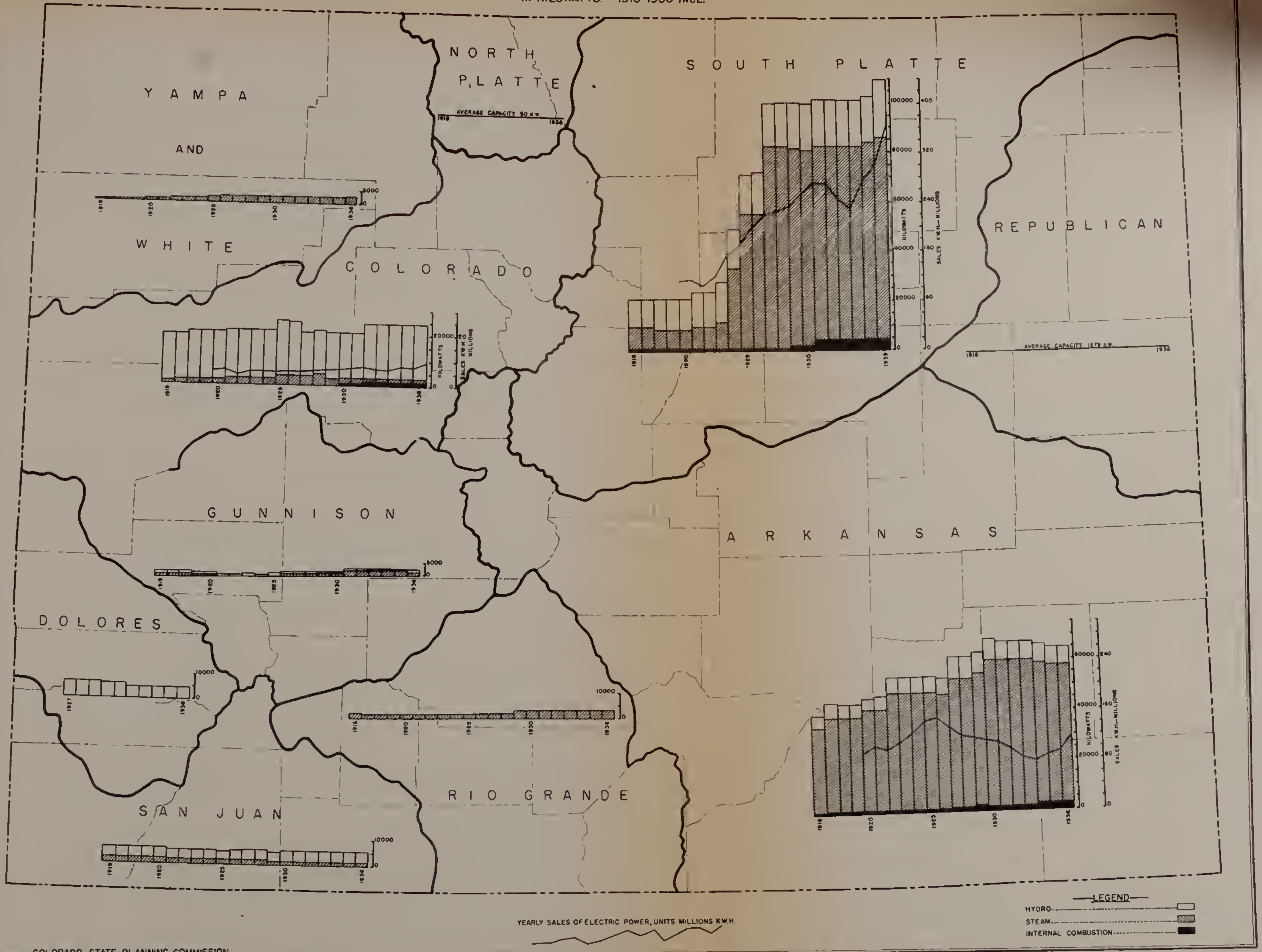
A brief composite summary of the two preceding tables using the totals of the 18 year period is here presented. The same general procedure has again been followed and data covering the large private electric utilities and the large municipally owned utilities as set forth previously have been combined, and data pertinent to the "Other" plants have likewise been combined. The table shows that of the total electric energy generated within the state over the 18 year period 1919 through 1936 56.4 percent was generated by steam plants,42.2 percent by hydro and 1.4 percent by internal combustion plants.

SUMMARY OF NET KILOWATT - HOURS GENERATED
BY
ALL PRIVATE AND MUNICIPALLY OWNED ELECTRIC UTILITIES
1919 - 1936 inclusive.

	Prime Mover			
	Steam	Hydro	Internal Combustion	Total
Large private systems	4181684517	3157532509	26222700	7365439726
Large Municipal systems	314509814	274148084	8355380	597013278
Total large systems	4496194331	3431680593	34578080	7962453004
Other private systems	124021561	27199084	65277836	216498481
Other municipal systems	20929653	2915474	11607591	35452738
Total other systems	144951234	30114558	76885427	251951219
Total large systems	4496194331	3431680593	34578080	7962453004
Total other systems	144951234	30114558	76885427	251951219
Total all systems	4641145565	3461795151	111463507	8214404223
Percent of total generated	56.4	42.2	1.4	100.0

INSTALLED CAPACITIES OF PRIVATE AND MUNICIPAL ELECTRIC UTILITIES IN MAJOR RIVER BASINS.

IN KILOWATTS. 1916-1936 INCL.



COLORADO STATE PLANNING COMMISSION

F E BLAKE 7-7-1936

INSTALLED CAPACITIES IN RIVER BASINS

The chart entitled "Installed Capacities of Public Utility and Municipal Plants 1916 - 1936" presents a graphic picture of the capacity installations in the several river basins of the state. An inspection of the chart reveals the large steam installations in the South Platte and Arkansas basins, and the hydro plants on the Colorado and South Platte rivers.

The installed capacity represents a static factor, while the sales curve in kilowatt hours represent a moving factor expressing demand in terms of sales only - due to limitations of scale, the sales lines are only shown in the South Platte, Arkansas and Colorado River basins.

Attention should be called to the relationship of the sales curve in the Colorado and South Platte basins. The years 1919 to 1924 show the curve above the graphic lines for capacity. In the Colorado River basin the installed capacity seems excessive for the demand. The explanation, of course, lies in the fact that a large part of the power generated at the Shoshone plant of the Public Service Company is brought over the 90,000 volt transmission line, and distributed in the Upper South Platte basin. It is evident that in 1924 installed capacity in the South Platte basin was pressed to supply the demand for power.

The construction of the first two units of the Valmont plant in 1923 and 1925 was the beginning of an extensive addition to plant capacities in the South Platte basin. Sales mounted rapidly until 1931 and fell until 1934. From 1934 to 1937 the increase in sales was at a higher rate than at any time from 1916 to 1936. It would appear that demand is again drawing close to capacity to produce. There are, however, several large steam plants in the area that are used but little at present.

In the Arkansas River basin the sales rose from 87 million KWH in 1919 to 155 million in 1926, they fell to about 80 million in 1934 and rose to 100 million in 1936. The trend through the period, though slightly up, is much less than in the Platte basin during the same time. Outside the Platte River basin it seems evident that installed capacity is more than ample for demand.

The Valmont plant of the Public Service Company of Colorado is the largest plant in the state and is situated close to Boulder in the South Platte basin. It is the principal source of electric energy consumed in the city of Denver, having an installed capacity of 70,000 kw. The plant consists of three steam operated units, two 25,000 kw. and one 20,000 kw. and the energy is transmitted at a potential of 90 kilovolts a distance of 33 miles to Denver. Boulder Canon hydro plant has an installed capacity of 20,000 kw.

In the Arkansas River basin the Canon City and Pueblo plants of the Southern Colorado Power Company each have installed capacities in excess of 11,000 kw. and the Trinidad and Walsenburg plants of the Trinidad Electric T.R. & G. Company have capacities of 8,500 kw. and 9,000 kw. respectively.

The Colorado Springs district is served by a municipally owned system with a total installed capacity of 14,500 kw. There is a steam plant of 10,000 kw. in Colorado Springs, and hydro plants at Manitou and Ruxton Park with installed capacities of 3,500 kw. and 1,000 kw. respectively.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

The Republican River basin area is supplied by nine plants, seven of which are municipally owned and two owned by private utilities corporations. The installed capacities of these several plants range between 100.kw. and 600 kw., and are all energized by internal combustion engines.

In the North Platte basin only one small 132 kw. I.C.plant exists and this is owned by the town of Walden, in Jackson County.

In the White and Yampa basin there are two plants, one a 2,750 kw. steam operated station at McGregor, owned by the Colorado Utilities Company, and the other a municipally owned plant at Meeker consisting of a 375 kw. steam unit and a 125 kw. I.C. unit.

The 15 plants in the Colorado River basin are approximately 90 percent hydro powered, the largest of which is the well known Shoshone hydro station with an installed capacity of 14,400 kw., almost 55 percent of the area total. The Shoshone plant is owned by the Public Service Company of Colorado and its energy is transmitted over a 90 kilovolt line, which, after electrifying the Central Mining area continues on into Denver a total distance of 153 miles. Incidentally, mention of the Colorado river and its vast potentialities for hydro-electric development naturally suggests to the mind the world famous Boulder Dam Project in Nevada where the water forces of the Colorado brings together the largest concentration of electric generating units in the world with an ultimate installed capacity of 1,350,000 kw.

In the Gunnison River basin there are nine plants, six of which are owned by private utilities corporations and three municipally owned. At Oliver there is a steam plant of 1,000 kw. and at Delta there is a 978 kw. plant consisting of three internal combustion units, municipally owned. The Ouray Plant of the Western Colorado Power Company has installed capacity of 600 kw., and is hydro powered. Gunnison has its municipal plant consisting of two steam units with an installed capacity of 550 kw. These are the largest plants in the area, the remaining five stations having installed capacities varying from 150 kw. to 300 kw.

The Dolores River Basin plants are 98 percent hydro powered, the largest of which is the reconstructed Ames plant with an installed capacity of 3,600 kw. Within this area is the extensive Telluride mining district, where the early day engineer and the pioneer miner vied with almost insuperable difficulties while the electrification of the area progressed; these eventually successful struggles made the original Ames plant an internationally famous hydro-electric laboratory.

The San Juan basin contains the Tacoma Hydro-Electric plant of the Western Colorado Power Company. This plant has an installed capacity of 4,500 kw. and thereby represents over 75 percent of the total capacity of the area; the energy is transmitted over a 44 kilovolt line north to Silverton and south to Durango, and from these towns transformed and distributed over lower tension lines to mines and other points of consumption.

The [illegible] engines.

[illegible]

[illegible]

[illegible] of 1,000,000 kw.

[illegible]

[illegible]

[illegible]

[illegible]

In the Rio Grande basin, which in general is the San Luis Valley of Colorado, are two plants. The municipal plant at Creede has a dual installation, consisting of a 30 kw. steam unit and a 75 kw. internal combustion unit. The Public Service Company of Colorado owns the 2,750 kw. steam plant at Alamosa. A 44 kilovolt line runs north from Alamosa; the voltage being reduced to 16.5 kilovolts in the northern section of the valley and thus served to Saguache, Villagrove and on into Salida. Three 22 kilovolt lines leave Alamosa running east, south and west serving the entire southern section of the valley.

The following table of "Installed capacity, Kilowatt-hours Generated, and Hours of Use" year by year 1916 through 1936 is graphically illustrated in the accompanying chart, and the assembled data represents the total capacity and output of all privately and municipally owned electric utilities combined. Large increases in installed capacity are indicated during the years 1924, 1925 and 1927. The year by year increase in energy generated suffered a set-back during the post war years 1919 to 1922, and again through the depression years 1931-2-3; however steady increases in energy generated have been indicated at all times since 1933.

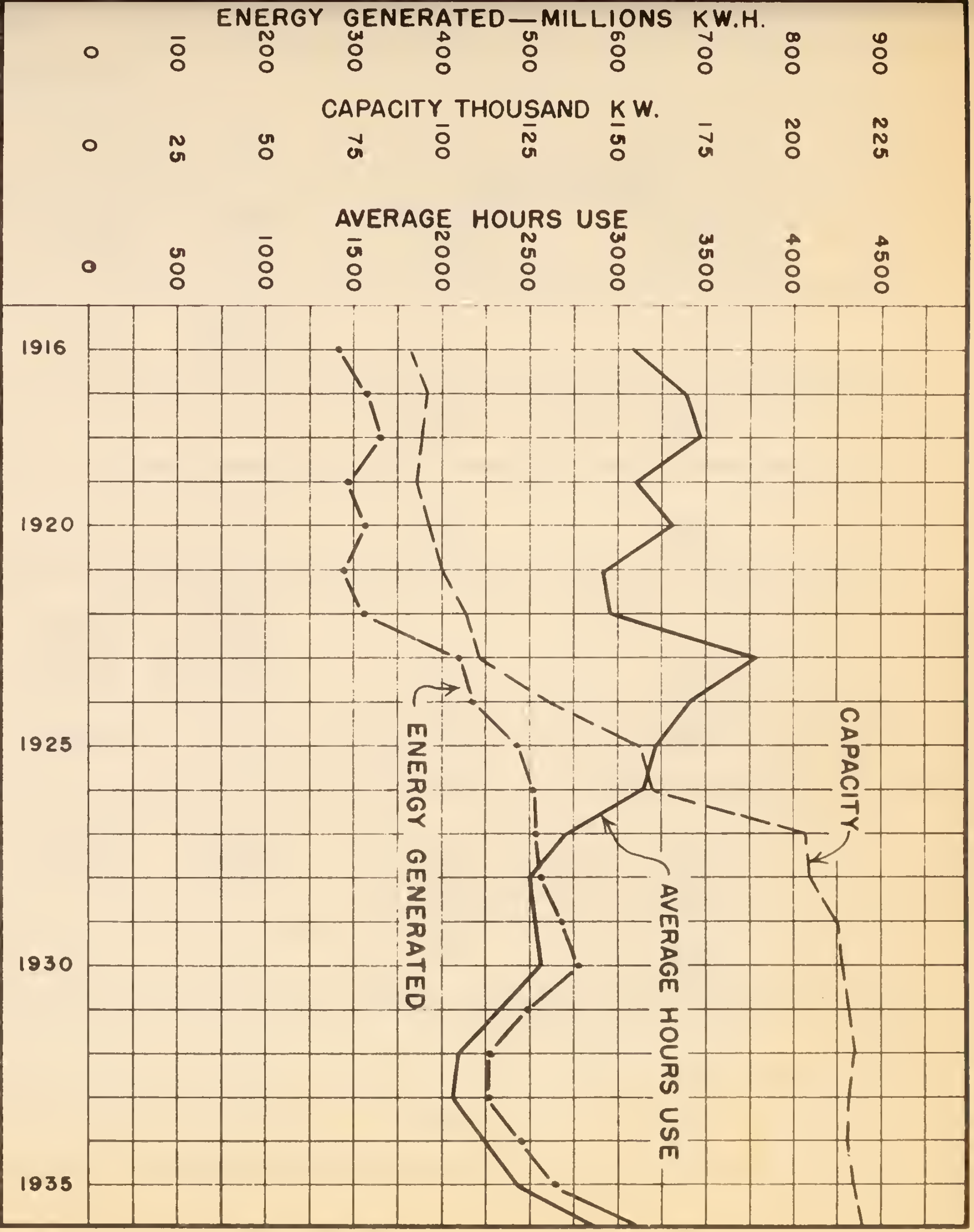
In the six [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

The following [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

OUTPUT, CAPACITY AND AVERAGE USE ELECTRIC LIGHT AND POWER UTILITIES OF COLORADO

YEAR	ENERGY GENERATED (MILLIONS KW. HOURS)	GENERATING CAPACITY END OF YEAR (THOUSANDS KW)	OUTPUT PER. KW. OF AVERAGE CAPACITY (KW. HOURS)*
1916	282.1	91.1	3100.3
1917	315.8	95.8	3378.7
1918	331.4	94.8	3475.6
1919	293.5	94.5	3099.7
1920	316.9	97.3	3303.3
1921	288.4	101.1	2905.6
1922	310.2	108.2	2963.8
1923	421.3	112.4	3826.9
1924	430.5	132.7	3418.6
1925	479.3	157.7	3236.7
1926	504.4	160.5	3171.1
1927	507.8	204.0	2786.4
1928	511.2	205.2	2498.4
1929	536.9	213.8	2562.6
1930	553.4	214.3	2585.6
1931	499.4	217.7	2312.2
1932	456.3	218.0	2094.4
1933	452.9	217.3	2080.8
1934	489.0	216.9	2252.3
1935	529.8	217.1	2441.7
1936	633.1	219.4	2900.3

* EQUIVALENT TO AVERAGE HOURS USE OF CAPACITY



COLORADO STATE PLANNING COMMISSION — 6-6-1938
F.E.BLAKE

OWNERSHIP, LOCATION AND INSTALLED CAPACITY
of
PUBLIC UTILITY AND PRIVATELY OWNED ELECTRIC POWER PLANTS
COLORADO ,1938

				Prime Movers						Total Capacity	
Name of Company	Location of Plant	Generators K W.	Make	Steam H. P	Make	Hydro H P	Make	Int. Comb H P.	Make	Generators K W	Prime Movers H P
Colo. Light & Power Co.	Briggsdale	2- 16	F.M.					1- 25	H.& B.		
								1- 25	F. M.	32	50
Colo. Portland Cem. Co.	Beottcher	1- 5000	Westh.	1- 6700	Westh.					5000	6700
Colo. Utilities Co.	McGregor	1- 1250	G. E.	1- 1700	G. E.						
		1- 1500	Westh.	1- 2000	Westh.					2750	3700
Commonwealth Util. Corp.	Akron	1- 100	F. M.					1-240	F. M.		
		1- 120	Westh.					1-240	Chi.Pneu.		
		1- 150	A. C.					1-240	" "	370	720
	Limon	1- 136	F. M.					1-200	F. M.	136	200
Eagle River Elec. Co.	Eagle	1- 52	F. M.					1- 80	F. M.		
		1- 60	W. E.					1- 75	F. M.	112	155
	Gypsum	1- 37.5	Ft. Wayne			1- 75	Leffel			37.5	75
	Gypsum Canyon	1- 75	Ft. Wayne			1-150	Leffel			75	150
Frying Pan L. & P.Co.	Basalt	No Equipment 3-14-38									
Glenwood L. & W. Co.	Glenwood	1- 200	G. E.			3-100	Doble			200	300

Name of Company	Location of Plant	Generators K. W.	Make	Steam H.P.	Make	Hydro H.P.	Make	Prime Movers Int.Comb H P	Make	Total Capacity Generators K W	Total Capacity Prime Movers H P
Grand Co.L.H.& P.Co.	Hot Sulph. Spgs.	1- 40	F.M.					1- 37.5	F.M.		
		1- 30	Cummings					1- 60	Cummings	70	97.5
Grand Lake Light Co.	Grand Lak.	1- 24	G.E.					1- 40	F.M.		
		1- 26	F.M.					1- 60	Worthington		
		1- 100	Westh.					1- 200	F.M.	150	300
Harshman, Seth	Wiggins	1- 5	F.M.					1- 10	F.M.		
		1- 12.5	F.M.					1- 25	F.M.	17.5	35
Highland Utilities Co.	Eads	1- 30	F.M.					1- 37.5	F.M.		
		1- 60	F.M.					1- 75	F.M.		
		1- 150	F.M.					1- 180	F.M.	240	292.5
	Springfield	1- 56	G.E.					1- 50	DeLavern		
		1- 72	F.M.					1- 50	F.M.		
		1- 60	Westh.					1- 120	F.M.		
		1- 168	"					1- 240	F.M.	356	460
Hindsdale Min.& Dev.Co.	Lake City	1- 40	Westh.			1- 100	Pelton				
		1- 120	F.M.			1- 100	"			160	200
				Plant not operating 4 years							
Inland Utilities Co.	Cheyenne Wells	1- 160	F.M.					1- 240	F.M.		
		1- 48	F.M.					1- 75	F.M.		
		1- 100	Westh.					1- 150	McI. Sey.	308	465
	Holly	1- 120	F.M.					1- 180	F.M.	120	180
	Hugo	1- 136	F.M.					1- 200	F.M.	136	200
	Stratton	1- 240	F.M.					1- 360	F.M.		
		1- 200	F.M.					1- 300	F.M.		
		1- 48	F.M.					1- 75	F.M.	488	735
Kim Lighting & Power Co.	Plant inoperative										

Name of Company	Location of Plant	Generators K W	Make	Steam H P	Make	Hydro H P	Make	Int. Comb. H.P	Make	Generators K W	Prime Movers H P
Kremmling L. & P. Co.	Kremmling	1- 30	W. E.					1- 40	F. M.		
		1- 72	F. M.					1- 120	F.M.		
		1- 52	F. M.					1- 80	F.M.	154	240
Montezuma L. & P. Co.	Norwood	1- 55	Diesel					1- 30	Stover		
		1- 45	"					1- 42	Deere		
								1- 25	Stover	100	97
Mountain Utilities Co.	Elizabeth	1- 38	F. M.					1- 60	F. M.		
		1- 60	F. M.					1- 100	F. M.	98	160
	Buena Vista	1- 150	F. M.					1- 180	F. M.	150	180 I. C.
		1- 120	Westh.			1- 120	Leffel				
		1- 50	G. E.			1- 85	"			170	205 Hydro
New Light & Power Co.	Pagosa Spgs.	1- 100	Westh.	1-150	Ballwood					100	150 Steam
		1- 150	Ideal El.			1- 190	Trump			150	190 Hydro
Orchard P.L.W. & G.Co.	Orchard	1- 32.5	F. M.					1- 50	F. M.		
		1- 10	F. M. (est.)					1- 15	F. M. (est.)	42.5	65
Pine River Power Co.	Bayfield	1- 125	Ideal (Dir.Con.)					1- 210	Venn-Severin		
		1- 100	Westh. (Blt'd.)					1- 140	" "	225	350 I. C.
		1- 100	Westh.	1-150	Skinner					100	150 Steam
Plateau Valley L. & P. Co.	Colbran	1- 30	G. E.					1- 45	F. M.		
		1- 50	G. E.					1- 75	F. M.	80	120

Name of Company	Location of Plant	Generators K. W.	Mak.	Steam H.P.	Make	Prime Movers Hydro H.P.	Make	Int.Comb. H.P.	Make	Total Capacity Generators K. W.	Prime Movers H. P.
Public Serv. Co. of Colorado.	Alamosa	1- 1500	G.E.	1- 2010	G.E.						
		1- 750	G.E.	1- 1000	Curtis						
		1- 500	Westh.	1- 670	Westh.					2750	3680
	Boulder Cn.	2-10000	G.E.			2-13500	Pelton			20000	27000
	Brush	1- 150	Westh.	1- 200	Hamilton						
		1- 200	C.W.	1- 270	Ames					350	470
	Dillon	2- 500	G.E.			2- 670	Pelton			1000	1340
	Estes Park	1- 200	Westh.			1- 260	Hug				
		1- 680	G.E.			1- 900	Worthington			880	1160 Hydro
		1- 32	F.M.					1- 50	F.M.		
		1- 200	F.M.					1-300	F.M.	232	350 I.C.
	Fall River	2- 300	G.E.			2- 400	Pelton			600	800
	Georgetown	2- 450	G.E.			2- 900	Pelton				
		1- 400	G.E.			1- 500	"			1300	2300
	Grand Jct.	1- 500	G.E.	1- 670	G.E.						
		1- 600	G.E.	1- 800	G.E.						
		1- 1250	G.E.	1-1675	G.E.						
		1- 150	Westh.	1- 200	Ideal (Not in use)					2500	3345
	Grand Valley	2- 1500	E.Mfg.Co.			2- 2300	Pelton			3000	4600
	Lacombe	1-12500	G.E.	1-16750	G.E.						
		1- 2400	Westh.	1- 3200	Westh.						
		1- 1000	Westh.	1- 1340	Westh.					15900	21290
	Lafayette	2- 2000	Westh.	2- 2680	Westh.						
		2- 1000	Westh.	2- 1340	Westh.(Not in use					6000	8040

Name of Company	Location of Plant	Generators K.W.	Make	Prime Movers Steam H.P.	Make	Hydro H.P.	Make	Int.Comb. H.P.	Make	Total Capacity Generators K.W.	Prime Movers H.P.
Public Service Co. of Colorado.	Leadville	1- 1500 1- 425	G.E. Bullock	1- 2000 1- 570	G.E. Allis					1925	2570
	Rifle	1- 125	G.E.			1- 260	Leffel			125	260
	Salida #1	1- 750 2- 160	G.E. G.E.			1- 1100 2- 300	Smith Hug			1070	1700
	Salida #2	1- 240 1- 240	G.E. G.E.			1- 550 1- 550	Hug Pelton			480	1100
	Salida Steam	1- 200 1- 500	G.E. G.E.	1- 270 1- 670	Nord-Allis G.E.Curtis					700	940
	Shoshone	2- 7200	G.E.			2- 9000	I. P. Morris			14400	18000

				Prime Movers						Total Capacity		
Name of Company	Location of Plant	Generators K. W	Make	Steam H P	Make	Hydro H P	Make	Int.Comb. H P	Make	Generators K W.	Prime Movers H P	
Public Serv. Co. Colo.	Sterling	1- 750	G. E.	1- 1000	G. E. Curtis							
		1- 1250	G. E.	1- 1675	G. E. Curtis							
		1- 200	Westh.	1- 270	Chuse-Corliss					2200	2945	Steam
		1- 2250	Westh.					1- 3300	Busch-Sulzer	2250	3300	I. C.
	Valmont	1- 20000	Westh.	1-27000	Westh.-Bauman							
		1- 25000	G. E.	1-33500	G. E.							
		1- 25000	G. E.	1-33500	G. E.					70000	94000	
	West (Not in use)	1- 2250	G. E.	1-3000	G. E.							
		1- 4000	G. E.	1-5360	G. E.							
		2- 1500	Bullock	2-2000	Filler-Stowell					9250	12360	
Redlands Power & Irr. Co.	Redlands	2- 450	G. E.			1- 1800	Leffel					
		1- 1400	G. E.			1- 2000	Smith			2300	3800	
Roaring Fork L. & P. Co.	Aspen	2- 200	Westh.	(A. C.)		1- 500	Pelton					
		2- 200	G. E.	(D. C.)		2- 700	Doble					
		3- 400	G. E.	(D. C.)		2- 500	Doble					
		1- 400	Westh.	(A. C.)		1- 700	Pelton					
						1- 700	Doble			2400	4300	
So. Colo. Power Co.	Canon City	3- 400	Westh.	3- 750	H. R.							
		2- 544	Westh	2- 850	Westh.							
		1- 1500	Allis- Ch.	1- 2000	Allis-Chalmers							
		1- 7500	G. E.	1-10000	G. E.					11288	15950	
	Pueblo	1- 800	G. E.	1-1262	Rice-Sargent							
		1- 768	G. E.	1-1262	Rice-Sargent							
		1- 1200	Allis-Ch.	1-1875	Allis-Chalmers							
		1- 1200	Allis-Ch.	1-1500	Allis-Chalmers							
		1- 7500	G. E.	1-10000	G. E.					11468	15899	
	Skaguay	4- 360	G. E.			4- 600	Pelton			1440	2400	

Name of Company	Location of Plant	Generators K W	Make	Prime Movers Steam H P	Make	Hydro H P	Make	Int. Comb. H P	Make	Total Capacity Generators K W	Prime Movers H P
Trinidad Elec. T.R.& G. Co.	Trinidad	1- 5000	G. E.	1- 6700	G. E.						
		1- 2000	Westh.	1- 2600	Westh.						
		1- 1000	Westh.	1- 1340	Westh.						
		1- 500	Westh.	1- 670	Westh.					8500	11390
	Walsen	1- 6000	G. E.	1- 8050	G. E.						
		1- 1500	Westh.	1- 2005	Westh.						
		1- 1500	Westh.	1- 2005	Westh.					9000	12060
Western Colo. Power Co.	Ames (New)	1- 3600	G. E.			1- 1200	Pelton				
						1- 5000	Pelton			3600	6200
	Cedaredge	1- 120	G. E.	1- 200	Chuse						
		1- 30	F. M.	1- 75	Atlas					150	275
	Illium	1- 1200	G. E.			1- 1800	Pelton			1200	1800
	Durango	1- 500	G. E.	1- 670	G. E.						
		1- 350	Bullock	1- 500	Allis					850	1170
	Montrose	1- 50	G. E.	1- 85	Ideal						
		1- 100	Westh.	1- 150	Buckeye						
		1- 150	G. E.	1- 275	Chuse					300	510
	Oliver	1- 1000	G. E.	1- 1340	G. E.					1000	1340
	Ouray	1- 420	G. E.			1- 1000	Pelton				
		1- 180	G. E.							600	1000
	Paonia	1- 100	Westh.	1- 150	Chuse						
		1- 96	Westh.	1- 150	Chuse					196	300
	Tacoma	2- 2250	G. E.			2- 4000	Pelton			4500	8000
Western Pub. Serv. Co.	Las Animas	2- 300	F. E.					2- 450	Worthington	600	900

OWNERSHIP LOCATION AND INSTALLED CAPACITY
of
MUNICIPALLY OWNED ELECTRIC POWER PLANTS
Colorado, 1938

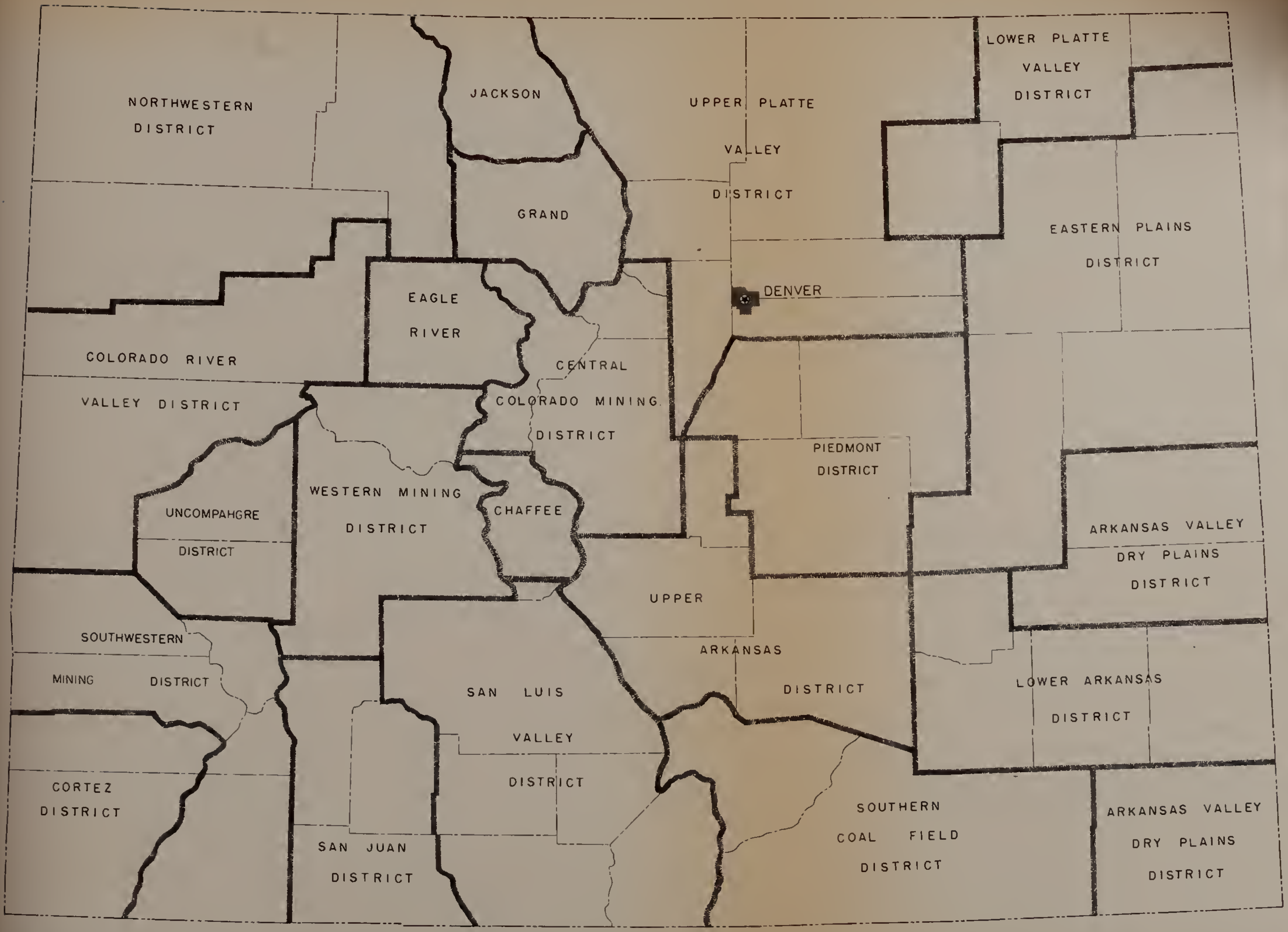
Town	Plant Location	Generators K.W.	Make	Prime Movers Steam Make H.P.	Prime Movers Hydro Make H.P.	Prime Movers Int.Comb.	Prime Movers Make	Total Capacity Generators K.W.	Total Capacity Prime Movers H.P.
Burlington	Burlington	1-90	F.M.			1-140	F. M.		
		1-187	F.M.			1-280	F. M.		
		1-300	F.M.			1-450	F. M.	577	870
Colo. Spgs.	Colo. Spgs.	1-5000	G.E.	1-8000 G.E.					
		2-2500	Westh.	2-4400 Westh.				10000	16800
	Manitou	1-2000	Westh.		1-3500 Pelton				
		2- 750	G.E.		2-1125 Pelton			3500	5750
	Ruxton Park	1-1000	G.E.		1-1450 Pelton			1000	14500
Creede	Creede	1- 75	G.E.			1-155	Cummings	75	155
		1- 30	G.E.		1- 75 Pelton			30	75
Crested Butte	Crested Butte	1- 150			1- 210			150	210
Crook	Crook	1- 10	F.M.			1- 20	F.M.		
		1- 20	F.M.			1- 37½	F.M.	30	57½
Delta	Delta	2- 148	F.M.			2-225	F.M.		
		1- 200	F.M.			1-300	F.M.		
		1- 482	F.M.			1-700	F.M.	978	1450
Flagler	Flagler	1- 40	F.M.			1- 75	F.M.		
		1- 120	F.M.			1-200	F.M.		
		1- 50	Westh.			1-100	International	210	375
Fleming	Fleming	1- 30	F.M.			1- 50	F.M.		
		1- 60	F.M.			1-100	F.M.	90	150

				Prime Movers				Total Capacity	
Town	Plant Location	Generators K.W.	Make	Steam Make H.P.	Hydro Make H.P.	Int. Comb. H.P.	Make	Generators K.W.	Prime Movers H.P.
Ft. Collins	Ft. Collins	2-1500	Westh.	2-2500 Westh.				3000	5000
Ft. Morgan	Ft. Morgan	2-1000	Allis-Ch	2-1500 Allis Ch.					
		1-2000	G.E.	1-3000 G.E.				4000	6000
Grover	Grover	1- 20	F.M.			1- 25	F.M.		
		1- 15	Westh.			1- 25	F.M.	35	50
Gunnison	Gunnison	1- 300	G.E.	1- 475 Skinner					
		1- 250	G.E.	1- 375 Chuse-Corliss				550	850
Haswell	Haswell	1- 10	Kohler			1- 25	Anderson	10	25
Haxtun	Haxtun	1- 270	G.E.			1-400	Busch-Sulzer		
		1- 100	G.E.			1-180	Busch-Sulzer		
		1- 50	Westh.			1- 85	Bessemer	420	665
Holyoke	Holyoke	1- 107	F.M.			1-165	F.M.		
		1- 187	F.M.			1-230	F.M.		
		1- 300	F.M.			1-450	F.M.	594	895
Julesburg	Julesburg	1- 138	F.M.			1- 210	F.M.		
		1- 240	F.M.			1- 360	F.M.		
		1- 335	F.M.			1- 480	F.M.	713	1050
Lamar	Lamar	2- 500	G.E.	2- 750 Curtis					
		1-2000	A.B.B.	1-3000 Amer.Br.Boveri				3000	4500
Longmont	Lyons	2- 200	Ft.Wayne		2- 400 Pelton			400	800
	Longmont	2- 500	G.E.			2- 640	F.M.		
		1- 300	G.E.			1- 450	F.M.		
		1- 840	F.M.			1-1400	F.M.	2140	3130
Loveland	Loveland	3- 300	G.E.		3- 400 S.Morgan Smith			900	1200
		1- 600	G.E.			1- 900	Busch-Sul.	600	900

				Prime Movers						Total Capacity	
Town	Plant Location	Generators K.W.	Make	Steam H.P.	Make	Hydro H.P.	Make	Int.Comb. H.P.	Make	Generators K.W.	Prime Movers H.P.
Lyons	Lyons	2- 50						2- 85	Cummings	100	170
Meeker	Meeker	1- 75		1- 100	Russell						
		1-300	G.E.	1- 450	G. E.					375	550
		1-125				1- 145	Leffel			125	145
Walden	Walden	1- 20	F.M.					1- 37½	F.M.		
		1- 35	F.M.					1- 60	F.M.		
		1- 76.8	F.M.					1- 120	F.M.	131.8	217½
Wray	Wray	1- 76.8	F.M.					1- 120	F.M.		
		1- 187	F.M.					1- 280	F.M.		
		1- 280	F.M.					1- 420	F.M.	543.8	820
Yuma	Yuma	1- 97	F.M.					1- 150	F.M.		
		1- 148	F.M.					1- 225	F.M.		
		* 1- 300	F.M.					1- 450	F.M.	545	825

* This unit about to be installed.

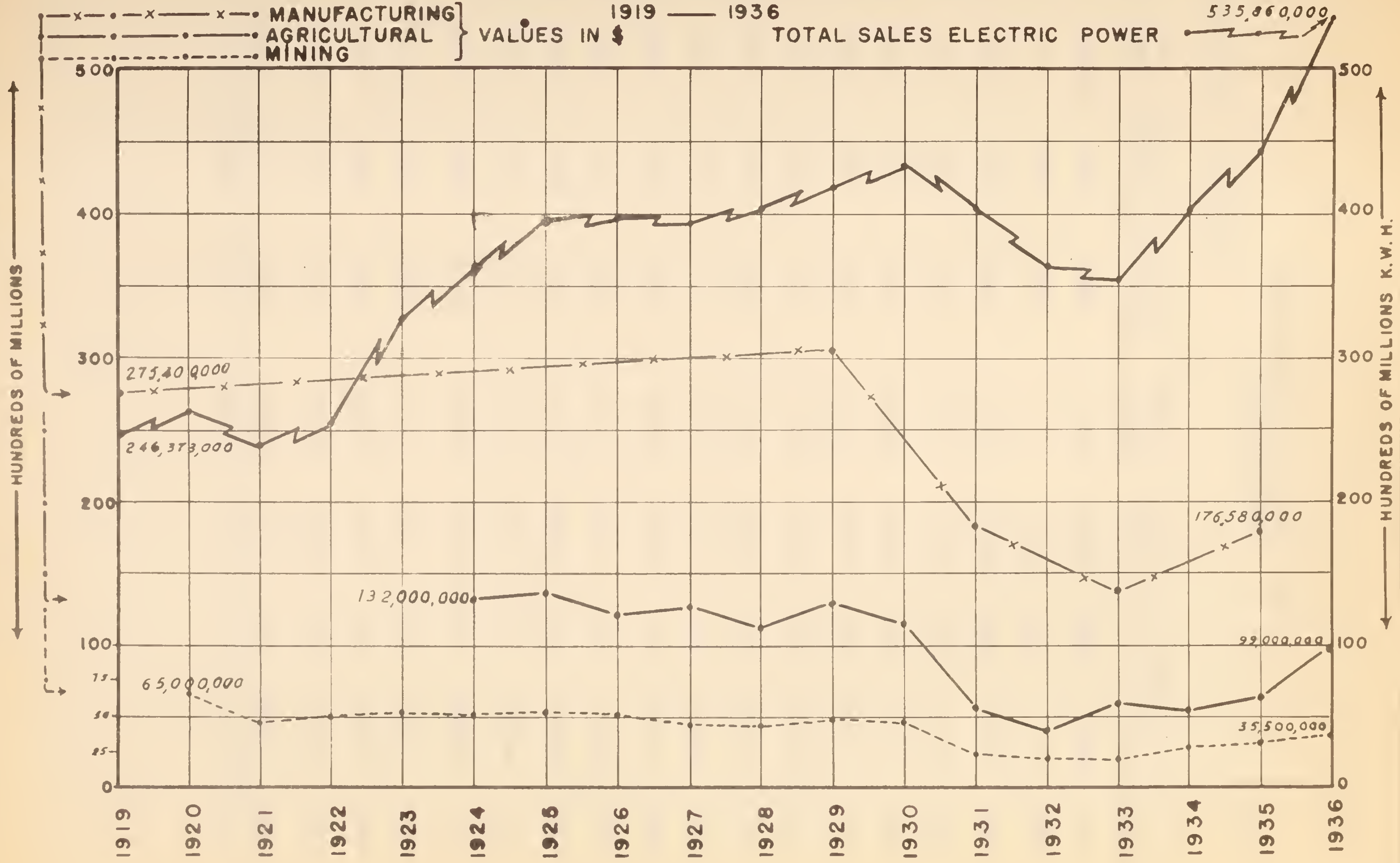
KEY MAP
OF
ELECTRIC POWER CONSUMER DISTRICTS.



COLORADO STATE PLANNING COMMISSION

F.E.BLAKE 5-16-1938

STATE OF COLORADO
SALES OF ELECTRC POWER
1919 —— 1936



DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

RECAPITULATION - STATEWIDE

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to Towns	Industry	Mining	No. of Consumer
1919	164812	37850	28889	14821	246372	81560	69442	95370	124504
1920	181273	38343	31726	15097	266439	85166	72337	108936	132431
1921	147414	41453	31884	15852	236603	89189	68514	78900	139770
1922	161929	42225	33324	16303	253781	91852	79234	82695	151693
1923	204210	47304	45569	28836	325919	121709	106410	97800	160046
1924	215546	62207	42206	44430	364389	148843	101838	113708	162474
1925	243908	70728	53512	31320	399468	155560	121549	122359	167403
1926	272227	47659	62448	14486	396820	124593	150511	121716	178888
1927	264437	52012	62120	15068	393637	129200	152634	111803	202508
1928	263476	57876	64366	16719	402437	138961	150641	112835	213730
1929	269592	65694	68896	15795	419977	150385	161846	107746	199249
1930	271286	73457	72437	17620	434800	163514	164208	107078	210087
1931	236865	80141	73668	17920	408594	171729	164348	72517	203090
1932	201910	81360	64027	18367	365664	163754	145259	56651	198524
1933	198235	79292	60266	16721	354514	156279	140099	53136	199310
1934	232449	84788	64413	20808	402458	170009	157205	75244	202954
1935	260380	92636	69314	21096	443426	183046	168005	92375	202612
1936	332112	103197	78905	21632	535846	203734	208248	123864	215640
Total	4122061	1158222	1007970	362891	3651144	2529083	2382328	1739733	3264913

DISTRIBUTION OF SALES OF ELECTRIC ENERGY

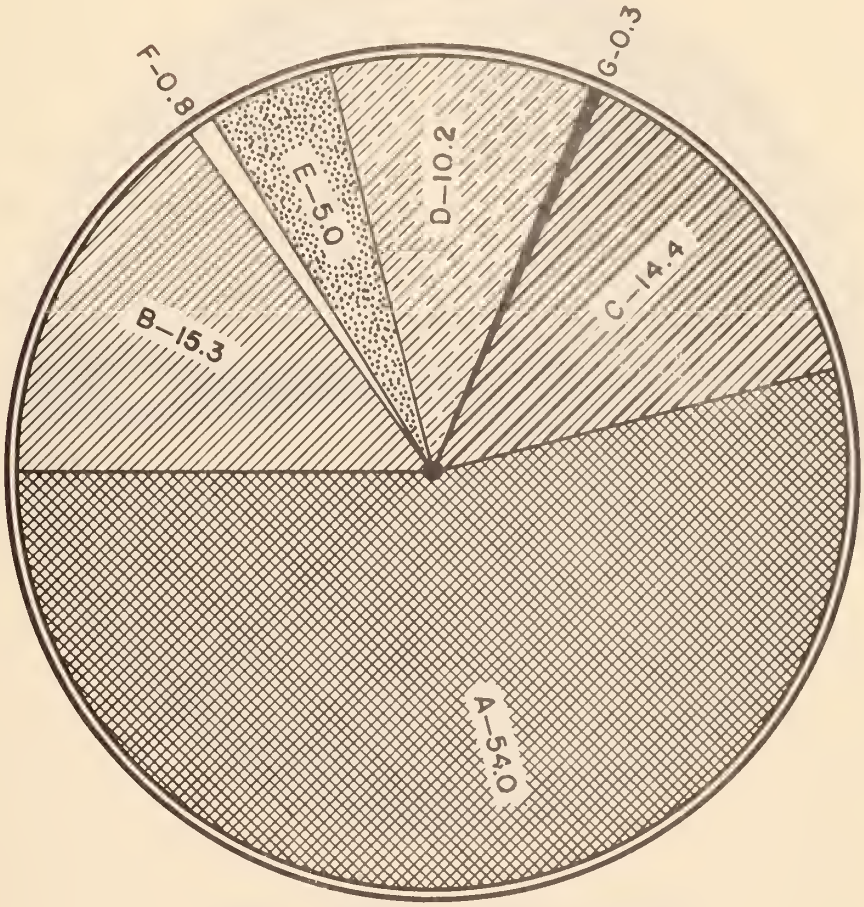
TEXT, TABULATIONS AND CHARTS

OF

SALES OF ELECTRIC ENERGY, POPULATION TRENDS AND CONSUMER USE

SALES OF ELECTRIC POWER IN COLORADO
PUBLIC UTILITY COMPANIES
1919 — 1936
Inclusive

UNIT : PERCENT TOTAL SALES



LEGEND

CLASS OF SERVICE		
COMMERCIAL POWER	A	▩
BUSINESS	B	▨
RESIDENTIAL	C	▨
WHOLESALE	D	▨
MUNICIPAL LIGHTS	E	░
MUNICIPAL POWER	F	□
MISCELLANEOUS	G	■

TOTAL SALES, 1919–1936 INCL 6,129,642,733 K.W. H.

COLORADO STATE PLANNING COMMISSION

F. E. BLAKE 7-11-38

[illegible]

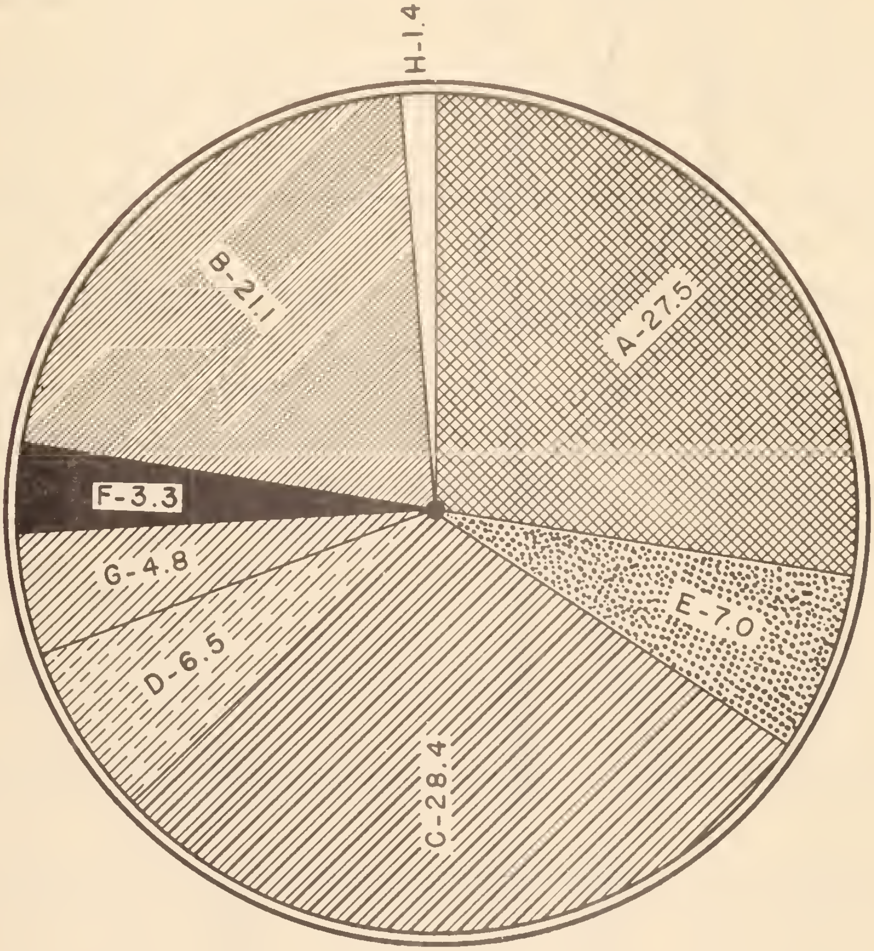
[illegible]

SALES OF ELECTRIC POWER IN COLORADO

MUNICIPAL POWER PLANTS.

1919 — 1936

Inclusive.



UNIT : PERCENT TOTAL SALES

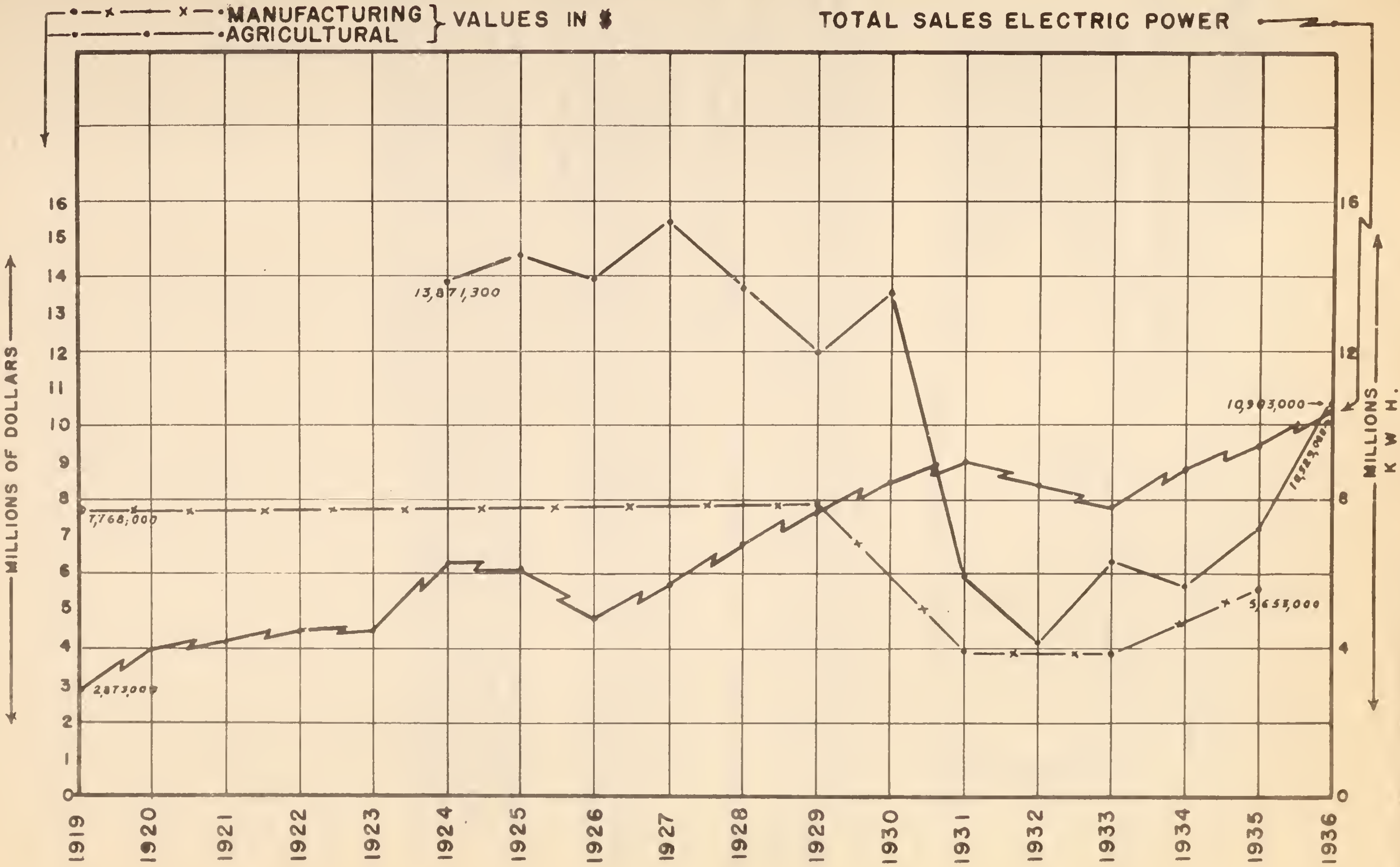
LEGEND

CLASS OF SERVICE		
COMMERCIAL POWER	A	▩
BUSINESS	B	▨
RESIDENTIAL	C	▨
WHOLESALE	D	▨
MUNICIPAL LIGHTS	E	░
MUNICIPAL POWER	F	■
MISCELLANEOUS	G	▨
COMMERCIAL LIGHTS	H	□

TOTAL SALES, 1919–1936 INCL. 481,161,269 KW.H

COLORADO STATE PLANNING COMMISSION F.E.BLAKE 2-8-38

LOWER PLATTE VALLEY DISTRICT



THE LOWER PLATTE DISTRICT

This district embraces Morgan, Logan and Sedgwick counties. It is served by the following plants:

Sterling Public Service Co.,	steam & oil,	capacity	4,450	KW
Ft. Morgan Municipal	steam	"	4,000	
Orchard P. & L. Co.	oil	"	42.5	
Crook Municipal	"	"	30	
Fleming Municipal	"	"	90	
Julesburg Municipal	"	"	713	
Wiggins-Seth Harshman Elec.	"	"	17.5	
	Total Installed Capacity		9,343.0	

The small plants serve only the towns wherein they are located. The largest service is given by the Sterling plant, and additional power is purchased by the Public Service Company from the Western Public Service Company the 4,000 kw. steam plant at Fort Morgan is the second largest municipal plant in the state.

The district is, primarily, an agricultural one, largely under an intensive system of irrigated lands.

A tabulation of the sales of classified electric current from 1919 to 1926, inclusive is found below. For the period of study, total sales have increased from 2,873,000 KWH in 1919 to 10,529,000 KWH in 1936, an increase of 266%. Of total electric current sold, about 66% was for town consumption and about 34% for industrial consumption.

The following tabulation gives the relationship of the population of the district to those served with electric current. As shown, this tabulation shows the population of a hypothetical service zone established at five miles either side of the main transmission line, and the population outside the serving zone. The complete inter-relationship is revealed by the detailed figures of the tabulation.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - LOWER PLATTE VALLEY

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to			No. of Consum
						Towns	Industry	Mining	
1919	824	614	539	896	2873	2049	824	None	3337
1920	1259	923	775	1062	4019	2760	1259	"	3786
1921	1176	958	873	1164	4171	2995	1176	"	3208
1922	1159	1074	957	1310	4500	3341	1159	"	4039
1923	1163	1108	959	1235	4465	3302	1163	"	4232
1924	2200	1369	2259	1472	6300	4100	2200	"	3184
1925	1499	1583	1402	1660	6144	4645	1499	"	3266
1926	1715	1565	1219	383	4882	3167	1715	"	4012
1927	2035	1851	1538	319	5743	3708	2035	"	4263
1928	2277	2310	1835	445	6867	4590	2277	"	4801
1929	3170	2315	1878	427	7790	4620	3170	"	5075
1930	3081	2628	1979	863	8551	5470	3081	"	5355
1931	3327	2912	2022	909	9170	5843	3327	"	5356
1932	2875	2850	1821	871	8417	5542	2876	"	4973
1933	2731	2618	1662	854	7865	5134	2731	"	4964
1934	3165	2296	2543	916	8920	5755	3165	"	5133
1935	3183	3319	2012	887	9401	6218	3183	"	5281
1936	4067	3346	2412	704	10529	6462	4067	"	5364
Total	40906	35639	27685	16377	120607	79701	40906	-	79629

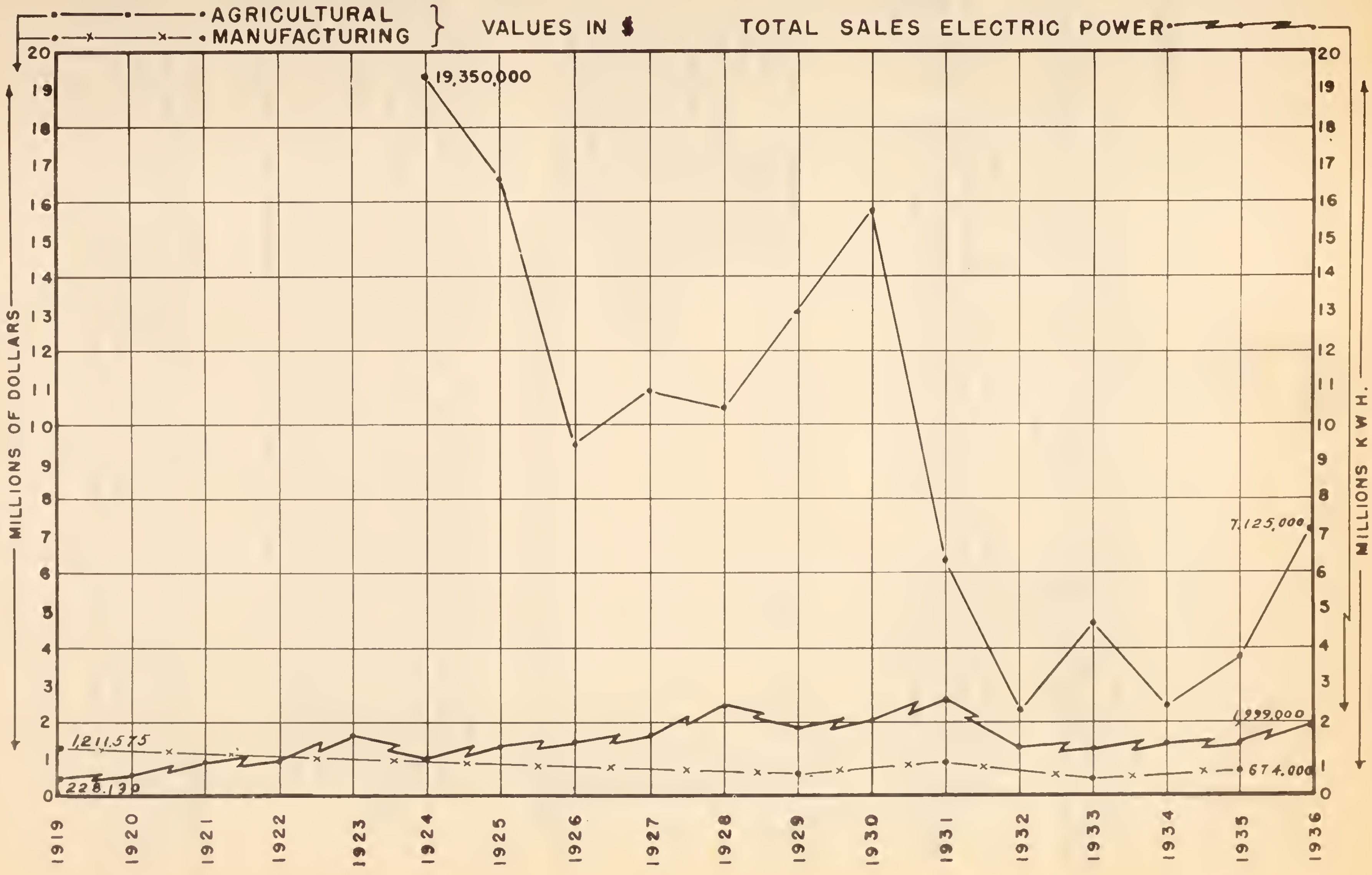
LOWER PLATTE VALLEY
(Counties: Sedgwick, Logan, Morgan)

	Zone Urban	Zone Rural	Outside Rural	Total District	Total Consumers
1920	15371	15622	7765	38758	3786
1921	15570	15823	7871	39264	3208
1922	15769	16024	7977	39770	4039
1923	15968	16226	8082	40276	4232
1924	16166	16427	8188	40781	3184
1925	16364	16628	8294	41286	3266
1926	16562	16829	8400	41791	4012
1927	16760	17030	8506	42296	4263
1928	16958	17231	8612	42801	4801
1929	17156	17432	8718	43306	5075
1930	18056	17077	8677	43810	5355
1931	18225	17146	8799	44170	5356
1932	18109	16919	8802	43830	4973
1933	17848	16695	8667	43210	4964
1934	17379	16267	8434	42080	5133
1935	17912	16899	8629	43440	5231
1936	17588	16682	8430	42700	5364
Total	287761	282957	142851	713569	76292

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	104	129	1062	79.9	12.2	9.7
1921	130	132	1269	79.9	10.2	8.3
1922	111	141	1114	79.9	12.6	10.2
1923	105	138	1054	79.9	13.1	10.5
1924	135	190	1978	79.9	9.7	7.7
1925	188	189	1881	79.9	9.8	7.9
1926	121	146	1216	79.8	12.0	9.6
1927	134	169	1347	79.8	12.6	10.0
1928	143	200	1430	79.8	14.0	11.2
1929	153	225	1534	79.8	14.6	11.7
1930	196	244	1511	80.0	15.1	12.2
1931	207	259	1711	80.0	15.1	12.1
1932	192	240	1693	79.9	14.1	11.3
1933	182	227	1571	78.7	14.3	11.4
1934	212	265	1738	79.9	15.2	12.1
1935	216	270	1781	80.0	15.1	12.1
1936	246	307	1962	80.0	15.3	12.5
Average	165	206	1543	79.9	13.4	10.7

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

EASTERN COLORADO DISTRICT



EASTERN PLAINS

This district embraces Phillips, Washington, Yuma, Kit Carson and Lincoln counties. It is served by the municipal plants at Wray, Yuma, Holyoke, Haxton, Burlington and Flagler. Akron and adjacent territory is served by the Commonwealth Utilities Corporation from its plant at.Akron.

The southern part of the district is served by the Burlington Municipal plant, by the Inland Utilities Company, from plants at Hugo and Stratton and by the Commonwealth Corporation with a plant at Limon, serving Limon and Genoa and a municipal plant at Flagler. The plant capacities are as follows:

			Capacity	
Akron. - Commonwealth Utilities Corp	Int.	Comb.	370	KW
Yuma. Municipal	"	"	545	"
Wray. Municipal	"	"	544	"
Burlington Municipal	"	"	577	"
Flagler Municipal	"	"	210	"
Stratton Inland Utilities Co.	"	"	488	"
Hugo. Inland Utilities Co.	"	"	136	"
Limon. Inland Utilities Co.	"	"	136	"
Holyoke Municipal	"	"	594	"
Haxton Municipal	"	"	420	"
Total Installed capacity for district			4,020	KW

The district is a dry farm and stock raising area of great importance to the state. In values of agricultural product in principal crops its production, from 1924 to 1936 inclusive, was greater than the Lower Platte, the Lower Arkansas or the San Luis Valley. As a consumer of electfical energy, it ranks below any of the three mentioned. A tabulation of the classified sales of electric current from 1919 to 1926 follows. For the period the total sales of Kilowatt Hour current has risen from 427,000 KWH in 19. to 1,999,000 or an increase of 368%. Of total sales, about 83% was for town consumption, and about 17% was classified for industrial usage.

Following the classified sales figures is the tabulation showing anslysis of the population as related to electric sales. The district has an unusually large percentage of rural population. About 55 percent is wholly rural, outdide the assumed serviceable zone. Of the population within the zone, about 59 percent is classed as urban, and about 41 percent as rural. Details shown in tabulation.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - EASTERN PLAINS

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to Towns	Sales to Industry	Sales to Mining	No Co [illegible]
1919	40	78	33	276	427	387	40	None	724
1920	15	283	193	40	531	516	15	"	870
1921	326	351	261	240	1178	852	326	"	2157
1922	333	334	253	413	1333	1000	333	"	2471
1923	387	571	469	653	2080	1693	387	"	2659
1924	331	343	258	384	1316	985	331	"	1864
1925	360	442	326	363	1491	1131	360	"	2249
1926	489	338	231	337	1395	906	489	"	1614
1927	549	414	302	453	1718	1169	549	"	2145
1928	427	496	364	986	2273	1846	427	"	2517
1929	246	574	381	867	2068	1822	246	"	2235
1930	177	444	370	1035	2026	1849	177	"	2404
1931	207	590	511	1220	2528	2321	207	"	3249
1932	159	199	342	521	1221	1062	159	"	1727
1933	175	184	291	644	1294	1119	175	"	1506
1934	76	258	416	565	1315	1239	76	"	1666
1935	179	189	430	676	1474	1295	179	"	1829
1936	229	319	423	1028	1999	1770	229	"	2316
Total	4705	6407	5854	10701	27667	22962	4705	-	36202

EASTERN PLAINS
(Counties:Phillips,Washington,Yuma,Lincoln,Kit Carson)

	Zone		Outside	Total	Total
	Urban	Rural	Rural	District	Consumers
1920	11992	6599	27201	47792	870
1921	11984	8585	27100	47669	2157
1922	11976	8571	26999	47546	2471
1923	11968	8558	26897	47423	2659
1924	11960	8544	26797	47301	1864
1925	11952	8530	26698	47180	2249
1926	11944	8516	26599	47059	1614
1927	11936	8502	26500	46938	2145
1928	11929	8488	26401	46818	2517
1929	11921	8474	26302	46697	2235
1930	12668	8748	25160	46576	2404
1931	12694	8790	25226	46710	3249
1932	13184	9150	26106	48440	1727
1933	13095	9092	25943	48130	1506
1934	12937	8995	25608	47540	1666
1935	12383	8639	24553	45575	1829
1936	11643	8119	23138	42900	2316
Total	208166	146900	443228	798294	35478

	KWH Per Capita Total Dist.	KWH Per Capita Serv.Zone	KWH Per Consumer	A	B	C
1920	11	25	610	43.0	4.2	1.8
1921	24	57	546	43.1	10.4	4.5
1922	28	64	539	42.2	12.0	5.1
1923	43	101	782	43.2	12.9	5.6
1924	27	64	706	44.9	4.8	3.9
1925	31	72	662	43.4	10.9	4.7
1926	29	68	864	43.4	7.8	3.4
1927	36	84	808	43.5	10.4	4.5
1928	48	111	903	41.4	12.3	5.3
1929	44	101	925	43.7	10.9	4.7
1930	44	94	685	45.9	11.2	5.1
1931	55	118	778	45.9	15.0	6.9
1932	25	55	707	46.1	7.7	3.5
1933	27	59	859	46.1	6.7	3.1
1934	27	60	789	46.1	7.5	3.5
1935	32	70	806	46.1	8.3	4.0
1936	46	101	864	46.6	11.7	5.4
Average	34	77	768	44.5	10.0	4.4

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

THE ARKANSAS DRY PLAINS

The counties of Cheyenne and Kiowa compose the district. It is predominantly a dry farm, stock-grazing district. The district is served by three isolated plants, two privately owned electric utilities and one municipally owned.

The plants and their capacities are as follows:

Cheyenne Wells.	Inland Utilities Corporation	Int.	Comb.	308 KW
Eads.	" " "	"	"	240 "
Haswell. Municipal				10 "
	Total Installed Capacity			558 KW

The district, lying north of the irrigated district of the Lower Arkansas Valley, has always suffered from a deficiency of rainfall, which has seriously handicapped its agricultural production.

It is, consequently, a lower consumer of electric current are hot complete, chronologically, but the records, as shown in the tabulation below, indicate an increase in total sales from 32,000 KWH in 1919 to 469,000 in 1936, 80.5 percent was classified as town current and the remainder as industrial

The population distribution is indicated as about 38% urban in an assumed zone and 62% rural. In the district the population is about 22.5% urban; 77.5% rural. Details of relationship of population to consumer usage of electric current are reflected in accompanying tabulation.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - ARKANSAS DRY PLAINS

	Com.	Residence	Business	Municipal	Total	Sales to			No.of
Year	Power	Lighting	Lighting	Usage	Sales	Towns	Industry	Mining	Consum.
1919	None	None	None	None	None	None	None	None	None
1920	"	"	"	"	"	"	"	"	"
1921	"	"	"	"	"	"	"	"	"
1922	2	6	12	12	32	30	2	"	114
1923	1	18	12	16	47	46	1	"	114
1924	None	20	13	17	50	50	None	"	128
1925	"	35	24	18	77	77	"	"	136
1926	"	69	69	68	206	206	"	"	None
1927	"	34	23	18	75	75	"	"	"
1928	"	130	90	72	292	292	"	"	274
1929	"	33	22	16	71	71	"	"	478
1930	"	11	None	7	18	18	"	"	304
1931	55	111	68	76	310	255	55	"	474
1932	53	201	41	93	388	335	53	"	516
1933	116	154	57	26	353	237	116	"	478
1934	168	163	25	28	384	216	168	"	523
1935	115	233	31	30	409	294	115	"	533
1936	109	253	76	31	469	360	109	"	503
Total	619	1471	563	528	3181	2562	619	-	4575

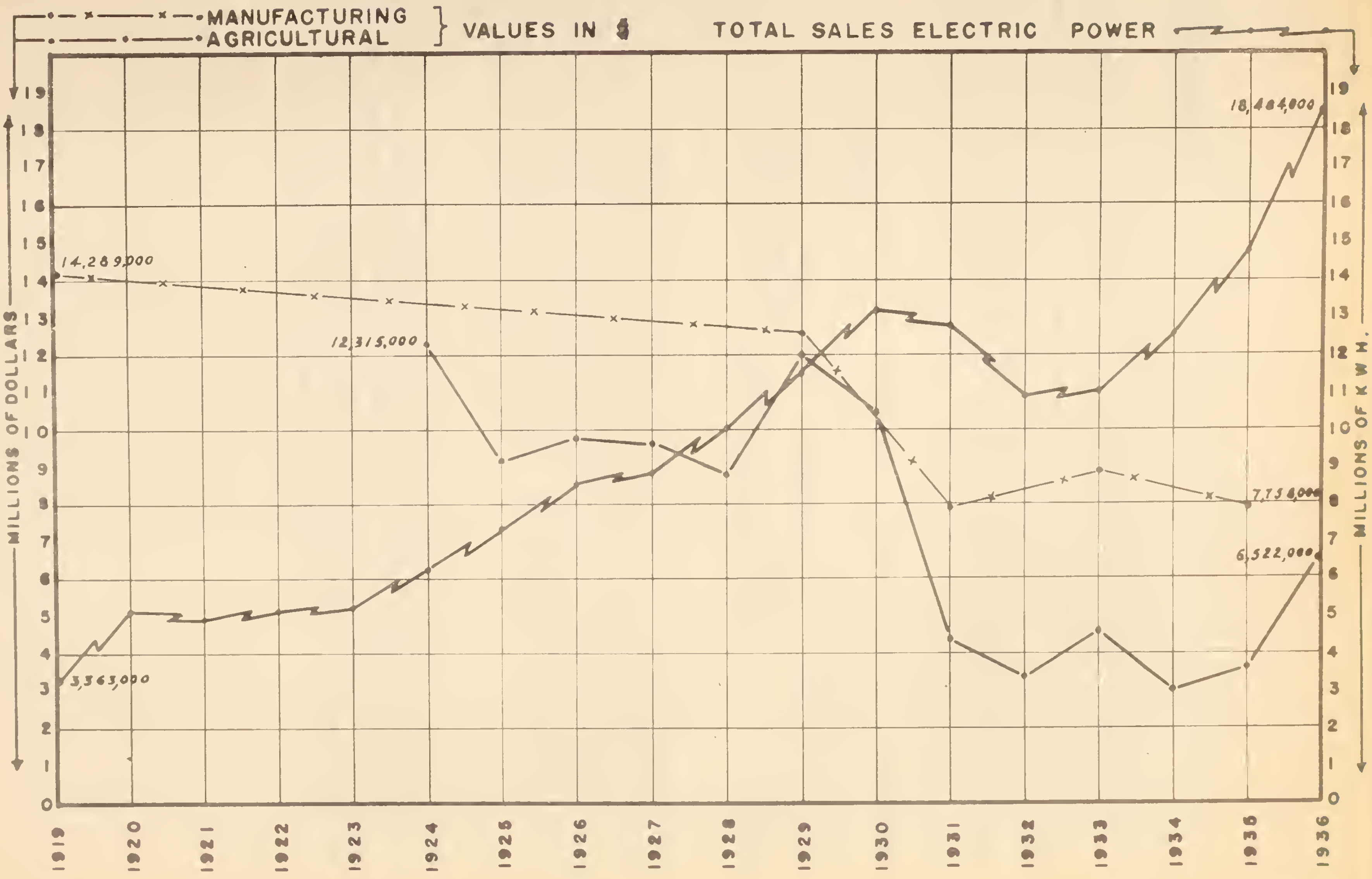
ARKANSAS VALLEY DRY PLAINS
(Cheyenne, Kiowa)

	Urban	Rural	Outside Rural	Total District	Total Consumers
1920	914	1798	4789	7501	None
1921	914	1798	4790	7502	"
1922	914	1798	4790	7502	114
1923	914	1798	4790	7502	114
1924	914	1798	4791	7503	128
1925	914	1798	4792	7504	136
1926	914	1798	4793	7505	None
1927	914	1798	4794	7506	None
1928	914	1798	4795	7507	274
1929	914	1798	4796	7508	478
1930	1269	1693	4547	7509	304
1931	1300	1734	4656	7690	474
1932	1402	1864	5024	8290	516
1933	1393	1859	4988	8240	478
1934	1345	1809	4806	7960	523
1935	1281	1757	4562	7600	533
1936	1164	1590	4146	6900	503
Total	18294	30286	80649	129229	4575

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	None	None	None	36.1	None	None
1921	"	"	"	36.1	"	"
1922	4	11	28	36.1	4.2	1.5
1923	4	13	42	36.1	4.2	1.5
1924	4	18	39	36.1	4.7	1.7
1925	4	28	536	36.1	5.0	1.8
1926	None	None	None	36.1	None	None
1927	"	"	"	36.1	"	"
1928	4	107	1066	36.1	10.1	3.6
1929	4	26	141	36.1	17.6	6.3
1930	3	6	58	39.4	10.2	4.0
1931	40	102	653	38.1	15.5	6.1
1932	47	120	751	39.4	15.8	6.2
1933	42	108	737	39.4	14.7	5.8
1934	48	122	735	39.6	16.0	6.5
1935	54,	135	768	39.9	17.2	6.9
1936	68	171	933	39.9	18.2	7.3
Average	24	66	695	37.6	9.4	3.5

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

LOWER ARKANSAS VALLEY DISTRICT



LOWER ARKANSAS VALLEY

The district embraces the counties of Prowers, Bent, Otero and Crowley. It is served by the Southern Colorado Power Company in Crowley and Otero counties; by the Western Public Service Company in the Las Animas and Fort Lyons area; and the Holly plant of the Inland Utilities Company, serving the town of Holly and adjacent territory. The valley between Hasty and Granada is served by the Lamar Municipal Plant. The Southern Colorado Power Company serves, by transmission from its Pueblo plant, Fowler, Manzanola, Rocky Ford, Swink, La Junta, Ordway, Sugar City, Crowley and adjacent territory.

The location and capacity of the plants in the Lower Arkansas district are as follows:

Holly.	Inland Utilities Company	internal combustion	120 KW
Lamar.	Municipal " "	steam	3000 "
Las Animas.	Western Public Service company	"	600 "
	Total installed capacity		3720 "

The district is largely agricultural, with an intensively developed system of irrigation in the settled portion along, or contiguous to the Arkansas River. During the period of study 1919 to 1936 inclusive, total sales of electric current increased from 3,363,000 kwh in 1919 to 18,484,000 kwh in 1936, or an increase of 449%. Of the total sales, about 48% is classed as town usage, and about 52% as industrial usage. A tabulation showing details of classified sales is presented below.

Accompanying the sales tabulation is one showing details of population distribution within the district as related to sales of electric current of the population of the serviceable zone. About 48% is classified as urban about 52% as rural with the zone. In the district the urban population represents 41% of total. The remainder is rural population. The kwh sales per consumer is relatively high for the area, being 2005 kwh.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

DISTRICT - LOWER ARKANSAS VALLEY

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Towns	Sales to Industry	Mining	No. Cons
1919	1877	553	676	257	3363	1486	1877	None	2318
1920	2389	1186	1104	423	5102	2713	2389	"	2764
1931	2050	1254	1111	453	4868	2818	2050	"	2829
1922	2351	1294	1113	370	4128	2777	2351	"	2934
1923	1620	1161	1162	1293	5236	3616	1620	"	2785
1924	2839	1188	1014	1258	6299	3460	2839	"	2796
1925	3896	1316	1067	1028	7307	3411	3896	"	3008
1926	5416	1392	1143	628	8579	3163	5416	"	3270
1927	5370	1578	1227	649	8824	3454	5370	"	4228
1928	6227	1828	1363	661	10079	3852	6227	"	5051
1929	7052	2264	1574	614	11504	4452	7052	"	5642
1930	8001	2528	2018	663	13210	5209	8001	"	6563
1931	7415	3006	1848	458	12727	5312	7415	"	6476
1932	4647	2844	1573	1848	10912	6265	4647	"	6331
1933	6475	2818	1419	341	11053	4578	6475	"	6361
1934	5198	3011	1621	2746	12576	7378	5198	"	6906
1935	6709	3273	1916	2810	14708	7999	6709	"	7683
1936	9643	4085	2044	2712	18484	8841	9643	"	7445
Total	89175	36579	24993	19212	169959	80784	89175	--	85391

LOWER ARKANSAS
(Counties:Crowley,Otero,Bent, Prowers)

	Zone Urban	Zone Rural	Outside Rural	Total District	Total Consumers
1920	20223	23613	8720	52556	2764
1921	20309	23672	8741	52722	2829
1922	20395	23732	8762	52889	2934
1923	20481	23792	8783	53056	2785
1924	20567	23852	8804	53223	2796
1925	20650	23912	8825	53390	3008
1926	20789	23972	8846	53557	3270
1927	20825	24032	8867	53724	4228
1928	20911	24091	8887	53889	5051
1929	20997	24149	8908	54054	5642
1930	24095	24375	5750	54220	6563
1931	25558	25871	6121	57550	6476
1932	25475	26012	6253	57740	6331
1933	24823	25464	6163	56450	6361
1934	23953	24505	5912	54370	6906
1935	23593	23881	5646	53120	7683
1936	23401	23540	5459	52400	7446
Total	376998	412465	129447	918910	83073

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	97	116	1488	83.4	6.3	5.2
1921	92	110	1720	83.4	6.3	5.3
1922	96	116	1747	83.4	6.6	5.5
1923	98	118	1915	83.4	6.3	5.2
1924	118	141	2252	83.4	6.3	5.2
1925	136	164	2429	83.4	6.7	5.6
1926	160	191	2626	83.4	7.3	6.1
1927	164	196	2086	83.4	9.5	7.9
1928	186	223	1995	83.4	10.9	9.3
1929	212	254	2039	83.4	12.5	10.4
1930	244	273	2060	89.4	13.9	12.1
1931	222	248	1966	89.4	12.5	11.2
1932	189	213	1723	89.1	12.2	10.9
1933	196	220	1737	89.1	12.6	11.2
1934	231	260	1821	89.1	14.2	12.7
1935	277	308	1915	89.4	16.1	14.4
1936	353	394	2482	89.6	15.8	14.2
Average	181	211	2005	85.9	10.5	9.0

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

ARKANSAS DRY PLAINS

BACA COUNTY

The district, consisting of Baca County only, lies in the low plains region of Colorado, and due to great variability of annual rainfall, may be classed as a dry plains area. It is segregated as a consumer of electrical energy, on account of the isolated nature of its service.

The district is by the plant and transmission system of the Baca County division of the Highland Utilities Company. The company operates an internal combustion plant at Springfield. Capacity 356 kw.

The district is almost entirely a dry farm, stock grazing area. There is a small area of irrigated lands near Two Buttes in the northern part of the county.

The record of electric current consumption dates from 1928. The sales increase from 60,000 wh in 1928 to 442,000 kwh in 1936, or an increase of 637% of the total sales, 74% is classed as town usage, 26% as industrial. See tabulation for details.

The accompanying tabulation figures indicate that urban population with the serviceable zone amounts to 18% of zone total. In the district the urban population represents 13.5% of the total district population.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - BACA COUNTY

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to Towns	Sales to Industry	Mining	No.of Consum.
1919	None	None	None	None	None	None	None	None	None
1920	"	"	"	"	"	"	"	"	"
1921	"	"	"	"	"	"	"	"	"
1922	"	"	"	"	"	"	"	"	"
1923	"	"	"	"	"	"	"	"	"
1924	"	"	"	"	"	"	"	"	"
1925	"	"	"	"	"	"	"	"	"
1926	"	"	"	"	"	"	"	"	"
1927	"	"	"	"	"	"	"	"	"
1928	15	25	16	4	60	45	15	"	"
1929	37	86	57	13	193	156	37	"	"
1930	80	182	131	45	428	348	80	"	768
1931	158	195	74	55	482	324	158	"	700
1932	145	167	62	61	435	290	145	"	700
1933	124	132	52	58	366	242	124	"	686
1934	137	208	56	-	401	264	137	"	721
1935	59	234	57	47	397	338	59	"	697
1936	75	211	110	46	442	367	75	"	711
Total	830	1440	605	329	3204	2374	830	-	4983

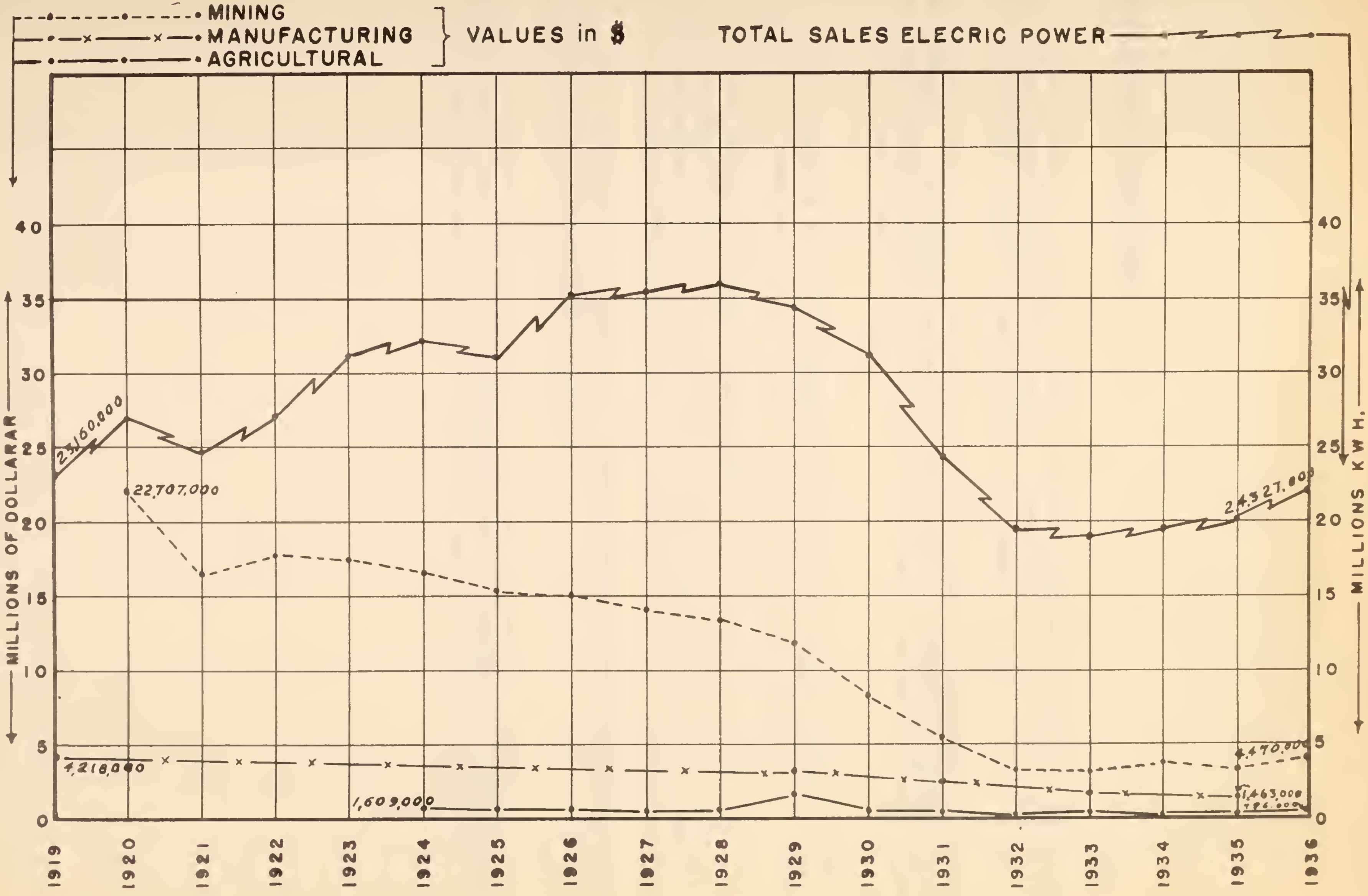
ARKANSAS VALLEY DRY PLAINS
(Baca County)

	Zone		Outside	Total	Total
	Urban	Rural	Rural	District	Consumers
1920	388	5614	2719	8721	None
1921	396	5733	2776	8905	"
1922	404	5852	2834	9090	"
1923	412	5971	2892	9275	"
1924	420	6090	2950	9460	"
1925	428	6209	3008	9645	"
1926	436	6328	3066	9830	"
1927	444	6447	3124	10015	"
1928	452	6566	3182	10200	"
1929	460	6685	3240	10385	"
1930	2456	6384	1730	10570	768
1931	2936	7644	2060	12640	700
1932	3087	8037	2166	13290	700
1933	3329	8666	2335	14330	686
1934	3361	8751	2358	14470	721
1935	2950	7680	2070	12700	697
1936	2555	6652	1793	11000	711
Total	24914	115309	44303	184526	4983

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	None	None	None	68.8	None	None
1921	"	"	"	68.8	"	"
1922	"	"	"	68.8	"	"
1923	"	"	"	68.8	"	"
1924	"	"	"	68.8	"	"
1925	"	"	"	68.8	"	"
1926	"	"	"	68.8	"	"
1927	"	"	"	68.8	"	"
1928	"	"	"	68.8	"	"
1929	"	"	"	68.8	"	"
1930	41	48	557	83.6	8.7	7.3
1931	38	46	689	83.7	6.6	5.5
1932	33	39	622	83.7	6.3	5.3
1933	12	14	242	83.7	5.7	4.8
1934	27	33	556	83.7	5.9	5.0
1935	31	37	570	83.7	6.5	5.5
1936	40	48	625	83.7	7.7	6.5
Average	17	23	643	76.0	3.6	2.7

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

SOUTHERN COLORADO COAL FIELD



SOUTHERN COLORADO COAL FIELDS

The district consists of Las Animas and Huerfano counties. It is the largest coal producing field in Colorado. Consequently, most of the electric current generated is sold for heavy industrial usage.

The district is served by the Trinidad Electric Transmission, Railroad and Gas Company. The company operates steam plants at Trinidad and Walsenburg with a total capacity of 17,500 kwh. There is a small internal combustion plant, which is no longer operated at Kim.

The district is an agricultural and industrial region, much of the region being a grazing and dry farm area, with a scattered population.

Total sales of electric current rose from 23,100,000 kwh in 1919 to 24,328,000 kwh in 1936, or about 5% increase. In 1926-27 and 1928, the average of sales was about 36,000,000 kwh. The district tabulation of sales reflects the extremes experienced by industrial districts in depression years.

The tabulation of population trends indicates that within the serviceable zone the population has been divided about 45% urban, 55% rural. In the district, 35% of the population is urban.

The district is one of the heaviest users of electric energy, per consumer, in the state, the figure being 5,629 kwh per consumer. Of total sales, 11.4% is classed town usage; 1.7% as industrial usage; 86.9% as mining usage.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - SOUTHERN COAL FIELD

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to Towns	Industry	Mining	No. of Consum.
1919	21466	670	747	277	23160	1694	74	21392	3936
1920	25280	618	942	280	27120	1840	343	24937	4028
1921	22580	906	1050	320	24856	2276	271	22309	3793
1922	24485	1008	1083	516	27092	2607	6	24479	4420
1923	28466	1105	1254	710	31535	3069	24	28442	4706
1924	28611	1159	1285	834	31889	3278	6	28605	5162
1925	27898	1217	1259	818	31192	3294	7	27891	4897
1926	32373	1195	1225	544	35337	2964	291	32082	4680
1927	32849	1257	1367	522	35995	3146	475	32374	4893
1928	33707	1400	1550	543	37200	3493	1750	31957	5443
1929	30672	1577	1618	558	34425	3753	651	30021	5563
1930	29070	1698	1590	482	32840	3770	532	28538	5635
1931	21218	1790	1385	501	24894	3676	590	20628	5363
1932	16256	1792	1222	400	19670	3414	606	15650	5009
1933	15139	1780	1135	374	18428	3289	598	14541	4962
1934	15629	1894	1299	348	19170	3541	652	14977	5166
1935	17074	2014	1389	325	20802	3728	736	16338	5300
1936	20147	2221	1639	321	24328	4181	986	19161	5666
Total :	442920	25301	23039	8673	499933	57013	8598	434322	88622

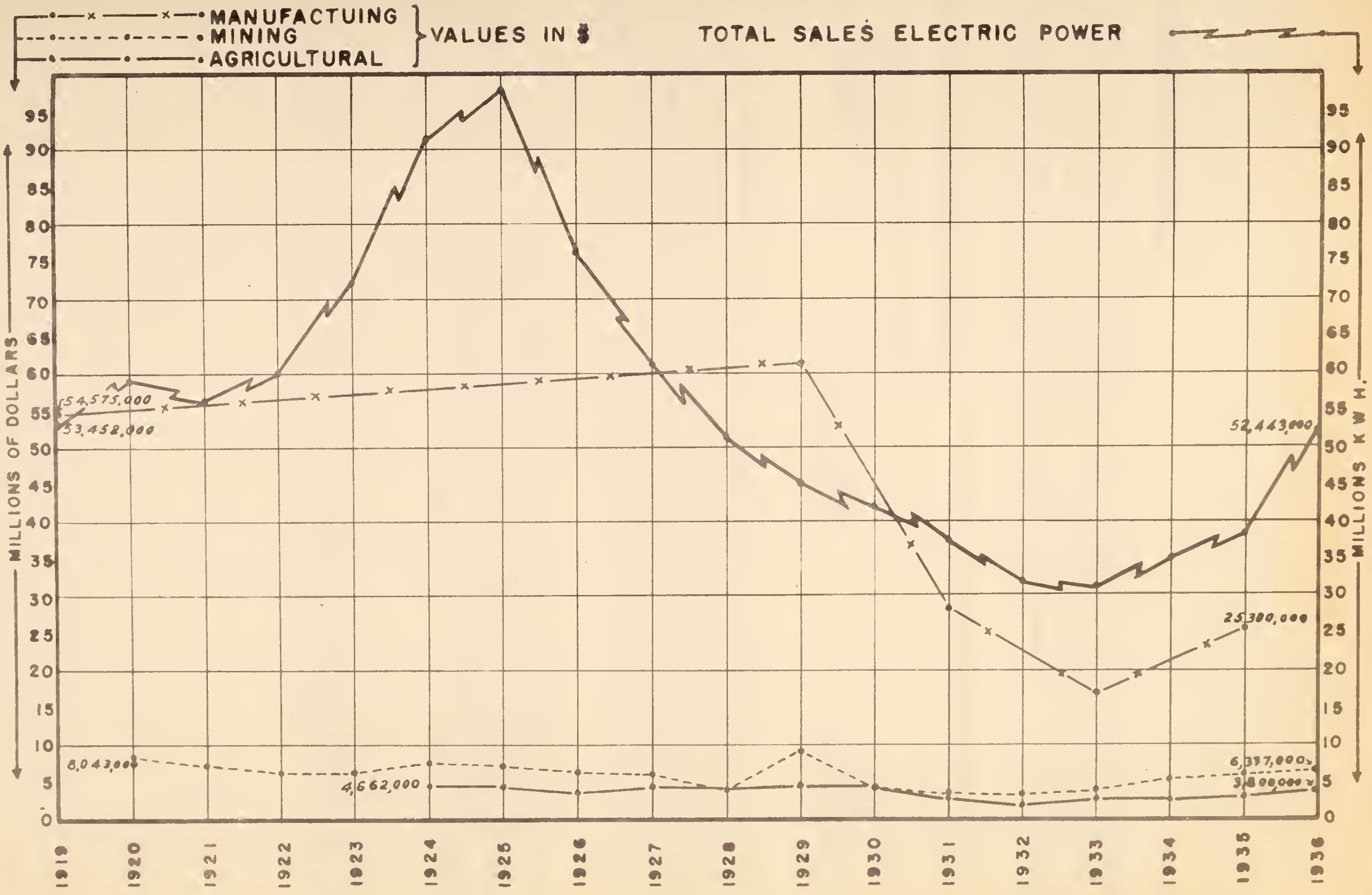
SOUTHERN COLORADO COAL FIELD
(Huerfano, Las Animas)

	Zone		Outside	Total	Total
	Urban	Rural	Rural	District	Consumers
1920	18066	24074	13714	55854	4028
1921	17966	23965	13645	55576	3793
1922	17866	23856	13576	55298	4420
1923	17766	23747	13507	55020	4706
1924	17666	23637	13438	54741	5162
1925	17566	23527	13369	54462	4897
1926	17466	23417	13300	54183	4680
1927	17366	23307	13231	53904	4893
1928	17267	23197	13162	53626	5443
1929	17168	23087	13098	53348	5563
1930	20865	23090	9015	53070	5635
1931	20909	23006	9015	52930	5363
1932	20714	22827	8919	52460	5009
1933	19812	21700	8578	50090	4962
1934	19415	21287	8398	49100	5166
1935	19534	21569	8397	49500	5300
1936	19585	21579	8436	49600	5666
Total	317097	390872	194793	902762	84686

	KWH Per Capita Total Dist.	KWH Per Capita Service Zone	KWH Per Consumer	A	B	C
1920	486	644	6732	73.6	9.5	7.2
1921	447	590	6553	75.4	9.0	6.8
1922	489	648	6129	75.4	10.5	7.9
1923	573	759	6700	73.6	11.3	8.5
1924	582	772	6177	73.6	12.4	9.3
1925	579	759	6349	75.4	11.9	8.9
1926	652	864	7552	75.4	11.4	8.6
1927	667	884	7356	75.4	12.0	9.0
1928	693	919	6834	75.4	13.4	10.1
1929	645	852	6186	75.4	13.8	10.4
1930	619	746	5834	83.0	12.7	10.6
1931	470	566	4640	83.0	12.2	10.1
1932	375	465	3928	83.0	11.5	9.5
1933	368	444	3713	82.9	11.9	9.9
1934	390	471	3117	82.9	12.6	10.5
1935	420	506	3925	83.0	12.9	10.7
1936	490	591	4290	83.0	13.7	11.4
Averages	528	673	5629	78.4	11.9	9.4

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

UPPER ARKANSAS VALLEY DISTRICT



UPPER ARKANSAS DISTRICT

The district embraces Pueblo, Fremont, Teller and Custer Counties. The industrial production of the district is second only to the Upper Platte district. In Teller County, the Cripple Creek Mining district is one of the great metal mining regions of the west. Consequently, the amounts of electric power used in heavy industry and in mining are very great.

The district is served by the Southern Colorado Power Company. The company has three plants operating:

Pueblo	Southern Colo. Power Co.	steam capacity -	11,468 kw.
Canon City.	" "	" "	11,288 "
Skaguay.	" "	hydro "	1,440 "
	Total capacity		24, 196 kw

The transmission lines of the company serve the Pueblo area, Florence, Canon City, Wet Mountain Valley and the Cripple Creek mining regions. The total sales of electric current have risen from 53,451,000 kwh in 1919 to 98,920,000 in 1925. The sales fell to 31,487,000 kwh in 1933 and rose to 52,443,000 in 1936. The loss as between 1919 and 1936 was 2%, 29% was classified as town usage; 49% as industrial, and 22% as used in mining operations. Full sales detail are shown in district tabulation.

The figures showing population in the district as related to sales reveal a very large urban proportion. The percentages of urban and rural population throu out the period are, respectively, urban 75%; rural 25%. The percentage of urban population to total population in the district is 70% urban. The upper Arkansas district is a large consumer of electric energy, showing 3109 kwh per consumer over the period 1919 to 1936.

The district is chiefly an industrial one. It has in addition, a fairly large agricultural production, generally intensively irrigated. Through the period under study its mining production has been the greatest in Colorado. Next to the Upper Platte, it is the most productive region in the state.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - UPPER ARKANSAS VALLEY

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to Towns	Sales to Industry	Sales to Mining	No. of Consumers
1919	42695	3867	5501	1388	53451	10756	24913	17782	15332
1920	46575	4472	6780	1397	59224	12649	33036	13539	17310
1921	42893	4739	6382	1282	55296	12403	26773	16120	16775
1922	47492	4986	6993	1400	60871	13379	33754	13738	18297
1923	52733	5415	7432	6585	72165	19432	40080	12653	19230
1924	68223	6344	8223	8344	91134	22911	52259	15964	19307
1925	76639	7778	8750	5753	98920	22281	57002	19635	20902
1926	65096	4907	5075	1068	76146	11050	43582	21514	22363
1927	49144	5943	5624	1147	61858	12714	28343	20801	21520
1928	37492	7002	6090	1302	51886	14394	18692	18800	21538
1929	29754	7980	6231	1337	45302	15548	20414	9340	21325
1930	25617	9063	6622	1374	42676	17059	18844	6773	25073
1931	21193	9441	6183	1451	38268	17075	16618	4575	20038
1932	17015	9054	5340	1380	32789	15774	12528	4487	19762
1933	16673	8659	4895	1260	31487	14814	11973	4700	19976
1934	17492	9351	5395	3032	35270	17778	11372	6120	20220
1935	19103	10149	5976	3086	38314	19211	13013	6090	20911
1936	30651	11602	6857	3333	52443	21792	23775	6876	22439
Total	706480	130752	114349	45919	997500	291020	436973	219507	362318

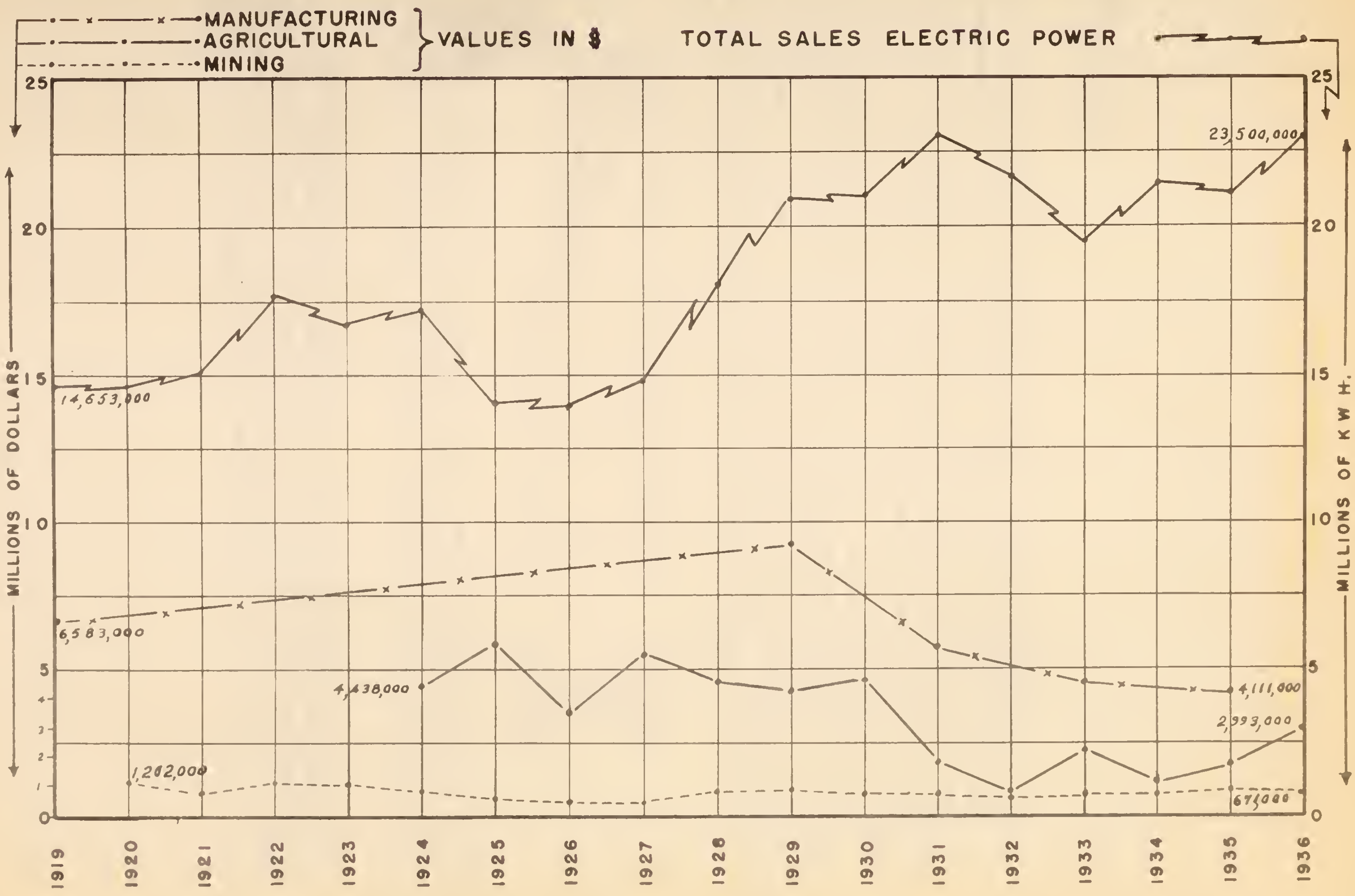
UPPER ARKANSAS VALLEY
(Counties: Pueblo, Custer, Fremont, Teller)

	Zone		Outside	Total	Total
	Urban	Rural	Rural	District	Consumers
1920	58526	19719	6084	84389	17310
1921	59115	19855	6100	85070	16775
1922	59644	19991	6116	85751	18297
1923	60173	20127	6132	86432	19230
1924	60701	20263	6148	87112	19307
1925	61229	20399	6164	87792	20902
1926	61758	20535	6190	88473	22363
1927	62287	20671	6196	89154	21520
1928	62816	20807	6212	89835	21538
1929	63345	20943	6229	90517	21325
1930	64718	21971	4510	91199	25073
1931	64419	21750	4431	90600	20038
1932	63690	21568	4432	89690	19762
1933	61570	21040	4390	87000	19976
1934	61437	21011	4432	86880	20220
1935	60649	20796	4455	85900	20911
1936	60355	20778	4467	85600	22439
Total	1046492	352224	92678	1491394	303611

	KWH Per Capita Total Dist.	KWH Per Capita Serv.Zone	KWH Per Consumer	A	B	C
1920	702	757	3421	92.7	22.1	20.5
1921	650	802	3296	92.8	21.2	19.7
1922	710	764	3327	92.8	23.0	21.3
1923	835	898	3753	92.9	23.9	22.2
1924	105	112	4720	92.9	23.8	22.2
1925	113	121	4733	92.9	25.6	23.8
1926	861	925	3404	93.0	27.2	25.3
1927	682	745	2874	93.0	25.9	24.1
1928	578	620	2409	93.0	25.7	24.0
1929	500	537	2124	93.1	25.3	23.4
1930	468	492	2011	95.0	24.3	23.1
1931	412	445	1909	95.1	23.2	22.1
1932	366	386	1659	95.0	23.1	22.0
1933	362	381	1578	94.9	24.1	22.1
1934	405	428	1745	94.9	24.5	23.2
1935	446	471	1832	94.8	25.6	24.3
1936	612	646	2337	94.8	27.6	26.2
Average	633	673	3109	93.8	21.7	20.4

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

PIEDMONT DISTRICT



PIEDMONT DISTRICT

Tje district embraces the counties of El Paso, Elbert and Douglas. The Mountain Utilities Corporation, operating in Elbert County; the Commonwealth Utilities Corporation, operating in El Paso, Elbert and Lincoln counties, and the Colorado Springs Municipal system and the Central Colorado Power, operating in Douglas county distribute the current consumed in the district. The Central Colorado Power Company supplys current to Louviers-Castle Rock region. The Mountain Utilities serves the Elizabeth, Elbert area from the company plant at Elizabeth, and it also serves the region from Larkspur to Woodland Park with current purchased wholesale from the Colorado Springs system. The Commonwealth Utilities Corporation transmits energy from Colorado Springs to Limon with current purchased from the Colorado Springs system. It has a stand-by plant at Limon, used as needed. The Colorado Springs system serves Colorado Springs, Manitou and adjacent territory, and sells wholesale to Fountain, in addition to sales to other utilities.

Colorado Springs.	Municipal	steam	capacities	- 10,000 kw
Manitou.	"	hydro	"	3,500 "
Ruxton Park.	"	"	"	1,000 "
Limon	Commonwealth Utilities Co.	Int. Comb.		136 "
Elizabeth.	Mountain "	" "	"	98 "
	Total installed capacity			14,734 kw

The total sales of electric current rose from 14,765,000 kwh in 1919. to 24,400,000 in 1936, or an increase of 65%, 44% has been classified as town usage, and 56% as industrial. The average consumer use through the period is 1431 kwh.

The percent of urban population within the serviceable zone is large, the urban 73%, the rural 27%. The percent of urban population to district. population is about 63%. The district has had a surprisingly large production in values from agriculture. Values of mining products are chiefly from coal. Through the period, the district ranked fourth in the state in values of manufactured products.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - PIEDMONT

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to Towns	Industry	Mining	No. of Consumers
1919	10544	2085	1120	1016	14765	4221	10544	None	10397
1920	10585	2084	1096	962	14727	4142	10585	"	10270
1921	10628	2449	1230	1054	15361	4733	10628	"	11734
1922	12554	2790	1211	1080	17635	5081	12554	"	12119
1923	11945	2516	1172	1183	16816	4871	11945	"	11734
1924	12458	2543	1165	1103	17269	4811	12458	"	11590
1925	7584	3163	2281	1001	14029	6445	7584	"	12082
1926	7100	3224	2224	1481	14029	6929	7100	"	12265
1927	8004	3914	1628	1580	15126	7122	8004	"	13429
1928	10824	4487	1856	1722	18889	8065	10824	"	13938
1929	12572	4883	2497	1861	21813	9241	12572	"	13555
1930	12208	5614	2888	1904	22614	10406	12208	"	13800
1931	13361	6047	3108	2086	24602	11241	13361	"	14205
1932	11757	6480	2719	1976	22932	11175	11757	"	14123
1933	9341	6579	2499	1930	20349	11008	9341	"	14702
1934	10688	6963	2783	1934	22368	11680	10688	"	15181
1935	9326	7578	3311	1983	22198	12872	9326	"	16065
1936	8938	8358	5009	2095	24400	15462	8938	"	16433
Total:	190417	81757	39797	27951	339922	149505	190417	-	237622

Note:
No statistic power sold for coal mining.

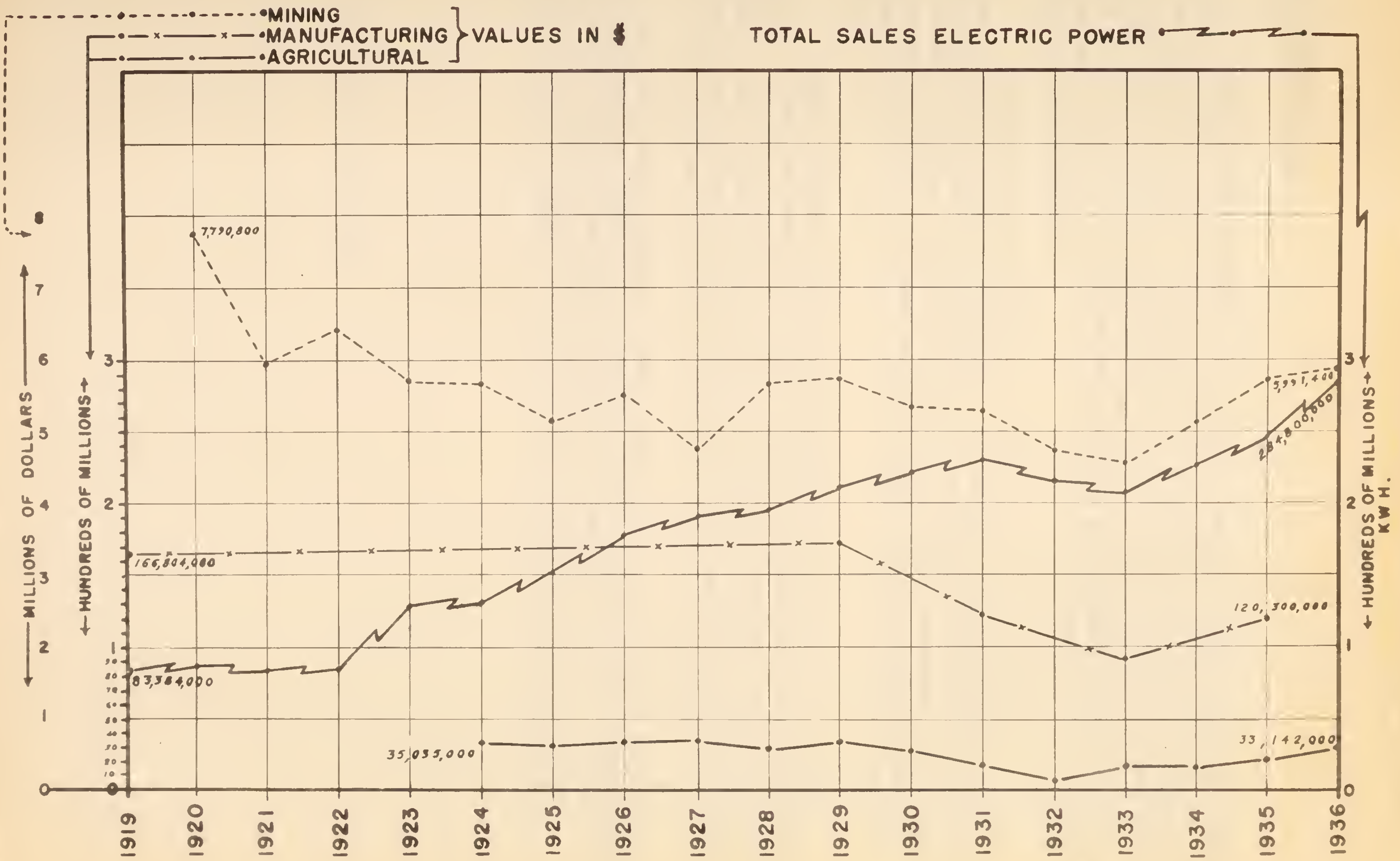
PIEDMONT DISTRICT
(Counties: El Paso, Douglas, Elbert)

	Zone		Outside	Total	Total
	Urban	Rural	Rural	District	Consumers
1920	33507	13103	7914	54524	10270
1921	33910	13201	7926	55037	11734
1922	34313	13299	7938	55550	12119
1923	34716	13397	7950	56063	11734
1924	35119	13494	7962	56575	11590
1925	35522	13591	7974	57087	12082
1926	35925	13688	7986	57599	12265
1927	36328	13785	7998	58111	13429
1928	36731	13882	8010	58623	13938
1929	37134	13979	8022	59135	13555
1030	37346	14412	7890	59648	13800
1931	37398	14272	7690	59360	14205
1932	38287	14731	8042	61060	14123
1933	38671	14801	8018	61490	14702
1934	37616	14467	7847	59930	15181
1935	38085	14435	7590	60110	16065
1936	37949	14232	7319	59500	16433
Total	618557	236769	134076	989402	227225

	KWH Per Capita Total Dist.	KWH Per Capita Serv.Zone	KWH Per Consumer	A	B	C
1920	270	315	1433	85.4	22.0	18.9
1921	275	326	1309	85.5	24.9	21.3
1922	317	370	1463	85.7	35.4	21.8
1923	300	349	1433	85.8	24.4	20.9
1924	305	355	1490	85.9	23.8	20.4
1925	246	286	1161	86.0	24.6	21.1
1926	243	282	1143	86.1	24.8	21.3
1927	260	295	1126	86.2	26.8	23.1
1928	322	373	1355	86.3	27.5	23.8
1929	369	426	1683	86.4	26.5	22.9
1930	380	437	1639	86.8	26.6	23.1
1931	417	478	1742	87.0	27.4	23.9
1932	376	432	1623	86.8	26.6	23.1
1933	331	381	1384	87.0	27.5	23.9
1934	373	429	1472	86.9	28.1	25.3
1935	370	423	1381	87.3	30.5	26.7
1936	410	467	1483	87.7	31.4	27.6
Average	328	380	1431	86.4	26.6	22.8

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

UPPER PLATTE VALLEY DISTRICT



UPPER PLATTE VALLEY

The district consists of Jefferson, Arapahoe, Adams, Boulder, Larimer and Weld counties. Included in the tabulations of the Upper Platte valley are two subsidiary districts, the High Plains of eastern Weld county, consisting of the operations of small isolated plants east of Greeley, and the Denver Suburban district, which includes sales to towns within a radius of about 25 miles. The district does not include any territory in the Piedmont district. A complete tabulation showing within this limited area has been prepared. The subsidiary districts are not graphed.

The Upper Platte district is served chiefly by the Public Service Company of Colorado and its subsidiary, the Central Colorado Power Company. The latter company distributes in Golden, Morrison, Engelwood, Littleton, Sheridan, Fort Lupton, Johnstown, Milliken, Platteville, Hudson, Keenesburg, Fort Logan and Lookout Mountain. The Home Gas and Electric Company serves Greeley and adjacent territory with current purdhased from the Public Service Company of Colorado.

Other services within the district are: Arvada Electric Company, supplying Arvada and Westminister with current purchased from the Public Service Company. The Evergreen Public Service Company in Evergreen, supplies Kittredge, Troutdale, Brook Forest and Marshdale with current purchased from the Central Colorado Power Company. Dacono, Frederick and Erie maintain municipal distributior with energy purchased from the Public Service Company of Colorado.

The Colorado Light and Power Company owns a small plant at Briggsdale, which supplies that town; and the municipalities of Grover, Fort Collins, Lyons, Loveland and Longmont own plants serving their respective towns. The Boettcher plant of the Colorado Portland Cement Company supplies current, on request, to the Public Service Company for resale in the Fort Collins suburban area.

Note:
Continued on next page.

UPPER PLATTE VALLEY (Concluded from previous page)

The installed capacities of plants within the district are as follows:

Valmont.	Public Service Co.	Steam	Capacity	70,000	kw.
Lacombe.	" " "	"	"	15,900	"
* West.	" " "	"	"	9,250	"
Lafayette.	" " "	"	"	6,000	"
Boulder Canyon.	" " "	Hydro	"	20,000	"
Estes Park.	" " "	"	"	880	"
Estes Park.	" " "	I. C.	"	232	"
Briggsdale.	Colorado L. & P. Co.	I. C.	"	32	"
Grover.	Municipal	I. C.	"	35	"
Fort Collins.	"	Steam	"	3,000	"
Longmont.	"	Hydro	"	400	"
Longmont.	"	I. C.	"	2,140	"
Loveland.	"	Hydro	"	900	"
Loveland	"	I. C.	"	600	"
Lyons.	"	I. C.	"	100	"
Ingleside.	Colorado Portland Cement Co.	Steam	"	5,000	"
	Total Installed Capacity			134,469	kw

The Upper Platte district is by far the largest consumer of electric energy in Colorado. Over the period 1919 - 1936 it has consumed three times the amount of the next largest consumer, the Upper Arkansas valley. The sales increased from 83,384,000 kw in 1919 to 284,776,000 kwh in 1936, or an increase of 242 percent.

Of the total sales 49 percent was classified as town usage, 46 percent as industrial, and 5 percent as mining usage. The increase in use of electric energy has been practically uninterrupted. In 1931 sales of kwh were 230,412,000,th amount fell to 207,900,000 in 1933 but showed a rapid gain from that year to 1936.

The population distribution is, of course, predominantly urban. Within the zone, about 85 percent of the population is urban, and 15 percent rural. In the district 78 percent is urban.

---

* The West plant is unused at present.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - UPPER PLATTE VALLEY
(Including Denver Suburban and North High Plains)

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to Towns	Sales to Industry	Sales to Mining	No. of Consumers
1919	31113	26175	16647	9449	83384	52271	26947	4166	71682
1920	36960	25515	17609	9625	89709	52749	21561	15399	76704
1921	27755	27483	17836	10209	83283	55528	24635	3120	82947
1922	29920	27377	18498	12002	85797	55877	26114	3806	89832
1923	53029	31478	29384	15669	129560	76531	47529	5500	96468
1924	31985	44761	24516	28656	129918	97933	27537	4448	97013
1925	53722	50110	33441	18465	155738	102016	46763	6959	99162
1926	93792	29535	45688	8250	177265	83473	87172	6620	106230
1927	108895	31430	44171	8733	193229	84334	102935	5960	128773
1928	108892	33906	44578	8964	196340	87448	104159	4733	136917
1929	116808	38629	47856	7999	211292	94484	111760	5048	120576
1930	121265	43333	49640	9131	223369	102104	115724	5541	122362
1931	122288	47839	51319	8966	230412	108124	116480	5808	122964
1932	113390	49413	44448	9165	216416	103026	107860	5530	122413
1933	109502	48204	40855	9339	207900	98398	104438	5064	121830
1934	123962	51418	43514	9178	228072	104110	120008	3954	122626
1935	137540	55360	46256	9000	248156	110616	129324	8216	122777
1936	164039	60834	50673	9230	284776	120737	154254	9785	127021
tal	1584857	722800	666929	200030	3174616	1589759	1475200	109657	1968297

Note: Denver Suburban and North Plains included in Upper Platte and shown separately in tabular form for discussion.

Estimated mining power - Boulder District.

UPPER PLATTE VALLEY
(Counties; Denver, Arapahoe, Adams, Jefferson, Boulder, Larimer, Weld)
(Including Denver Suburban and North High Plains)

	Zone		Outside	Total	Total
	Urban	Rural	Rural	District	Consumers
1920	329027	50109	33743	412879	76704
1921	333726	51567	34624	419917	82947
1922	338425	53026	35505	426956	89832
1923	343123	54485	36386	433994	96468
1924	347821	55944	37268	441033	97013
1925	352519	57403	38149	448071	99162
1926	357215	58862	39031	455108	106230
1927	361911	60321	39912	462144	128773
1928	366607	61780	40794	469181	136917
1929	371303	63238	41675	476216	120576
1930	376900	72676	33675	483251	122362
1931	379989	79993	28998	488980	122964
1932	380345	81810	29658	491813	122413
1933	382982	81596	29422	494000	121830
1934	383152	80644	28904	492700	122626
1935	387004	83008	29388	499400	122777
1936	390759	81926	29115	501800	127021
Total	6182808	1128388	586247	7897443	1896615

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	218	237	1170	91.7	20.2	18.5
1921	198	216	1004	91.7	21.3	19.8
1922	200	219	955	91.7	22.9	21.0
1923	298	327	1343	91.6	24.3	22.2
1924	292	322	1329	91.5	24.0	21.9
1925	347	355	1571	91.5	24.2	22.1
1926	389	426	1669	91.4	25.5	23.7
1927	418	457	1500	91.3	30.5	27.8
1928	418	458	1434	91.3	31.9	29.1
1929	443	486	1752	91.2	27.7	25.3
1930	463	497	1825	93.0	27.2	25.3
1931	472	500	1874	94.0	26.7	25.1
1932	439	468	1768	94.0	26.5	24.8
1933	421	448	1706	94.0	26.2	24.6
1934	462	492	1860	94.1	26.4	24.0
1935	496	528	2021	94.2	26.1	24.5
1936	560	602	2242	94.0	26.9	25.3
Average	391	423	1629	92.6	25.9	24.0

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

DENVER SUBURBAN DISTRICT (Sub - DISTRICT OF UPPER PLATTE)

The area of the district lies about 20 to 25 miles around the city of Denver. The figures shown in the consumer and population tabulations are included in the Upper Platte district. The district is presented in order to show the large consumer usage adjacent to the metropolis, excluding the Denver figures. It is served by the Public Service Company of Colorado. No plant installation is shown, as the Public Service Company of Colorado distributes directly, or wholesales for distribution all current used in the district.

Total sales have increased from 2,286,000 kwh in 1919 to 11,000,000 kwh in 1936, or an increase of 381 percent. The rate of increase has been consistent except for slight recessions in 1932, 1933 and 1934. Of total sales 50.5 percent is classed as town usage, and 49.5 percent as industrial. Residential lights amounts to 21 percent of total sales. Commercial power to 49.5 percent.

From an agricultural standpoint, the producing areas within the district reflect an intensive irrigated development. Not much coal is produced within the district, as the coal fields lie, generally, to the north of the area.

Manufacturing is represented by large interests in Golden, Arvada, Brighton and Littleton.

The consumer use is 1,117 kwh per consumer annually, while the Platte consumer use is 1,629 kwh.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - DENVER SUBURBAN

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to Towns	Sales to Industry	Sales to Mining	No. of Consumer
1919	1312	412	349	213	2286	974	1312	None	3058
1920	1330	577	425	273	2605	1275	1330	"	3604
1921	1933	740	468	249	3390	1457	1933	"	4049
1922	2288	813	460	334	3895	1607	2288	"	4467
1923	2592	911	554	441	4498	1906	2592	"	4921
1924	3109	1094	520	616	5339	2230	3109	"	5288
1925	4230	1214	716	610	6770	2540	4230	"	6105
1926	NO DATA AVAILABLE FOR THIS YEAR								
1927	4811	1831	619	239	7500	2689	4811	"	6288
1928	5032	2051	766	264	8113	3081	5032	"	6678
1929	5224	2383	907	659	9173	3949	5224	"	7175
1930	4853	2714	1112	605	9284	4431	4853	"	7282
1931	4050	2890	1392	581	8913	4863	4050	"	7307
1932	2865	2909	1291	580	7645	4780	2865	"	7124
1933	2483	2788	1222	565	7058	4575	2483	"	6909
1934	2947	3001	1383	565	7896	4949	2947	"	7205
1935	3210	3370	1596	571	8747	5537	3210	"	7437
1936	4248	3985	2074	693	11000	6752	4248	"	7908
Total	56517	33683	15854	8058	114112	57595	56517	"	102105

These data included in Upper Platte Valley District.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 K.W.H

District - NORTHERN HIGH PLAINS

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to Towns	Industry	Mining	No. of Consume
1919	None	None	None	None	None	None	None	None	None
1920	"	"	"	"	"	"			
1921	"	2	1	"	3	3	"	"	18
1922	"	None	None	"	None	None	"	"	None
1923	"	"	"	"	"	"	"	"	"
1924		"	"	"	"	"	"	"	"
1925	"	"	"	"	"	"		"	"
1926	"	"	"	"	"	"	"	"	"
1927	"	"	"	"	"	"	"	"	
1928	"	"			"		"	"	"
1929	"	"	"	"	"		"	"	
1930	"	"		"			"		
1931	"	9	6	"	15	15	"	"	80
1932	"	11	12	"	23	23	"	"	80
1933	"	22	21	"	43	43	"	"	82
1934	4	17	14		35	31	4		86
1935	2	17	19	"	38	36	2		90
1936	None	6	8		14	14	None	None	36
Total	6	84	81	None	171	165	6	-	472
	3.51	49.1	47.4		100	96.1	3.5		

These data included in Upper Platte Valley.

NORTH HIGH PLAINS (SUB-DISTRICT OF THE UPPER PLATTE)

The figures for the district which includes the Briggsdale and Grover plants, have been intermittent and the records incomplete. The district is shown only to emphasize the isolated nature of the region so far as the distribution of electric current is concerned. The scanty data are included in the Upper Platte district.

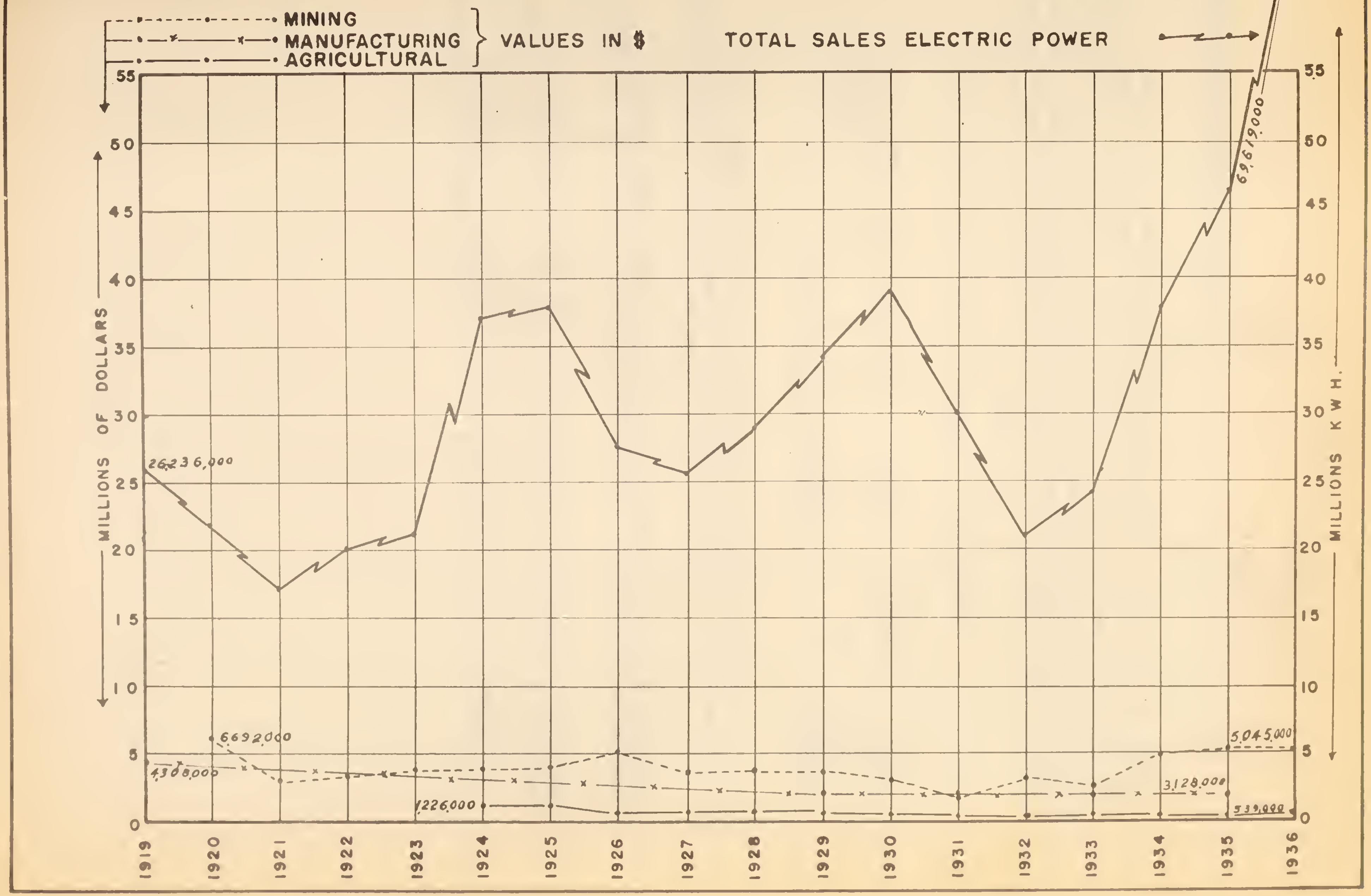
The region is one of grazing and dry farming, with a scattered population and limited resources. It was seriously affected by the prolonged drought.

The plants and their capacities are as follows:

Briggsdale.	Colorado L. & P. Co.	I.C.	Capacity	32 kw.
Grover.	Municipal	I.C.	"	35 "
	Total Installed Capacity			67 kw.

Consumer usage is small, being 369 kwh per consumer annually from 1931 - 1936. Practically all current sold is for town usage about equally divided between residential and business lighting.

CENTRAL COLORADO MINING DISTRICT



CENTRAL COLORADO MINING DISTRICT

The district comprises the counties of Clear Creek, Gilpin, Summit, Park and Lake. It has been a user of electric energy since the earliest days of the industry in Colorado. It is essentially a mining area, embracing the Clear Creek, Breckenridge and Leadville mining regions, for many years one of the greatest producers of metalliferous ore values in America. Its production during the period of study amounts to 19 percent of the state total, ranking below the Cripple Creek and San Juan regions, only.

The location and capacity of plants is as follows:

Fall River.	Public Service Co.	Hydro	Capacity	600 kw.
Georgetown.	" " "	"	"	1300 "
Dillon.	" " "	"	"	1000 "
Leadville.	" " "	Steam	"	1925 "
	Total Installed Capacity.			4825 "

Total sales have increased from 26,236,000 kwh in 1919 to 69,619,000 in 1936, or an increase of 165 percent. Sales to mining are 95 percent of the total, and the town usage is five percent.

Consumer usage ranks with the San Juan district, being 9,306 kwh per consumer for the period. In 1934, 1935 and 1936 the consumer use averaged 13 500 kwh.

Of the population in the serviceable zone, 79 percent is classified as urban, 21 percent rural. In the district, 61 percent is urban population.

The district is served entirely by the Public Service Company of Colorado from the Shoshone plant.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - CENTRAL COLORADO MINING

	Com.	Residence	Business	Municipal	Total	Sales to			No. of
Year	Power	Lighting	Lighting	Usage	Sales	Towns	Industry	Mining	Consume
1919	24917	504	544	271	26236	1319	768	24149	3044
1920	20514	477	542	275	21808	1294	---	20514	2907
1921	16118	464	550	261	17393	1275	---	16118	2755
1922	18683	447	539	250	19919	1236	372	18311	2760
1923	19617	469	566	262	20914	1297	391	19226	2760
1924	34161	726	881	529	36297	2136	672	33489	5525
1925	36453	800	977	590	38820	2367	755	35698	5556
1926	26238	569	721	260	27788	1550	199	26039	2676
1927	24039	642	785	276	25742	1703	190	23849	2946
1928	27911	570	767	164	29412	1501	267	27644	2620
1929	33306	646	712	168	34832	1526	224	33082	3158
1930	37561	706	703	191	39161	1600	180	37381	3947
1931	28797	752	589	183	30321	1524	186	28611	3055
1932	19628	746	584	165	21123	1495	221	19407	3027
1933	22740	747	587	149	24223	1483	275	22465	3246
1934	36027	900	739	146	37812	1785	348	35679	3612
1935	44908	1030	909	133	46980	2072	434	44474	3758
1936	67156	1189	1134	140	69619	2463	637	66519	3947
Total	538774	12384	12829	4413	568400	29626	6119	532655	58255

CENTRAL COLORADO MINING DISTRICT
(Counties: Clear ,Creek,Gilpin,Park,Summit,Lake)

	Zone		Outside Rural	Total District	Total Consumers
	Urban	Rural			
1920	9141	2284	3161	14586	2907
1921	8903	2231	3122	14256	2755
1922	8666	2178	3083	13927	2760
1923	8431	2125	3043	13599	2760
1924	8196	2072	3003	13271	5525
1925	7961	2019	2963	12943	5556
1926	7726	1966	2922	12614	2676
1927	7492	1913	2881	12286	2946
1928	7259	1860	2840	11959	2620
1929	7026	1807	2799	11632	3158
1930	7092	1802	2411	11305	3947
1931	6331	1621	2328	10280	3055
1932	6950	1770	2480	11200	3027
1933	6952	1792	2616	11360	3246
1934	7108	1864	2908	11880	3612
1935	7855	2084	3601	13540	3758
1936	8506	2246	3848	14600	3947
Total	131595	33634	50009	215238	58255

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	1500	1910	7502	78.3	25.4	19.2
1921	1227	1526	6312	78.1	24.7	19.3
1922	1429	1836	7216	77.8	25.5	19.8
1923	1493	1981	7581	77.6	26.1	20.2
1924	2734	3535	6569	77.3	53.8	41.6
1925	2999	3535	6987	77.1	55.6	42.8
1926	2202	2866	1038	76.8	27.6	21.2
1927	2096	2743	8738	76.5	31.3	23.9
1928	2458	3225	1122	76.2	28.7	21.9
1929	2994	3830	1102	75.9	35.7	37.1
1930	3463	4402	9913	78.6	44.3	34.9
1931	2944	3809	9998	77.3	38.9	29.6
1932	1884	2421	7024	77.8	34.7	27.0
1933	2132	2770	7462	76.9	37.1	28.5
1934	3182	4212	10468	75.5	40.2	30.4
1935	3468	4298	12500	73.4	37.8	27.7
1936	4768	6475	17640	76.3	36.7	27.0
Average	2519	3281	9306	76.8	35.3	27.0

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

JACKSON COUNTY

This district (known as North Park) is isolated, with but one municipally owned plant at Walden, an internal combustion type, with a capacity of 132 kw. The plant was installed in 1918, but reports of its operation are to be had only in the years 1931 - 1932 and 1933, when the sales averaged 38,000 kwh annually.

The average population of the district since 1919 has been about 1,400, of which the urban and rural population within the serviceable zone are 49 percent and 51 percent respectively. The proportion of urban to rural population in the district is 34 percent urban and 66 percent rural.

There was an average of 110 consumers for the three year period, and an average usage of 3,441 kwh per consumer annually.

The district is one of a forage type of agriculture, stock raising, lumbering and coal mining interests. As the headwater basin of the North Platte river, it is an important producer of water.

Complete details are shown in accompanying tabulations.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District. -NORTH PARK
(Jackson County)

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to Towns	Industry	Mining	No. Consumers
1919	None	None	None	None	None	None	None	None	None
1920	"	"	"	"	"	"	"	"	"
1921	"	"	"	"	"	"	"	"	"
1922	"	"	"	"	"	"	"	"	"
1923	"	"	"	"	"		"	"	"
1924	"	"	"	"	"	"	"	"	"
1925	"	"	"	"	"	"	"	"	"
1926	"	"	"	"	"	"	"	"	"
1927	"	"	"	"	"	"	"	"	"
1928	"	"	"	"	"	"	"	"	"
1929	"	"	"	"	"	"	"	"	"
1930	"	"	"	"	"	"	"	"	"
1931	4	16	17	"	37	33	4	"	105
1932	4	16	17	"	37	33	4	"	104
1933	4	20	17	"	41	37	4	"	125
1934	None	None	None	"	None	None	None	"	None
1935	"	"	"	"	"	"	"	"	"
1936	"	"	"	"	"	"	"	"	"
tal	12	52	51	-	115	103	12	-	334

NORTH PARK DISTRICT
(Jackson County)

	Zone		Outside	Total	Total
	Urban	Rural	Rural	District	Consumers
1920	260	280	800	1340	None
1921	261	281	803	1345	"
1922	262	282	806	1350	"
1923	263	283	809	1365	"
1924	264	284	812	1360	"
1925	265	285	815	1365	"
1926	266	286	818	1370	"
1927	267	287	820	1374	"
1928	268	288	822	1378	"
1929	269	289	824	1382	"
1930	284	290	812	1386	"
1931	308	314	878	1500	105
1932	316	322	902	1540	104
1933	318	324	908	1550	125
1934	336	343	961	1640	None
1935	316	322	902	1540	"
1936	308	314	878	1500	"
Total	4831	5074	14370	24275	334

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	None	None	None	40.3	None	None
1921	"	"	"	40.3	"	"
1922	"	"	"	40.3	"	"
1923	"	"	"	40.3	"	"
1924	"	"	"	40.3	"	"
1925	"	"	"	40.3	"	"
1926	"	"	"	40.3	"	"
1927	"	"	"	40.3	"	"
1928	"	"	"	40.3	"	"
1929	"	"	"	40.3	"	"
1930	"	"	"	41.4	"	"
1931	25	59	349	41.4	17	7
1932	24	57	362	41.4	16	7
1933	26	63	325	41.4	19	8
1934	None	None	None	41.4	None	None
1935	"	"	"	41.4	"	"
1936	"	"	"	41.4	"	"
Average	4	11	344	40.8	3.4	1.3

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

GRAND COUNTY

This district, known as Middle Park, contains three internal combustion type of plants. Locations and capacities are as follows:

Hot Supphur Springs.	Grand Co. L. H. & P. Co.	I. C.	Capacity	70	kw.
Grand Lake.	Grand Lake Light Co.	I. C.	"	150	"
Kremmling.	Kremmling L. & P. Co.	I. C.	"	154	"
	Total Installed Capacity			374	"

The plants were installed in 1932, 1935 and 1930 respectively, therefore the service record is limited.

The Grand County L. H. & P. Company supplies current to Fraser, Tabernash, Vasquez and West Portal with electric energy purchased from the Public Service Company of Colorado.

Total sales of electric current have increased from 42,000 kw in 1931 to 117,000 in 1936, or 179 percent for the six year period. The average number of consumers was 117 annually, and consumer usage annually was 595 kwh.

The population in the serviceable zone is classified 28 percent urban, 72 percent rural. In the district, the urban population represents 18 percent of the total. The district is of the ranching and stockraising type, and is the famous lettuce growing area of Colorado. Middle Park produces the largest flow of virgin water in the state.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - GRAND COUNTY

	Com.	Residence	Business	Municipal	Total	Sales to			No. of
Year	Power	Lighting	Lighting	Usage	Sales	Towns	Industry	Mining	Consumers
1919	None	None	None	None	None	None	None	None	None
1920	"	"	"	"	"	"	"	"	"
1921	"	"	"	"	"	"	"	"	"
1922								"	"
1923	"	"	"	"	"	"	"	"	"
1924	"	"	"	"	"	"	"	"	"
1925	"	"	"	"	"	"	"	"	"
1926	"	"	"	"	"	"	"	"	"
1927	"	"	"	"	"	"	"	"	"
1928	"	"	"	"	"	"	"	"	"
1929	"	"	"	"	"	"	"	"	"
1930	"	"	"	"	"	"	"	"	"
1931	"	14	14	14	42	42	"	"	86
1932	5	14	15	12	46	41	5	"	93
1933	7	26	36	17	86	79	7	"	151
1934	6	18	14	13	51	45	6	"	93
1935	6	24	36	10	76	70	6	"	121
1936	15	36	59	7	117	102	15	"	158
otal	39	132	174	73	418	379	39	-	702

GRAND COUNTY

	Zone Urban	 Rural	Outside Rural	Total District	Total Consumers
1920	409	1204	1046	2659	None
1921	400	1179	1024	2603	"
1922	392	1154	1002	2548	"
1923	384	1129	980	2493	"
1924	376	1104	958	2438	"
1925	368	1079	936	2383	"
1926	360	1054	914	2328	"
1927	352	1029	892	2273	"
1928	344	1004	870	2218	"
1929	336	979	848	2163	"
1930	493	1085	530	2108	"
1931	472	1040	508	2020	86
1932	535	1179	576	2290	93
1933	561	1235	604	2400	151
1934	561	1235	604	2400	93
1935	584	1287	629	2500	121
1936	607	1339	654	2600	158
Total	7534	19315	13575	40424	702

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	None	None	None	60.6	None	None
1921	"	"	"	60.6	"	"
1922	"	"	"	60.6	"	"
1923	"	"	"	60.7	"	"
1924	"	"	"	60.7	"	"
1925	"	"	"	60.7	"	"
1926	"	"	"	60.7	"	"
1927	"	"	"	60.7	"	"
1928	"	"	"	60.7	"	"
1929	"	"	"	60.7	"	"
1930	"	"	"	74.8	"	"
1931	20	28	484	74.8	5.6	4.2
1932	20	27	497	74.8	5.4	4.0
1933	36	48	568	74.8	8.5	6.2
1934	21	28	544	74.8	5.1	3.8
1935	31	41	630	74.8	6.4	4.8
1936	45	60	738	74.8	8.1	6.0
Average	10	15	595	66.4	2.6	1.7

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

EAGLE RIVER VALLEY (EAGLE COUNTY)

The district lies in the valley of the Eagle river from Eagle to Gypsum. It is served by the Eagle River Electric Company controlled by the Commonwealth Utilities Corporation. The company has three plants, as follows:

Eagle.	I. C.	Capacity	112 kw.
Gypsum.	Hydro	"	37 "
Gypsum Canon	"	"	75 "
	Total Installed Capacity		224 kw.

The total sales of electric current increased from 38,000 in 1919 to 202,000 in 1936, or an increase of 431 percent. Of the total sales 55 percent is classified as town usage, 45 percent as industrial. The increase in use of electric energy has been practically continuous, but the consumer use is relatively small, being 498 kwh per consumer during the period. The average number of consumers was 213 annually.

Of the population in the serviceable zone 54 percent is classed as urban and 46 percent rural. In the district 40 percent is urban.

The district is a fine mountain valley ranching region, well irrigated. It has been a substantial source of wealth in raising of high grade stock. The matalliferous mining section in the eastern part of the district produces average values of almost $2,000,000 annually, and is served electrically by the Public Service Company of Colorado.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - EAGLE RIVER VALLEY

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to			Number o Consumers
						Towns	Industry	Mining	
1919	16	16	11	None	38	27	11	None	151
1920	15	17	11	8	51	36	15	"	158
1921	7	19	12	11	49	42	7	"	169
1922	8	38	8	16	70	62	8	"	185
1923	8	30	20	19	77	69	8	"	185
1924	21	23	15	16	75	54	21	"	164
1925	15	25	17	16	73	58	15	"	208
1926	21	25	20	15	81	60	21	"	210
1927	14	50	28	15	107	93	14	"	204
1928	17	28	26	16	87	70	17	"	210
1929	43	24	18	16	101	58	43	"	191
1930	53	25	19	16	113	60	53	"	224
1931	73	25	12	15	125	52	73	"	231
1932	62	26	22	16	126	64	62	"	234
1933	95	26	12	16	149	54	95	"	272
1934	111	28	12	16	167	56	111	"	271
1935	123	27	10	16	176	53	123	"	274
1936	145	28	12	17	202	57	145	"	284
Total	842	480	285	260	1867	1025	842	--	3825

EAGLE RIVER DISTRICT

Eagle County

	Zone Urban	Zone Rural	Outside Rural	Total District	Total Consumers
1920	1352	1151	882	3385	158
1921	1374	1169	896	3439	169
1922	1396	1187	910	3493	185
1923	1418	1205	924	3547	185
1924	1440	1223	938	3601	164
1925	1462	1241	952	3655	208
1926	1484	1259	966	3709	210
1927	1506	1277	980	3763	204
1928	1528	1295	994	3817	210
1929	1550	1313	1008	3871	191
1930	1598	1366	960	3924	224
1931	1702	1456	1022	4180	231
1932	1922	1644	1154	4720	234
1933	1951	1668	1171	4790	272
1934	1898	1623	1139	4660	271
1935	2016	1724	1210	4950	274
1936	2077	1776	1247	5100	284
Total	27674	23577	17353	68604	3674

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	15	20	322	73.9	6.3	4.6
1921	14	19	289	73.9	6.6	4.9
1922	20	27	378	73.9	7.1	5.3
1923	21	29	416	73.9	7.0	5.1
1924	20	28	457	73.9	6.1	4.5
1925	19	27	350	73.9	7.7	5.6
1926	21	29	385	73.9	7.7	5.6
1927	28	38	524	73.9	7.3	5.6
1928	25	30	414	73.9	7.4	5.5
1929	26	35	528	73.9	6.6	4.9
1930	29	39	464	75.5	7.6	5.7
1931	30	40	542	75.5	7.3	5.5
1932	27	35	540	75.5	6.5	4.9
1933	31	41	548	75.5	7.5	5.6
1934	36	48	617	75.5	7.7	5.8
1935	36	47	643	75.5	7.3	5.5
1936	40	52	710	75.5	7.3	5.5
Average	26	36	498	74.7	7.2	5.9

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

U. S. GOVERNMENT [illegible]

CHAFFEE COUNTY (BUENA VISTA ONLY)

The district comprises that portion of Chaffee county north of the Salida district. It contains about one-twelfth of the population of the county. It has a good irrigated agricultural area lying south from the town of Buena Vista.

The area is served by the hydro and internal combustion plants of the Mountain Utilities Corporation. The hydro plant, near the base of the Sangre de Cristo range east of Buena Vista has an installed capacity of 170 kw. and the internal combustion plant has a capacity of 150 kw.

Of the total population in the serviceable zone about 77 percent is urban and 23 percent rural. The proportion of urban to district population is 55 percent. The consumer use is about normal for such districts, being 691 kwh per consumer.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - CHAFFEE (Buena Vista - only)

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to Towns	Industry	Mining	No. of Consumers
1919	16	4	54	44	118	102	16	None	200
1920	3	4	10	44	61	58	3	"	205
1921	26	147	-	52	225	199	26	"	210
1922	8	176	28	5	217	209	8	"	230
1923	151	10	16	55	232	81	151	"	211
1924	40	50	30	47	166	127	40	"	210
1925	5	20	24	88	136	132	5	"	210
1926	45	21	28	43	137	92	45	"	215
1927	16	20	30	27	94	77	16	"	213
1928	24	30	43	40	136	113	24	"	213
1929	35	44	26	41	146	111	35	"	217
1930	39	24	47	40	150	111	39	"	222
1931	45	45	27	40	157	112	45	"	232
1932	52	44	24	40	160	108	52	"	251
1933	38	46	22	39	145	107	38	"	259
1934	43	47	27	38	155	112	43	"	268
1935	46	48	28	40	162	116	46	"	255
1936	60	50	34	45	189	129	60	"	240
otal	692	830	498	768	2786	2096	692	-	4061

CHAFFEE - BUENA VISTA

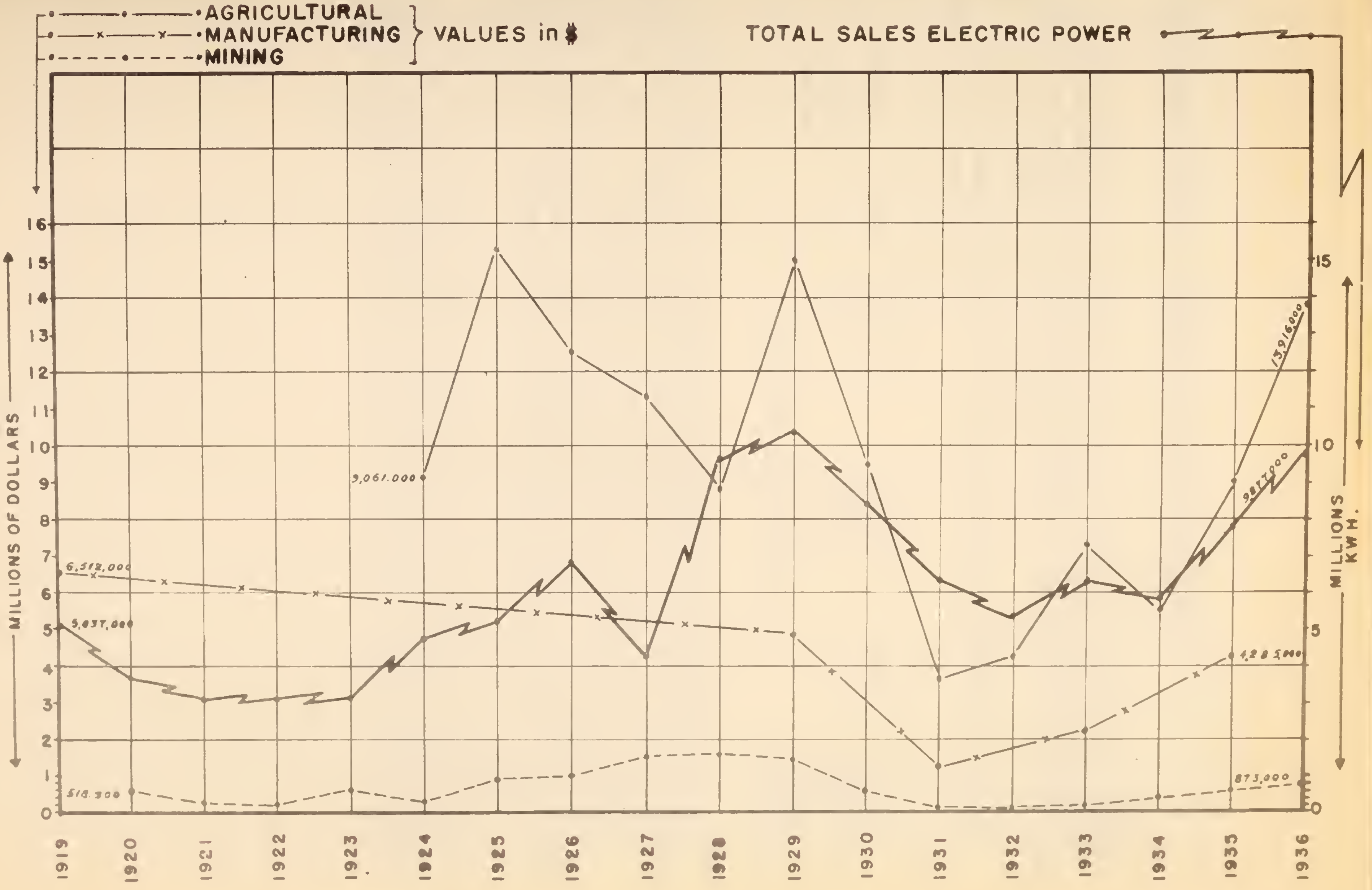
	Zone Urban	Zone Rural	Outside Rural	Total District	Total Consumers
1920	903	180	390	1473	205
1921	908	190	392	1490	210
1922	913	200	394	1507	230
1923	918	210	396	1524	211
1924	923	220	398	1541	210
1925	927	230	400	1557	210
1926	931	240	402	1573	215
1927	935	250	404	1589	213
1928	939	260	406	1605	213
1929	943	270	408	1621	217
1930	751	280	490	1521	222
1931	803	284	525	1612	232
1932	777	288	508	1573	251
1933	749	292	490	1531	259
1934	721	296	472	1489	268
1935	739	300	484	1523	255
1936	767	304	503	1574	240
Total	14547	4294	7462	26303	3861

	KWH Per Capita Total Dist.	KWH Per Capita Serv.Zone	KWH Per Consumer	A	B	C
1920	41	56	297	73.5	19.0	13.9
1921	151	204	1071	73.6	19.1	14.0
1922	144	195	943	73.8	20.6	15.2
1923	152	206	1099	74.0	18.7	13.8
1924	107	145	790	74.1	18.3	13.6
1925	87	118	648	74.3	18.1	13.4
1926	87	117	637	74.4	18.3	13.6
1927	59	80	441	74.5	18.0	13.4
1928	84	113	638	74.7	17.6	13.2
1929	90	120	672	74.8	17.8	13.3
1930	92	145	675	67.7	21.6	14.6
1931	97	144	676	67.4	21.3	14.4
1932	101	150	633	67.7	23.6	15.9
1933	95	140	559	68.0	24.8	16.8
1934	104	152	580	68.3	26.3	17.9
1935	106	156	675	68.2	24.5	16.7
1936	120	176	787	68.0	22.4	15.2
Average	101	141	691	71.6	20.4	14.6

A - Zone Population to District Population B - Consumer to Zone Population
C - Consumer to District Population

Note: This table concerns Buena Vista and surrounding rural territory only. Salida and its surrounding rural territory is included in the San Luis Valley.

SAN LUIS VALLEY DISTRICT



SAN LUIS VALLEY DISTRICT (INCLUDING SALIDA AND ENVIRONS)

The district includes the counties of Saguache, Rio Grande, Alamosa, Conejos and Costilla, together with the south portion of Chaffee county. It is a region of extensive agrucultural production, considerable manufacturing, and a relatively small mining production.

It is served by the Public Service Company of Colorado, with the following plant installations:

Salida.	Public Service Co.	Steam	Capacity	700 kw.
" #1	" " "	hydro	"	1070 "
" #2	" " "	"	"	480 "
Alamosa	" " "	steam	"	2750 "
	Total Installed Capacity			5000 kw

The sales of electric current have risen from 5,037,000 kwh in 1919 to 9,877,000 in 1936, or an increase of 96 percent. In 1929 sales reached 10,441,000 kwh. Consumer usage compares favorably with that of other irrigated agricultural districts in Colorado, averaging 918 kwh per consumer annually during the period. In 1932 the sales of electric current fell to a figure comparable to the sales of 1919. The classified sales show 55 percent town usage, 4 percent industrial, and 41 percent mining usage. The sales to mining, once heavy at the Bonanza mines in northern Saguache, have ceased. The chief mining activity is now at Summitville in southwestern Rio Grande county.

Of the total serviceable zone population, 56 percent is classed as urban, and 44 percent rural, and in the district 44 percent is urban. Inspection of the sales graphs indicates that in this district the values produced from agriculture, mining and manufacturing show a prevailing upward trend through the period of study.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - SAN LUIS VALLEY

	Com.	Residence	Business	Municipal	Total	Sales to			No. of
Year	Power	Lighting	Lighting	Usage	Sales	Towns	Industry	Mining	Consumers
1919	3908	424	536	169	5037	1129	248	3660	3188
.920	2238	505	621	299	3663	1425	276	1962	3228
.921	1506	550	636	325	3017	1511	230	1276	3370
.922	1414	612	700	351	3077	1663	274	1140	3841
.923	1384	591	696	342	3013	1629	245	1139	3552
.924	2242	899	1079	573	4793	2551	402	1840	3560
.925	2520	1009	1212	640	5381	2861	451	2069	3185
.926	4534	976	1019	332	6861	2327	907	3627	8318
.927	1566	1121	1256	309	4252	2685	313	1253	4889
.928	6566	1371	1375	300	9612	3046	1313	5253	4980
.929	7161	1555	1405	320	10441	3280	1432	5729	5617
.930	4433	1940	1677	389	8439	4006	887	3546	10250
.931	1986	2100	1800	468	6354	4368	397	1583	5659
.932	1402	1989	1499	437	5327	3925	280	1122	5354
.933	1432	1855	2726	395	6408	4976	286	1146	5363
.934	1815	2002	1576	387	5780	3965	363	1452	5394
.935	3599	2105	1787	388	7879	4280	722	2877	5601
.936	4696	2523	2255	403	9877	5181	939	3757	5981
tal	54402	24127	23855	6827	109211	54809	9965	44437	91330

SAN LUIS VALLEY

(Counties: Saguache, Alamosa,Rio Grande,Conejos,Costilla,Salida and Rural)

	Zone Urban	Zone Rural	Outside Rural	Total District	Total Consumers
1920	16475	11730	9164	37369	4384
1921	16925	12011	9385	38321	4767
1922	17375	12292	9605	39272	5569
1923	17825	12573	9825	40223	5090
1924	18275	12854	10045	41174	4878
1925	18725	13135	10265	42125	4713
1926	19175	13416	10485	43076	9862
1927	19626	13697	10705	44028	6455
1928	20077	13977	10924	44978	6536
1929	20527	14257	11143	45927	7179
1930	20489	16967	9596	47052	11796
1931	21240	17490	9688	48418	7185
1932	21589	18113	10045	49747	6851
1933	21419	18177	10283	49879	6872
1934	21048	18031	10312	49391	6894
1935	22182	18978	10737	51897	7104
1936	23043	19996	11090	54129	7491
Total	336015	257694	173297	767006	113416

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	98	130	835	75.5	15.5	11.7
1921	79	104	633	75.5	16.5	12.4
1922	78	101	575	75.5	18.1	13.7
1923	75	99	593	75.5	16.7	12.6
1924	116	154	982	75.5	15.7	11.8
1925	128	169	1154	75.6	14.8	11.2
1926	159	215	695	75.6	30.2	22.9
1927	96	127	658	75.6	19.4	14.6
1928	213	282	1470	75.7	19.2	14.5
1929	227	300	1451	75.7	20.6	15.6
1930	179	225	715	79.6	39.5	25.0
1931	131	164	884	80.0	18.5	14.8
1932	107	137	777	79.8	17.3	13.8
1933	128	162	932	79.4	17.3	13.8
1934	117	147	838	79.1	17.6	13.9
1935	152	191	1109	79.3	17.2	13.7
1936	182	230	1318	79.5	17.4	13.8
Average	135	175	918	77.4	19.1	14.8

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

SAN JUAN DISTRICT

The district consists of the counties of Mineral, Hinsdale and Archuleta, and is one of isolated plant service at Creede and Pagosa Springs. The map of transmission lines shows a plant at Lake City owned by the Hinsdale Mining and Development Company which sold lighting current to Lake City up to 1933, when its operation ceased. It is included in the district list of installed capacities because it is shown on the transmission map.

Location and plant capacities are as follows:

Lake City.	Hinsdale Mining & Developing Co.	Hydro	Capacity	160 kw.
Creede.	Municipal	"	"	30 "
Creede.	Municipal	I. C.	"	75 "
Pagosa Springs.	New Light & Power Company	steam	"	100 "
" "	" " " " "	hydro	"	150 "
	Total Installed Capacity			515 kw.

The sales record of current distribution for the district is not hronologically continuous; sales increased from 150,000 kwh in 1921 to 531,000 kwh in 1936, or 308 percent. The consumer use is relatively high for so isolated a district, being 781 kwh per consumer. The classified sales are indicated as 53 percent town usage, 47 percent industrial.

The tabulation showing population distribution relative to consumer usage, indicated an urban and rural population within the serviceable zone of 75 and 25 percent respectively, and in the district 36 percent is classified as urban.

The district is one of the most mountainous sections of Colorado. Its industrial economy lies in mining and irrigated mountain valley ranching. There is a considerable area of good coal in southern Archuleta supplying local demand only. The coal resources are not developed, or well known. Lumbering was a primary industry until a quarter of a century ago, and there still is a large area of fine timber. Transportation facilities are inadequate. Service is by one narrow gauge railroad and one major highway.

There are undoubtedly, large undeveloped areas of metalliferous areas, coal and timber, the proper development of which would make the district a much larger consumer of electric energy.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - SAN JUAN

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to			No. of Consumer
						Towns	Industry	Mining	
1919	None	None	None	None	None	None	None	None	None
1920	"	"	"	"	"	"	"	"	"
1921	47	25	42	16	130	83	47	"	178
1922	57	28	33	21	139	82	57	"	286
1923	62	27	36	16	141	79	62	"	290
1924	62	28	49	23	162	100	62	"	292
1925	70	26	39	25	160	90	70	"	197
1926	None	133	None	25	158	158	None	"	198
1927	64	71	"	29	164	100	64	"	215
1928	65	80	"	30	175	110	65	"	225
1929	65	104	9	71	249	184	65	"	343
1930	117	21	77	38	253	136	117	"	330
1931	155	93	22	38	308	153	155	"	326
1932	185	26	59	36	306	121	185	"	325
1933	218	75	19	65	377	159	218	"	466
1934	238	68	37	61	404	166	238	"	517
1935	273	78	51	66	468	195	273	"	540
1936	298	96	65	72	531	233	298	"	552
Total	1976	979	538	632	4125	2149	1976	-	4880

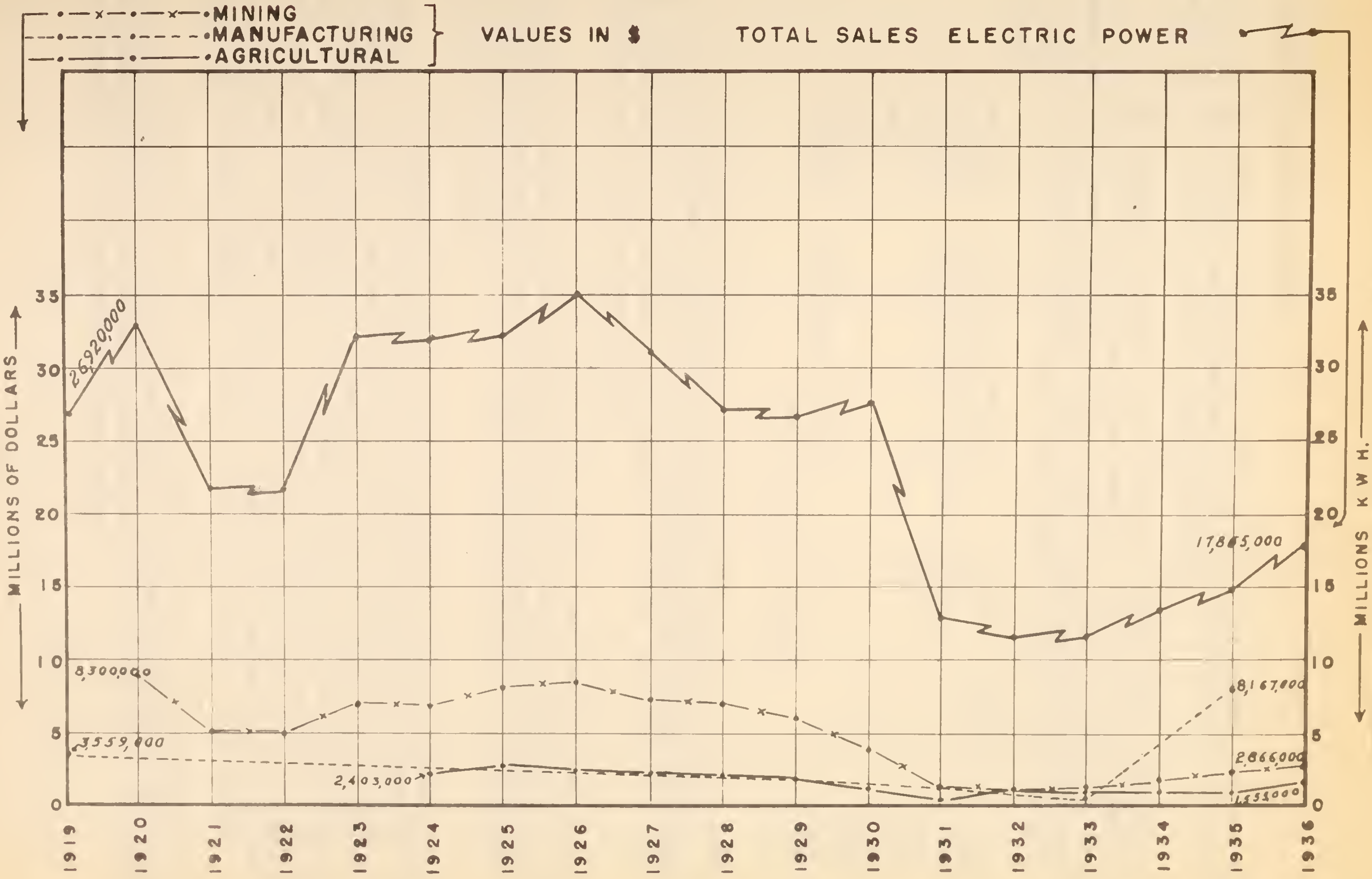
SAN JUAN MOUNTAIN DISTRICT
(Counties:Hinsdale,Mineral,Archuleta)

	Zone		Outside	Total	Total
	Urban	Rural	Rural	District	Consumers
1920	1849	614	2444	4907	None
1921	1824	606	2416	4846	178
1922	1799	598	2388	4785	206
1923	1774	590	2360	4724	230
1924	1749	582	2332	4663	292
1925	1724	574	2303	4601	197
1926	1699	566	2274	4539	198
1927	1674	558	2245	4477	215
1928	1649	550	2216	4415	225
1929	1624	542	2187	4353	343
1930	1447	540	2306	4293	330
1931	1389	523	2218	4139	326
1932	1389	526	2205	4120	325
1933	1431	542	2297	4270	466
1934	1441	546	2313	4300	517
1935	1454	552	2304	4310	540
1936	1473	559	2368	4400	552
Total	27389	9568	39176	76133	5280

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	None	None	None	50.2	None	None
1921	26	53	724	50.1	7.3	3.6
1922	29	58	485	50.0	11.9	5.8
1923	29	59	486	50.0	12.2	6.1
1924	34	69	548	49.9	12.5	6.2
1925	34	69	802	49.2	8.5	4.2
1926	34	69	821	49.9	8.7	4.3
1927	36	73	813	49.8	9.6	4.8
1928	39	79	1106	49.8	10.2	5.0
1929	57	114	735	49.3	15.8	7.8
1930	59	127	765	46.2	16.6	7.6
1931	74	161	942	46.2	17.0	7.8
1932	75	161	942	46.4	16.9	7.8
1933	89	191	809	46.2	23.6	10.9
1934	94	204	781	46.2	26.0	12.0
1935	109	234	867	46.5	26.9	12.5
1936	121	262	961	46.1	27.1	12.5
Average	54	111	781	48.5	14.3	6.9

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

SAN JUAN MINING DISTRICT



SOUTHWESTERN MINING DISTRICT

The district embraces the counties of La Plata, San Juan, San Miguel, Ouray and the southern half of Montrose. It is a very large user of electrical energy, most of which is used in mining operations.

The district is served by the Western Colorado Power Company with plants at Ames and Illium in San Miguel county, at Ouray in Ouray county,,and Tacoma and Durango in La Plata county. There is a small privately owned plant at Norwood in western San Miguel county, and a small privately owned plant at Bayfield in eastern La Plata county. The plants and their capacities are as follows:

Bayfield.	Pine River Power Co.	Steam	Capacity	100 kw.
Bayfield.	Pine River Power Co.	I.C.	"	225 "
Durango.	Western Colo. Power Co.	Steam	"	850 "
Tacoma.	" " "	Hydro	"	4500 "
Ouray.	" " "	"	"	600 "
Ames.	" " "	"	"	3600 "
Illium.	" " "	"	"	1200 "
Norwood.	Montezuma L.& P.Co.	I.C.	"	100 " .
	Total installed capacity			11175 kw.

Total sales decreased from 26,920,000 kwh in 1919 to 17,835,000 kwh in 1936, or a decrease of 34 percent, indicating a falling off in mining in the San Juan district. The years to 1927 inclusive show an average total sales of 29,467,000 kwh for these years. The consumer use for the period 1923-1927 inclusive was 12,732 kwh per consumer.

The population, urban and rural, within serviceable zone is 66 percen urban and 34 percent rural. In the district, the urban population is 49 percen The kwh consumption per capita in zone, was 1,629 kwh, and in district 1,223. This ranks second highest in the state, being exceeded only in the Central Colorado Mining district.

The Southwestern Mining district is one of the most important economi regions in Colorado. Its average production in dollar values during the period of study is first in western Colorado, being nearly $8,000,000 annually, somewh exceeding similar production in the Colorado River or Grand Valley district A study of the great mining district figures, both coal and metalliferous, clearl indicates the large importance of the mining industry to the state. The resour of metalliferous ores and coal should be fully investigated and a decided effor should be made to increase production. Relative to consumption of electric energy, this mining industry offers one of the best media in the state.

The district is far from its markets, and has a scant measure of trans portation facilities. In this modern age, if mining production could be increa the transportation problem would solve itself, and improvement in the district would benefit the entire western slope region.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - SOUTHWESTERN MINING

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to Towns	Sales to Industry	Sales to Mining	No Con
1919	23832	1637	1195	256	26920	3088	1025	22807	219
1920	31266	891	656	139	32952	1686	554	30712	226
1921	19888	943	687	155	21673	1735	591	19297	253
1922	19789	939	682	147	21557	1768	587	19202	250
1923	30146	1061	772	169	32148	2002	663	29483	257
1924	29655	1123	810	176	31764	2109	698	28957	244
1925	29787	1191	855	187	32020	2233	731	29056	257
1926	31890	1346	1443	364	35043	3153	572	31318	247
1927	27567	1609	1577	372	31125	3558	800	26767	26
1928	23451	1818	1517	335	27121	3670	608	22843	267
1929	22457	2065	1477	643	26642	4185	446	22011	283
1930	23294	2158	1490	718	27660	4366	506	22788	230
1931	9388	1746	1188	591	12913	3525	423	8965	24
1932	8679	1504	1075	539	11797	3118	373	8306	23
1933	8668	1453	965	488	11574	2906	337	8331	237
1934	10536	1485	949	368	13338	2802	378	10158	24
1935	11874	1522	1045	379	14820	2946	434	11440	25
1936	14248	1960	1241	416	17865	3617	569	13679	28
Total	376415	26451	19624	6442	428932	52517	10295	366120	4497

[illegible]
[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

SAN JUAN MINING - SOUTHWESTERN DISTRICT
(Counties: Ouray, San Miguel, La Plata, San Juan)

	Zone		Outside	Total	Total
	Urban	Rural	Rural	District	Consumers
1920	9781	4978	6060	20819	2264
1921	9711	4951	5963	20625	2532
1922	9641	4924	5866	20431	2503
1923	9571	4897	5769	20237	2572
1924	9501	4870	5672	20043	2446
1925	9431	4843	5575	19849	2570
1926	9360	4816	5478	19654	2478
1927	9289	4790	5381	19460	2638
1928	9219	4763	5284	19266	2674
1929	9149	4736	5187	19072	2833
1930	9853	5285	3740	18878	2307
1931	9783	5206	3641	18630	2440
1932	9730	5171	3619	18520	2386
1933	9118	5004	3608	17730	2378
1934	9227	5001	3582	17810	2437
1935	9510	5161	3649	18320	2505
1936	10001	5405	3794	19200	2821
Total	161875	84801	81868	328544	42784

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	1582	2232	14554	69.0	15.3	10.8
1921	1050	1477	8559	70.5	17.2	12.2
1922	1055	1480	8612	71.2	17.1	12.2
1923	1588	2222	12499	71.4	17.8	12.6
1924	1584	2210	12986	71.7	17.0	12.2
1925	1613	2243	12459	72.0	18.0	17.9
1926	1782	2471	14141	72.1	17.4	13.8
1927	1599	2210	12557	72.4	18.7	14.0
1928	1408	1939	10142	72.8	19.1	13.8
1929	1396	1918	9404	72.8	20.4	14.8
1930	1465	1927	11989	85.4	15.2	12.2
1931	693	862	5292	80.4	16.2	13.0
1932	636	791	4944	80.4	16.0	12.8
1933	652	819	4866	79.6	16.8	13.4
1934	748	937	5472	79.8	17.1	13.7
1935	809	1009	5916	80.0	17.0	13.6
1936	930	1158	6332	80.2	18.3	14.3
Average	1223	1629	9309	75.0	17.3	13.0

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

THE CORTEZ DISTRICT

The district consists of Montezuma and Dolores counties. Electric consumption is largely centered in the towns of Cortez, Mancos and Dolores and adjacent territory. The Montezuma Light and Power Company of Cortez serves the district with current purchased from the Western Power Company. There are no power plants in the district, plants at Cortez and Mancos having been abandoned, and as said above, all current is purchased. The distribution system includes transmission to Mesa Verde.

Total sales have risen from 30,000 kwh in 1919 to 711,000 kwh in 1936, or an increase of 2,273 percent. The use was rapid to 1926, when 914,000 kwh sales were indicated. This fell to 91,000 kwh in 1928, but the sales have increased steadily since that time.

The sales are classified 77 percent town usage, and 23 percent industrial. Sales of residential current are the greatest of the classified series, being 43 percent of total. Consumer use is high for such a district, being 866 kwh per consumer annually.

The district is primarily an agricultural and stock raising region. Formerly it had a large lumbering industry, but that has declined for several years. There are still large areas of fine commercial timber. Of the total population of the serviceable zone about 46 percent is classed as urban, about 54 percent as rural. Of the total district, about 27 percent is urban. The per capita consumption in zone and district is low.

Topographically the district is isolated by the high La Plata mountains to the east, miles of desert to the south, the huge gorge of the Colorado river to the west and the great Uncompahgre plateau to the north. Transportation outlets are poor but the Federal aid highways are being rapidly improved. It lies wholly in the plateau regions of Western Colorado. Scenery is unique and varied. Its archeological importance is nationally known.

The Mesa Verde National Park, and the Towaoc Ute Indian Agency are in Montezuma county, and while the amount of energy used within these institutions is not known accurately, it is nevertheless true that they account for most of the energy consumed within the district.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - MONTEZUMA COUNTY (cortez)

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to			No. of Consumer
						Towns	Industry	Mining	
1919	None	17	10	3	30	30	None	None	120
1920	"	11	11	None	22	22	"	"	120
1921	"	138	79	"	217	217	"	"	161
1922	"	83	70	"	153	153	"	"	161
1923	"	178	120	35	333	333	"	"	164
1924	"	186	149	40	375	375	"	"	284
1925	44	368	268	106	786	742	44	"	346
1926	179	395	241	99	914	735	179	"	135
1927	19	42	41	11	113	94	19	"	558
1928	None	34	33	24	91	91	None	"	575
1929	109	33	56	31	229	120	109	"	563
1930	142	95	63	32	332	190	142	"	643
1931	56	127	141	30	354	298	56	"	624
1932	187	97	47	30	361	174	187	"	617
1933	285	95	44	31	455	170	285	"	619
1934	205	292	59	31	587	382	205	"	675
1935	220	330	64	32	646	426	220	"	709
1936	79	372	76	184	711	632	79	"	751
Total	1525	2893	1572	719	6709	5184	1525	-	7825

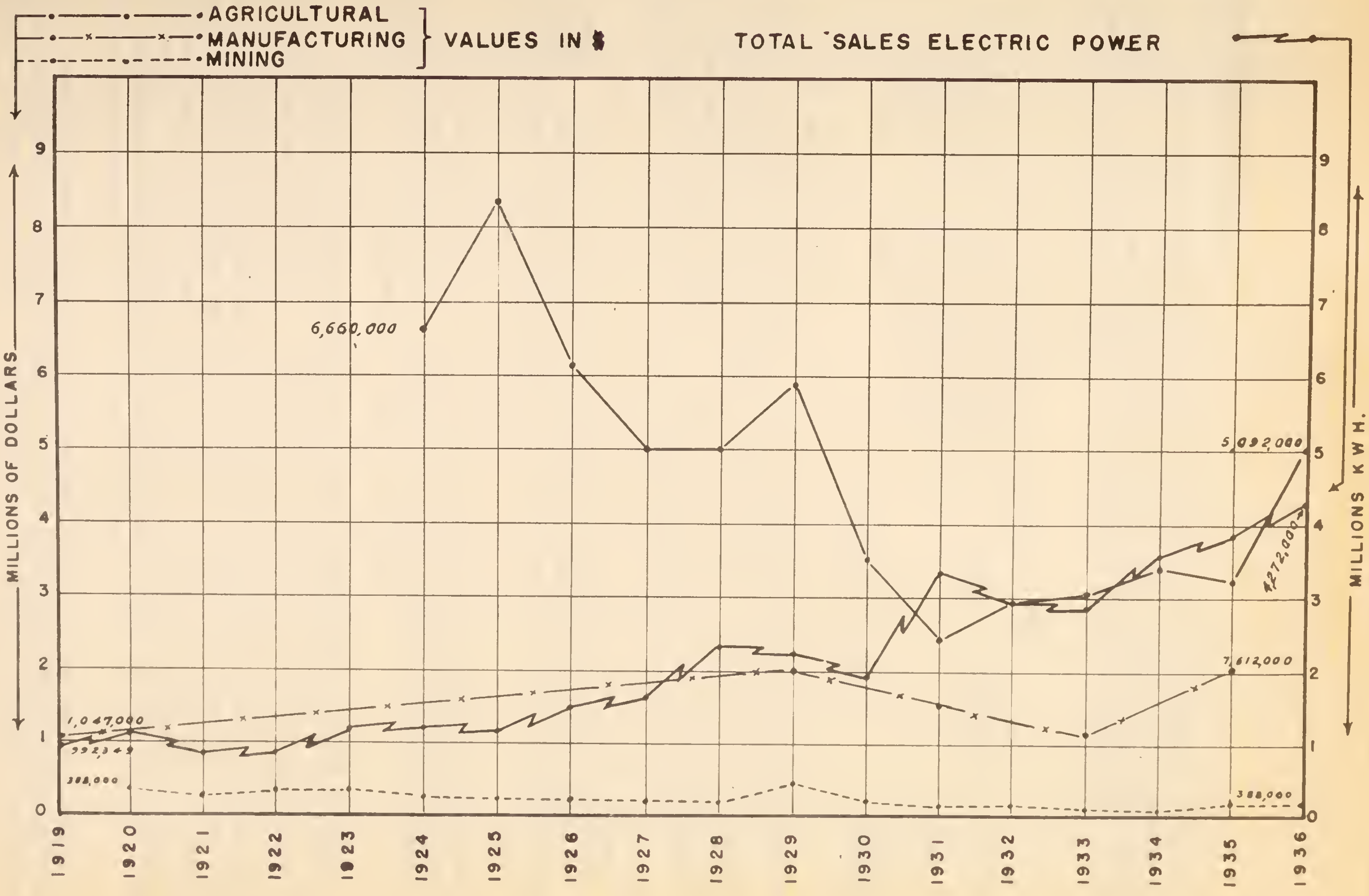
CORTEZ DISTRICT
(Counties: Montezuma, Dolores,)

	Zone		Outside	Total	Total
	Urban	Rural	Rural	District	Consumers
1920	2014	2326	3163	7503	120
1921	2060	2384	3230	7674	161
1922	2106	2442	3297	7845	161
1923	2152	2500	3364	8016	164
1924	2198	2558	3431	8187	284
1925	2244	2616	3498	8358	346
1926	2290	2674	3565	8529	135
1927	2336	2732	3632	8700	558
1928	2382	2790	3699	8871	575
1929	2428	2847	3766	9041	563
1930	2571	3082	3557	9210	643
1931	2606	3107	3617	9330	624
1932	2775	3341	3834	9950	617
1933	2852	3390	3968	10210	619
1934	2923	4028	3539	10490	675
1935	3231	3896	4462	11590	709
1936	3236	3877	4487	11600	751
Total	42404	50590	62110	155104	7705

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	3	5	183	57.9	2.7	1.6
1921	28	49	1347	68.3	3.6	2.1
1922	19	34	950	58.1	3.5	2.1
1923	41	71	2030	58.0	2.0	1.9
1924	45	79	1320	57.2	6.0	3.5
1925	94	161	2271	58.1	7.1	4.1
1926	107	184	6770	58.2	2.9	1.6
1927	13	22	202	58.2	11.0	6.4
1928	12	17	158	58.3	11.1	6.5
1929	25	42	407	58.3	10.8	6.2
1930	36	59	517	60.2	11.4	6.9
1931	38	61	567	61.2	10.9	6.7
1932	37	60	585	61.4	10.1	6.2
1933	44	73	274	61.1	9.9	6.0
1934	56	82	565	66.2	9.7	6.4
1935	56	91	601	61.4	9.9	6.1
1936	62	100	841	61.3	10.5	6.5
Average	43	72	866	60.0	8.3	5.0

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

UNCOMPAHGRE DISTRICT



U. S. Government [illegible]

THE UNCOMPAHGRE DISTRICT

The district consists of the northeastern half of Montrose, and the whole of Delta county. The district is served by the plants of the Western Colorad Power Company, and the municipal plant at Delta. Delta was formerly served by the Western Colorado Power Company, but inaugurated municipal ownership of its electric utility in 1937.

The plants and their capacities are as follows:

Montrose.	Western Colo. Power Co.	Steam	Capacity	300 kw.
Cedaredge.	Western Colo. Power Co.	"	"	150 "
Paonia.	Western Colo. Power Co.	"	"	196 "
* Oliver.	Western Colo. Power Co.	"	"	1000 "
Delta.	Municipal	I.C.	"	978 "
		Total installed capacity		2624 kw.

The sales of electric current increased from 992,000 in 1919 to 4,273,000 or a gain of 330 percent. In this district the gain has been rapid and almost continuous, the recessions from previous years being relatively small. The district, with an average population about one-fourth greater than that of the Southwestern Mining district, used in 1936, about one-fourth of the power used by the latter district. During the period of study the Uncompahgre has used about nine percent as much as the Southwestern Mining district.

The total sales are classified 20 percent industrial and 80 percent town usage. Of the latter, about 51 percent is tesidential usage. There is some mining usage at the coal mines in the North Fork of the Gunnison above Paonia but we were unable to get definite figures on the amounts, therefore this item is included in commercial power sales.

Of the population of the serviceable zone, 44 percent is classed as urban and 56 percent as rural. In the district 36 percent is classed as urban population. The consumer use is relatively small, considering the importance of the district, being 643 kwh per consumer annually.

The district is an important irrigated agricultural region with an average crop value production second only to the Colorado River or Grand Valley district on the western slope. It has a large stock raising industry, and a steady coal production from its North Fork mines. Exceptional facilities for outdoor recreational activities exist in the splendid Grand Mesa area, and the wonderful gorge of the Black Canon National Monument. Development has just been started looking toward a stable recreational business, with fine possibilities for future growth. There are large areas capable of increased agricultural development. This district may never use as much electric energy as the San Juan district but its present consumption will no doubt increase.

* Note that the Oliver plant is geographically in the Western Mining district, is a part of the Western Colorado Power Company, but has no connection with the territory to the east. The Western Colorado Power Company also serves Somerset through the Calumet Fuel Company.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - UNCOMPAHGRE

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to			No. of Consume
						Towns	Industry	Mining	
1919	222	397	291	82	992	770	222	None	2735
1920	272	484	350	91	1197	925	272	"	2775
1921	179	348	250	44	821	642	179	"	3139
1922	178	357	256	44	835	657	178	"	3136
1923	266	492	355	82	1195	929	266	"	3257
1924	262	513	386	78	1239	977	262	"	3135
1925	264	490	367	76	1197	933	264	"	3333
1926	265	623	527	109	1524	1259	265	"	3251
1927	279	714	561	127	1681	1402	279	"	3500
1928	384	790	634	525	2333	1949	384	"	3590
1929	430	942	704	184	2260	1830	430	"	3848
1930	394	802	658	142	1996	1602	394	"	3172
1931	971	1212	980	233	3396	2425	971	"	3535
1932	574	1206	966	210	2956	2382	574	"	3459
1933	537	1158	932	198	2825	2288	537	"	3594
1934	626	1611	1086	253	3576	2950	626	"	3832
1935	738	1703	1109	268	3818	3080	738	"	4032
1936	738	1753	1487	295	4273	3535	738	"	4113
Total	7579	15595	11899	3041	38114	30535	7579	-	61436

No data available on power consumption in mines in the Somerset coal region.

UNCOMPAHGRE - SOUTHWESTERN DISTRICT
(Counties: Montrose, Delta)

	Zone		Outside	Total	Total
	Urban	Rural	Rural	District	Consumers
1920	9013	11803	4704	25520	2775
1921	9028	11828	4707	25563	3139
1922	9043	11853	4710	25606	3136
1923	9058	11878	4713	25649	3257
1924	9073	11903	4716	25692	3135
1925	9088	11928	4719	25735	3333
1926	9103	11953	4722	25778	3251
1927	9117	11978	4725	25820	3500
1928	9131	12003	4728	25862	3590
1929	9145	12028	4731	25904	3848
1930	9437	12049	4460	25946	3172
1931	9834	12486	4700	27020	3535
1932	9783	12392	4695	26870	3459
1933	9758	12362	4680	26800	3594
1934	10195	12956	4859	28010	3832
1935	10724	13737	5029	29490	4032
1936	10192	12948	4860	28000	4113
Total	160722	208085	80458	449265	57701

	KWH Per Capita Total Dist.	KWH Per Capita Serv.Zone	KWH Per Consumer	A	B	C
1920	46	57	431	81.5	13.3	10.8
1921	32	39	261	81.5	15.0	12.3
1922	32	39	266	81.6	15.0	12.6
1923	46	57	366	82.0	15.5	12.6
1924	48	59	395	81.6	14.9	12.2
1925	46	56	359	81.6	15.3	12.8
1926	59	72	468	81.6	15.4	12.2
1927	65	79	480	81.7	16.5	13.5
1928	90	110	649	81.7	16.8	13.8
1929	87	106	587	81.7	18.1	14.3
1930	76	92	629	82.8	14.8	12.2
1931	125	152	960	82.6	15.8	13.0
1932	110	133	854	82.5	15.6	12.8
1933	105	128	786	82.5	16.2	13.4
1934	127	154	933	82.3	16.5	13.6
1935	122	156	946	82.9	16.4	13.6
1936	152	189	1039	82.9	17.7	14.6
Average	82	101	643	82.1	15.6	12.8

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

WESTERN MINING DISTRICT

This district includes Pitkin and Gunnison counties. It is one of rugged mountainous terrain with scattered population, and relatively low and undeveloped productive possibilities. It is served by the Roaring Fork Water Light and Power Company at Aspen, Pitkin County, and municipally owned plants at Crested Butte and Gunnison in Gunnison county.

The plants and their capacities are shown below:

Aspen.	Roaring Fork W.L.& P. Co.	Hydro	Capacity	2400kw
Crested Butte.	Municipal	"	"	150 "
Gunnison.	"	Steam	"	550 "
		Total installed capacity		3100 kw

The total sales show an increase from 1,817,000 kwh in 1919 to 2,536,000 kwh in 1936, or an increase of 14 percent. The yearly usage varies greatly dropping to 350,000 kwh in 1931. The mean for the period being about 1,240,000 kwh. Of the total sales about 29 percent is classified as urban, 70 percent as mining, and 1 percent as industrial usage. Of the town sales, 39 percent is residential.

The consumer use is high, due to the large mining usage, being 2,131 kwh per consumer annually. Per capita use, zone and district, second only to the San Juan Mining district. Of the zone population 72 percent is urban, 28 percent rural. In the district 50 percent is urban. There are several importa mining areas namely, Aspen - metalliferous, Marble - marble, Crested Butte - co and other metal mining areas along the south side of the Ruby Range north and east of Gunnison. Values of crop production are steady through the period, and exceed values of mining products. The district has good connections with main transportation routes both highway and rail.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - WESTERN MINING

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to Towns	Sales to Industry	Sales to Mining	No. of Consum
1919	1414	129	135	139	1817	403	None	1414	920
1920	2016	84	219	160	2479	463	143	1873	907
1921	660	58	59	22	799	139	None	660	475
1922	2019	57	68	22	2166	147	"	2019	473
1923	1367	153	130	62	1712	345	10	1357	879
1924	405	40	44	22	511	106	None	405	385
1925	1056	174	130	80	1440	384	"	1056	952
1926	593	333	334	88	1348	755	77	516	903
1927	366	104	329	93	892	526	79	287	933
1928	497	150	356	89	1092	595	85	412	930
1929	340	358	185	128	1011	671	None	340	856
1930	192	140	42	26	400	208	"	192	269
1931	105	176	32	37	350	245	"	105	245
1932	174	152	27	17	370	196	"	174	237
1933	271	157	29	25	482	211	"	271	261
1934	1717	65	41	235	2058	341	"	1717	316
1935	1292	268	210	413	2183	891	"	1292	903
1936	2424	61	34	17	2536	112	"	2424	317
Total	16908	2659	2404	1675	23646	6738	394	16514	11161

WESTERN MOUNTAIN DISTRICT
(Counties: Gunnison, Pitkin)

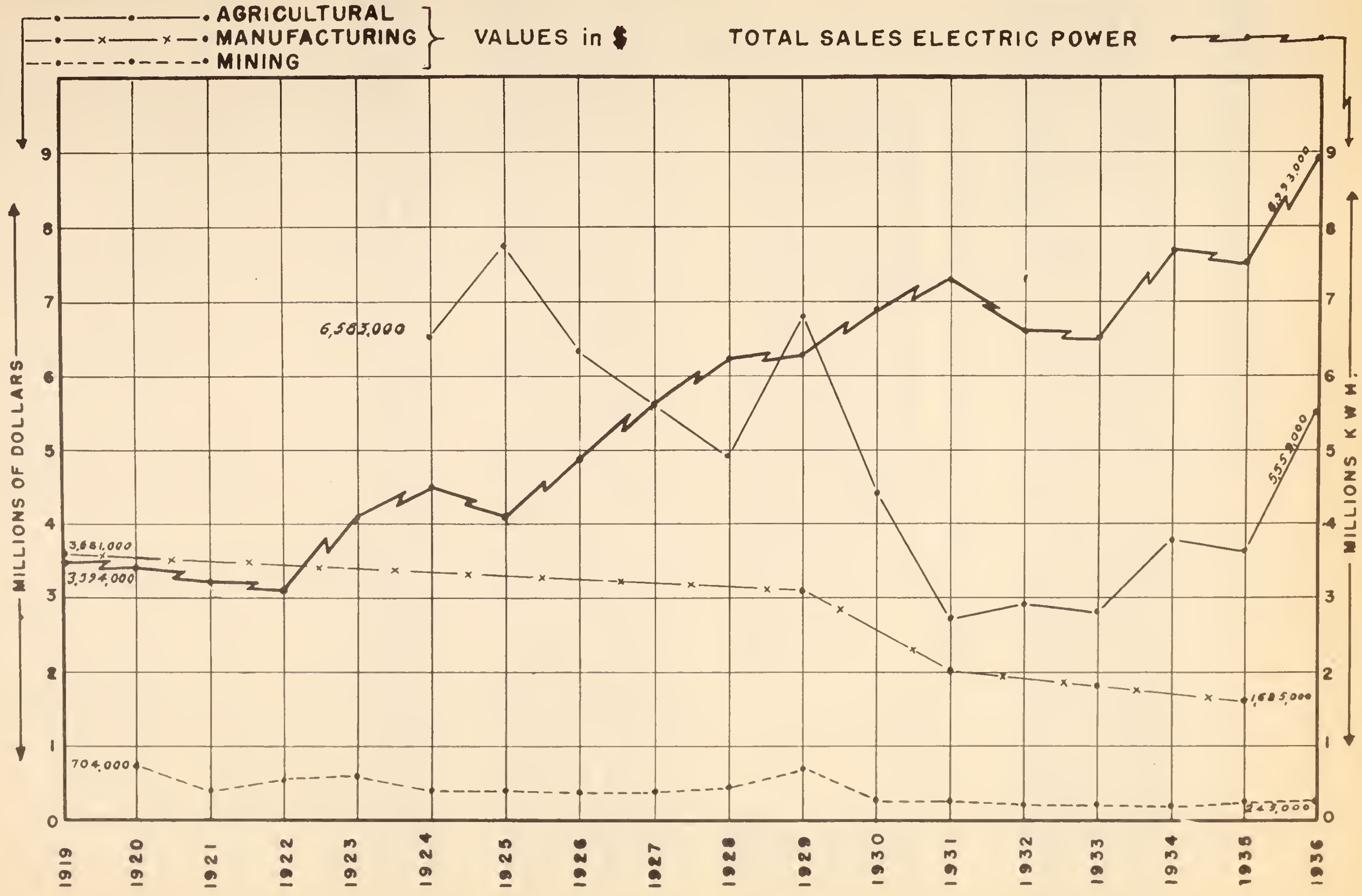
	Zone		Outside	Total	Total
	Urban	Rural	Rural	District	Consumers
1920	4053	1682	2562	8297	907
1921	4006	1662	2528	8196	475
1922	3959	1642	2494	8095	473
1923	3912	1622	2460	7994	879
1924	3865	1602	2427	7894	385
1925	3818	1582	2394	7794	952
1926	3771	1562	2361	7694	903
1927	3724	1542	2328	7594	933
1928	3678	1522	2295	7495	930
1929	3632	1502	2262	7396	856
1930	3816	1061	2420	7297	269
1931	3485	946	2189	6620	245
1932	3541	968	2231	6740	237
1933	3635	979	2276	6890	261
1934	3457	935	2168	6560	316
1935	3609	987	2274	6870	903
1936	3525	959	2216	6700	317
Total	63486	22755	39885	126126	10241

	KWH Per Capita Total Dist.	KWH Per Capita Serv.Zone	KWH Per Consumer	A	B	C
1920	298	432	2733	69.1	15.7	10.9
1921	97	141	1680	69.1	8.2	5.7
1922	267	387	4579	69.1	8.2	5.8
1923	214	309	1720	69.3	15.8	10.9
1924	65	93	1327	69.1	7.2	4.8
1925	185	267	1512	69.2	17.6	12.2
1926	175	248	1493	68.9	16.9	11.7
1927	117	169	956	68.4	17.7	12.2
1928	145	210	1173	69.3	17.8	12.3
1929	137	197	1180	69.0	16.6	11.5
1930	547	82	1483	66.8	5.5	3.6
1931	53	79	1428	66.9	5.5	3.7
1932	55	82	1560	66.8	5.2	3.5
1933	70	105	1847	66.9	5.6	3.7
1934	314	469	6512	65.4	7.2	4.8
1935	318	475	2418	67.0	19.6	13.1
1936	378	565	8000	66.9	7.0	4.7
Average	173	253	2131	68.4	11.8	8.1

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

GRAND VALLEY DISTRICT

GRAND VALLEY DISTRICT



COLORADO RIVER OR GRAND VALLEY DISTRICT

This district has been called the heart of the western slope. It is the most populous of the western Colorado consumer districts and has the larges assessed valuation. It is served by the Public Service Company of Colorado and the Plateau Valley Light and Power Company, and some power is purchased for resale by the Public Service Company of Colorado from the Grand Valley plant of the U. S. Reclamation service near Palisade. Current is sold from the Redlands plant in the neighborhood.

The plants and their capacities are as follows:

Shoshone.	Public Service Company	Hydro	Capacity	14400	kw..
Glenwood.	Glenwood L. & P. Company	"	"	200	"
Rifle.	Public Service Company	"	"	125	"
Grand Valley.	U. S. Reclamation Service	hydro	"	3000	"
Collbran.	Plateau Valley L. & P. Co.	"	"	80	"
Grand Junction.	Public Service Company	steam	"	2500	"
Redlands.	Redlands Irrigation district	hydro	"	2300	"
	Total installed capacity			22605	"

The sales of energy have increased from 3,595,000 kwh in 1919 to 8,993,000 kwh in 1936, or 150 percent. The rate of increase was the most regular of any district on the western slope. Of the total sales 59 percent is classed as town usage, and 41 percent as industrial. There was some mining usage in coal mines, but figures covering the full period on sales of power for mining operations cannot be secured from existing records, therefore they have been included in commercial sales. About 26 percent of total sales were reside tial.

Town population is classed, 57 percent urban, 43 percent rural. In t district, 48 percent of the population has been classed as urban. The consumer use compares favorably with districts on the eastern slope, being 1,095 kwh per consumer annually. The per capita zone, and district usage is relatively high.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - COLORADO RIVER OR GRAND VALLEY

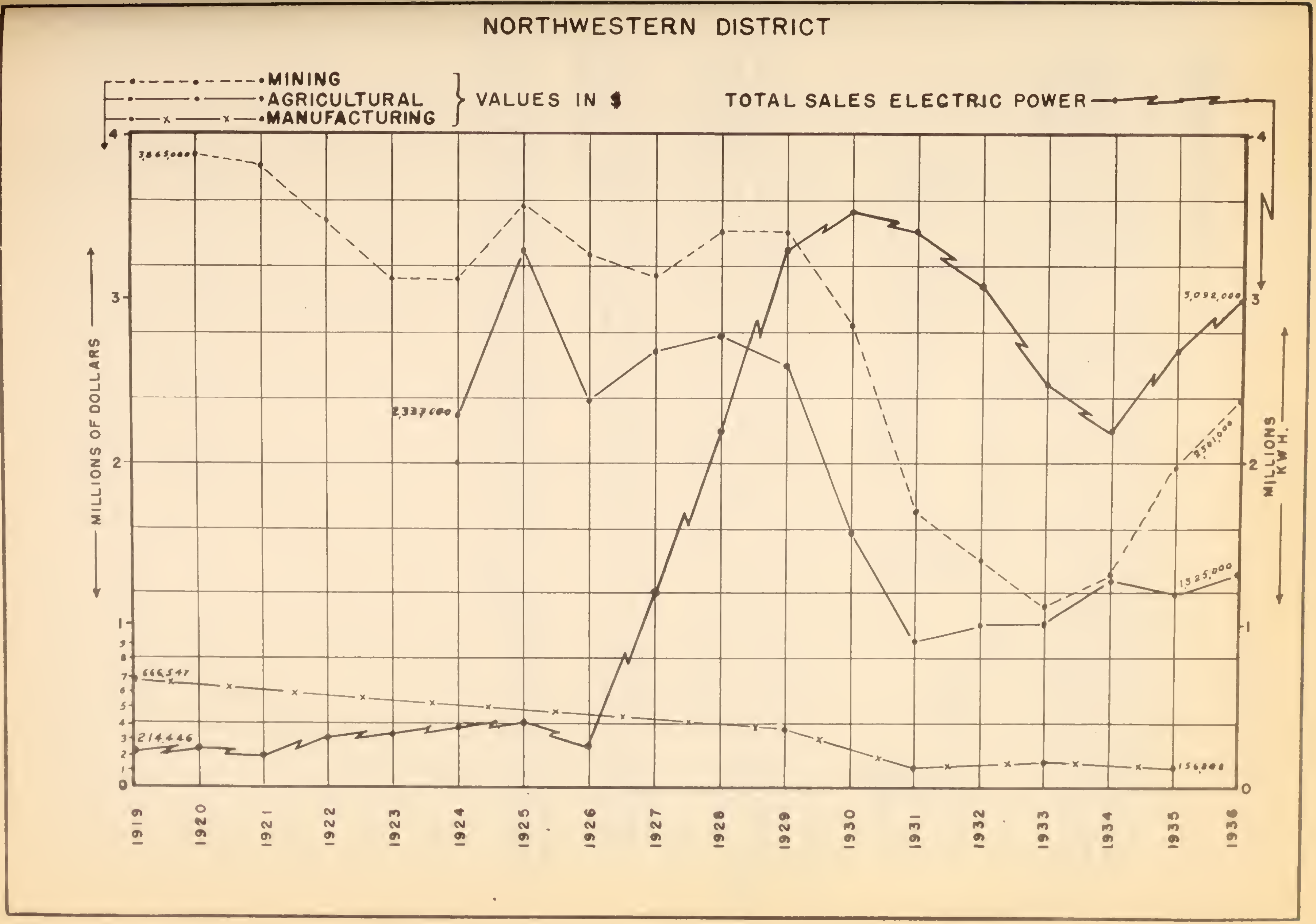
Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to			No. of Consumer
						Towns	Industry	Mining	
1919	1914	572	794	315	3595	1681	1914	None	3630
1920	1819	652	730	297	3498	1679	1819	"	3669
1921	1553	676	734	265	3228	1675	1553	"	3543
1922	1442	648	723	286	3099	1657	1442	"	3400
1923	1981	790	907	426	4104	2123	1981	"	4151
1924	2001	754	907	845	4507	2506	2001	"	4385
1925	2047	798	933	384	4162	2115	2047	"	4091
1926	2421	925	1135	389	4870	2449	2421	"	5240
1927	2905	988	1320	393	5606	2701	2905	"	5490
1928	3133	1180	1547	390	6250	3117	3133	"	5757
1929	2755	1318	1810	411	6294	3539	2755	"	5908
1930	2913	1643	1962	458	6976	4063	2913	"	5857
1931	3304	1557	1979	474	7314	4010	3304	"	5954
1932	2208	2208	1792	460	6668	4450	2208	"	5824
1933	1685	2236	1700	434	6055	4370	1685	"	5819
1934	2985	2455	1902	437	7779	4794	2985	"	6047
1935	1929	2851	2324	441	7545	5616	1929	"	6419
1936	2154	3512	2858	469	8993	6839	2154	"	6957
Total	41149	26057	7574	7574	100543	59394	41149	-	92141

COLORADO RIVER VALLEY DISTRICT
(GRAND RIVER VALLEY DISTRICT)
(Counties; Garfield, Mesa)

	Zone Urban	Zone Rural	Outside Rural	Total District	Total Consumers
1920	15379	11572	4634	31585	3669
1921	15593	11724	4699	32016	3543
1922	15806	11876	4764	32446	3400
1923	16019	12028	4829	32876	4151
1924	16232	12180	4894	33306	4385
1925	16445	12332	4959	33736	4091
1926	16659	12484	5024	34166	5240
1927	16871	12636	5089	34596	5490
1928	17083	12788	5154	35025	5757
1929	17295	12940	5219	35454	5908
1930	17177	13296	5410	35883	5857
1931	17916	13839	5645	37400	5954
1932	17681	13690	5569	36940	5824
1933	18195	14041	5734	37970	5819
1934	18923	14701	5956	39580	6047
1935	19911	15258	6281	41450	6419
1936	20375	15595	6430	42400	6957
Total	293559	222980	90290	606829	88511

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	111	133	951	85.3	13.6	11.6
1921	100	128	911	85.3	12.9	11.6
1922	95	116	911	85.3	12.3	10.5
1923	124	110	988	85.3	14.4	12.6
1924	135	144	1027	85.3	15.4	13.1
1925	123	156	1017	85.3	14.2	12.1
1926	142	142	929	85.2	17.7	15.3
1927	162	164	1021	85.2	18.6	15.9
1928	177	187	1085	85.2	19.0	16.4
1929	177	206	1048	85.2	19.2	16.6
1930	194	229	1191	84.8	19.2	16.3
1931	195	230	1228	84.9	18.7	15.8
1932	181	211	1143	84.8	18.5	15.5
1933	159	188	1041	84.8	18.1	15.3
1934	196	231	1286	84.9	17.8	15.2
1935	182	218	1175	84.7	18.2	15.4
1936	212	250	1292	84.8	19.3	16.4
Average	159	187	1095	85.1	17.1	14.6

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population


NORTHWESTERN DISTRICT
MINING
AGRICULTURAL
MANUFACTURING
VALUES IN $
TOTAL SALES ELECTRIC POWER
MILLIONS OF DOLLARS
MILLIONS KWH.
4
3
2
1
9
8
7
6
5
4
3
2
1
0
3,865,000
2,337,000
666,547
214,446
3,092,000
2,501,000
1,525,000
156,808
1919
1920
1921
1922
1923
1924
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936

NORTHWESTERN DISTRICT

The district includes Rio Blanco, Moffat and Routt counties. The district is served by the Colorado Utilities Corporation and the Moffat Coal Company, which supplies current to the town of Oak Creek from its plant there. The town of Meeker, in Rio Blanco county, operates its municipally owned plant for Meeker and adjacent territory.

The plants and their capacities are as follows:

Meeker.	Municipal	Steam	Capacity	375	kw.
Meeker.	Municipal	Hydro	"	125	"
McGregor.	Colorado Utilities Corp.	Steam	"	2750	"
Oak Creek.	Moffat Coal Company	Steam	"	1900	"
	Total Installed Capacity			5150	"

Total sales have increased from 285,000 kwh in 1919 to 3,252,000 kwh in 1936, or an increase of 1,041 percent. Of the total sales 33 percent is classed as town usage, 51 percent as mining, and 16 percent as industrial usage. Residential use is 14 percent of total sales. Consumer use of current is above the average, being 1,292 kwh per consumer annually, but the per capita use in zone and district is low, as volume lies largely in mining usage.

The district is one of large stock raising interests, irrigated valley ranching, with promise of large development of additional irrigated acreage. Some dry farming has been attempted with considerable success in Routt county.

Coal mining is important, some of the best bituminous coals in the state being mined in Moffat and Routt counties. The Iles oil field in Moffat county is the largest petroleum producer in Colorado.

DISTRIBUTION OF ELECTRIC SALES
UNIT 1000 KWH

District - NORTHWESTERN

Year	Com. Power	Residence Lighting	Business Lighting	Municipal Usage	Total Sales	Sales to Towns	Industry	Mining	No. of Consume
1919	36	112	110	27	285	249	36	None	795
1920	70	141	87	39	337	267	70	"	911
1921	51	90	91	31	263	212	51	"	646
1922	43	147	125	63	378	335	43	"	1076
1923	35	141	123	79	378	343	35	"	1069
1924	90	188	153	60	491	401	90	"	1254
1925	54	203	164	110	531	477	54	"	1263
1926	105	109	134	46	394	289	105	"	1622
1927	772	250	343	22	1387	615	260	512	1746
1928	1591	271	369	147	2378	787	400	1191	1907
1929	2614	308	406	131	3459	845	439	2175	1912
1930	2688	426	518	106	3738	1050	369	2319	1951
1931	2804	392	376	115	3687	883	568	2236	1925
1932	2505	376	356	130	3367	862	530	1975	1230
1933	2017	316	334	77	2744	727	399	1618	1469
1934	1668	302	346	114	2430	762	481	1187	1532
1935	2130	349	391	106	2976	846	482	1648	1584
1936	2261	438	441	112	3252	891	598	1763	1814
Total	21534	4559	4867	1515	32475	10841	5010	16624	25706

NORTHWESTERN DISTRICT.
(Counties: Moffat, Routt, Rio Blanco)

	Zone		Outside	Total	Total
	Urban	Rural	Rural	District	Consumers
1920	5103	4696	7413	17212	911
1921	5104	4712	7394	17210	646
1922	5105	4728	7375	17208	1076
1923	5106	4744	7356	17206	1069
1924	5107	4760	7337	17204	1254
1925	5108	4775	7318	17201	1263
1926	5109	4790	7300	17199	1622
1927	5110	4805	7282	17197	1746
1928	5111	4820	7264	17195	1907
1929	5113	4835	7246	17194	1912
1930	5760	4859	6574	17193	1951
1931	5736	4840	6554	17130	1925
1932	5956	5027	6827	17810	1230
1933	6088	5159	6933	18180	1469
1934	5514	4550	6446	16510	1532
1935	5549	4618	6403	16570	1584
1936	5566	4695	6339	16600	1814
Total	91245	81413	119361	292019	24911

	KWH Per Capita Total Dist.	KWH Per Capita Serv. Zone	KWH Per Consumer	A	B	C
1920	19	34	370	57.5	9.4	5.3
1921	15	27	407	57.0	6.4	3.7
1922	22	38	351	57.1	10.8	6.2
1923	22	38	353	57.2	10.8	6.2
1924	29	51	391	57.3	12.6	7.3
1925	31	54	420	57.4	12.7	7.3
1926	23	40	243	57.4	16.3	9.4
1927	81	140	794	57.6	17.6	10.1
1928	138	239	1247	57.7	19.2	11.1
1929	201	356	1704	57.8	19.2	11.1
1930	217	352	1916	61.8	18.4	11.3
1931	215	348	1915	61.7	18.2	11.2
1932	189	307	2737	61.6	11.4	6.9
1933	152	255	1868	61.1	13.0	8.0
1934	147	242	1586	60.9	15.2	9.3
1935	179	293	1878	61.3	15.6	9.5
1936	202	326	1793	61.8	17.7	10.9
Average	110	186	1292	59.1	14.4	8.6

A - Zone Population to District Population
B - Consumer to Zone Population
C - Consumer to District Population

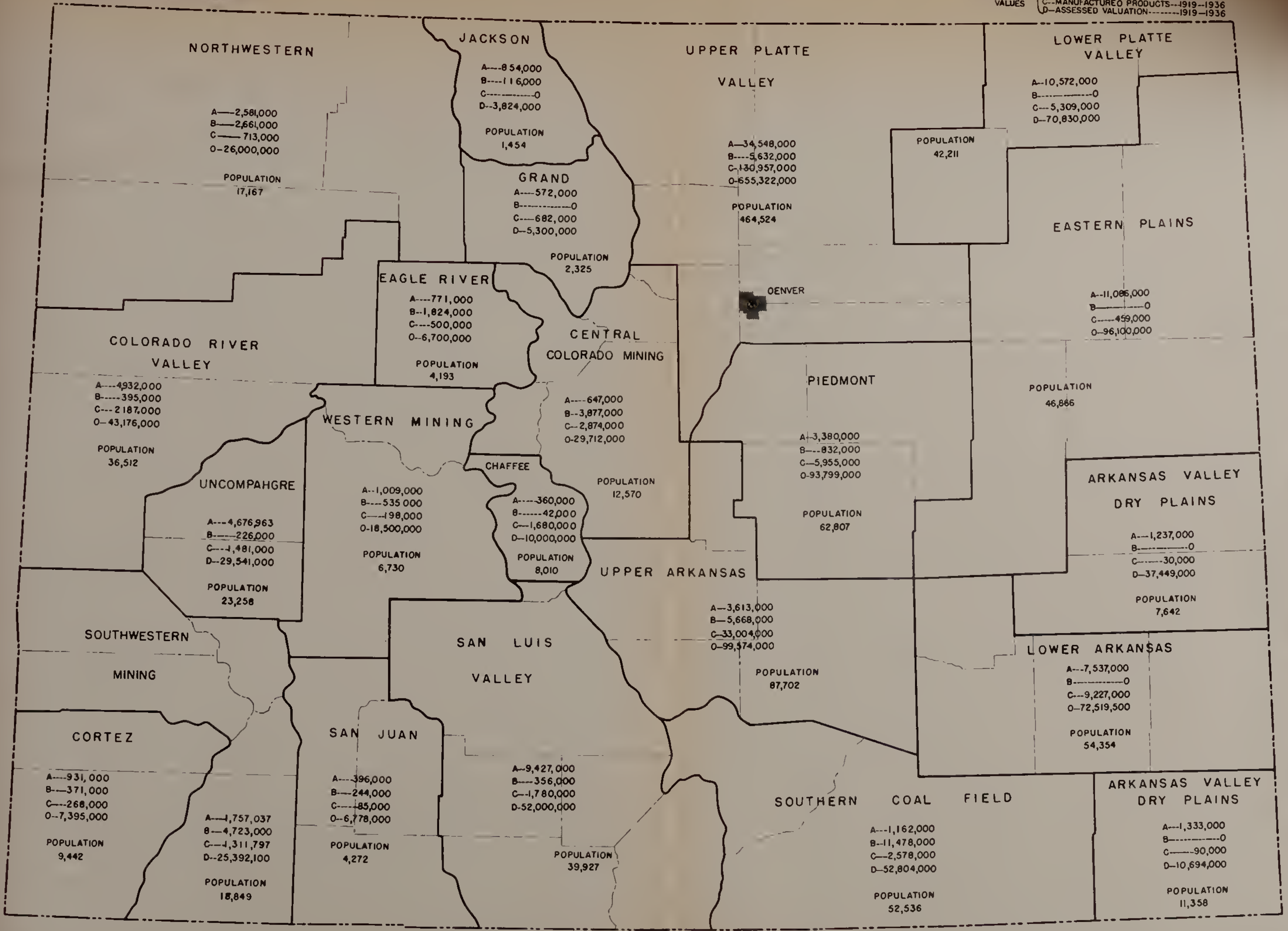
AVERAGE ANNUAL POPULATION AND INDICATED FACTORS

POWER CONSUMPTION DISTRICTS

COLORADO STATE PLANNING COMMISSION

—LEGEND—

AVERAGE YEARLY VALUES
- A--PRINCIPAL CROPS----------1924--1936
- B--METAL & COAL MINING--------1919—1936
- C--MANUFACTURED PRODUCTS---1919--1936
- D—ASSESSED VALUATION----------1919—1936



INDICATED POPULATION IS ARITHMETICAL MEAN OF YEARS 1919—1936

[illegible] 6-20-1938

COMPARATIVE GROUP SUMMARY OF CONSUMER DISTRICTS

Consumer districts fall naturally into certain general cultural class these being chiefly agricultural, stockraising, industrial and mining, with several falling in more than one class.

We have grouped the several districts upon the principle out lined wi the results shown below:

District	Class	Average Annual Sales 1000 KWH	Percent of Increase	KWH Per Capita		KWH Consum Use
				Zone	Dist	
Lower Platte. Lower Arkansas.	Irrigated Farm Area	16148	365	202	169	1722
Eastern Plains. Arkansas Dry Plains. Baca County.	Dry Farm Area	2105	461	65	32	795
Upper Platte Valley. Piedmont. Upper Arkansas Valley.	Industrial Irrigated farm Area	250669	139	445	411	1755
Southern Colo. Coal field. Central Colo. Mining Southwestern Mining.	Coal and Metals Mining	83181	46	1263	978	8062
Eagle River. Chaffee County.	Mountain Valley Ranch Area	253	151	63	46	584
Cortez. San Luis Valley.	Irrigated farm Area Mining	6440	109	159	119	904
Uncompahgre. Colo. River or Grand Valley. Northwestern.	Irrigated farm Area Mining	9507	239	153	120	945
Western Mining. San Juan.	Mining Ranching	1543	58	217	132	1721
North High Plains. Jackson. Grand County.	Misc	117	110	267	64	466
Totals		369508	117	440	372	2044

Increase in sales of total power in the state from 1919 to 1936 was 117 percent. Of the total sales, 38 percent is classified as town, 36 percent as industrial, and 26 percent as mining usage. Commercial power is 62 percent, residential 17.4 percent, business 15.2 percent and municipal usage 5.4 percent of total sales. Of the total population through the period 84.7 is segregated to the serviceable zone, and 15.3 percent lies outside zone limitations. Accompanying tabulations show detail of sales and consumer usage.

SUMMARY
1920 to 1936 Inclusive

District	Zone Urban	Zone Rural	Outside Rural	Total District	Total Consumers
Lower Platte Valley	287761	282957	142851	713569	76292
Eastern Plains	208166	146900	443228	798294	35478
Ark. Valley D.Plains (Cheyenne-Kiowa)	18294	30286	80649	129229	4575
Lower Arkansas	376998	412465	129447	918910	83073
Ark.Valley D.Plains (Baca)	24914	115309	44303	184526	4983
So. Colo. Coal Field	317097	390872	194793	902762	84686
Upper Ark. Valley	1046492	352224	92678	1491394	303611
Piedmont	618557	236769	134076	989402	227225
Upper Platte Valley	6182808	1128388	586247	7897443	1896615
North Park	4831	5074	14370	24275	334
Grand County	7534	19315	13575	40424	702
Central Colo. Mng.	131595	33634	50009	215238	58255
Eagle River	27674	23577	17353	68604	3674
Chaffee County (Buena Vista)	14547	4294	7462	26303	3861
San Luis Valley	336015	257694	173297	767006	113416
San Juan Mountain	27389	9568	39176	76133	5280
San Juan Mining	161875	84801	81868	328544	42784
Uncompahgre	160722	208085	80458	449265	57701
Cortez	42404	50590	62110	155104	7705
Western Mountain	63486	22755	39885	126126	10241
Grand River Valley	293559	222980	90290	606829	88511
Northwestern	91245	81413	119361	292019	24911

Note: This table continued on following page.

Conclusion of table from preceding page

District	KWH Per Cap. Dist.	KWH Per Cap. Zone	Per Consumer	A	B	C
Lower Platte Valley	165	206	1543	79.9	13.4	10.7
Eastern Plains	34	77	768	44.5	10.0	4.4
Ark. Valley D. Plains (Cheyenne - Kiowa)	24	66	695	37.6	9.4	3.5
Lower Arkansas	181	211	2005	85.9	10.5	9.0
Ark. Valley D. Plains (Baca)	17	23	643	76.0	3.6	2.7
So. Colo. Coal Field	528	673	5629	78.4	11.9	9.4
Upper Ark. Valley	633	3109	673	93.8	21.7	20.4
Piedmont	326	1431	380	86.4	26.6	22.8
Upper Platte Valley	391	1629	423	92.6	25.9	24.0
North Park	4	344	11	40.8	3.4	1.3
Grand County	10	595	15	66.4	2.6	1.7
Central Colo. Mng.	2519	9306	3281	76.8	35.3	27.0
Eagle River	26	498	36	74.7	7.2	5.9
Chaffee County (Buena Vista)	101	691	141	71.6	20.4	14.6
San Luis Valley	135	918	175	77.4	19.1	14.8
San Juan Mountain	54	781	111	48.5	14.3	6.9
San Juan Mining	1223	9309	1629	75.0	17.3	13.0
Uncompahgre	82	643	101	82.1	15.6	12.8
Cortez	43	866	72	60.0	8.3	5.0
Western Mountain	173	2131	253	68.4	11.8	8.1
Grand River Valley	159	1095	187	85.1	17.1	14.6
Northwestern	110	1292	186	59.1	14.4	8.6
Average	372	2044	440	84.7	21.5	18.2

CONSUMPTION OF POWER IN LARGE CITIES

A study of the consumption of electric energy in the large municipalities, namely, Denver, Pueblo and Colorado Springs reveals their influence in the state wide consumer use, and data contained in the following tables indicate the energy distribution.

Average Annual Consumption - 1919-1936 Inclusive
Unit 1000 kw h

City	Com. Power	Residential	Business	Muni. Power	Muni. Lights	Total Sales	No. of Consumers
Colo. Spgs.	9878	4666	2231	62	1489	18326	13040
Percentage	54.0	25.5	12.2	0.3	8.0	100.0	
Pueblo	7685	5206	4327	1534	839	19591	13020
Percentage	39.2	26.5	22.2	7.8	4.3	100.0	
Denver	75337	28286	33250	--	6293	143166	49169
Percentage	52.6	19.7	23.3	--	4.4	100.0	

The trends through the period are as follows:

City of Denver

Total sales of current have increased from 64,925,000 kw h in 1919 to 226,308,000 in 1936, an increase of 249 percent. In the period from 1919 to 1936, the average was 143,166,000 kw h. A large increase is indicated in 1936 and 1937, being 226,308,000 kw h and 250,447,000 kw h, respectively.

Classified sales increased as follows:

Unit 1000 kw h

Classification	1919	1936	Percent Increase
Commercial Power	27155	99776	268.0
Residential	15005	45648	204.0
Business	18339	42000	129.0
Municipal Usage	4426	7585	70.0
Wholesale	None	31299	- -

Note: Continued on next page.

Continued from previous page.

Classified Sales - 1937
Unit 1000 kw h

Commercial Power	111089 kw h
Wholesale	37452 "
Residential	49763 "
Business	45001 "
Municipal Lights	7142 "
Total	250447 "

Number of consumers increased from 68,692 in 1924 to 97,580 in 1936, and in 1937 there were 99,817.

City of Pueblo

Total sales increased from 11,667,408 kw h in 1919 to 25,100,605 kw h in 1936, an increase of 115 percent. In 1937 total sales were 28,540,000 kw h.

Classified sales increased as follows:

Unit 1000 kw h

Classification	1919	1936	Percent Increase
Commercial Power	6883	6876	0.0
Residential	1656	9462	471.0
Business	2539	5679	124.0
Municipal Usage	589	3084	423.0

High year for sales of commercial power was 1925 with 14,233,000 kw

Municipal lights showed high years from 1930 to 1932 inclusive with an average sale of 1,060,000 kw h.

Classified Sales - 1937
Unit 1000 kw h

Commercial Power	7806 kw h
Residential	10753 "
Business	6475 "
Municipal Power	2455 "
Municipal Lights	1051 "
Total	28540 "

The number of consumers increased steadily from 9,473 in 1919 to 15,491 in 1936.

Continued on next page.

Concluded from previous page.

City of Colorado Springs (1920 - 1936)

The record for Colorado Springs begins in 1920.

Total sales of electric energy increased from 14,483,737 kw h in 1920 to 23,129,357 in 1936, an increase of 59 percent.

Commercial sales varied greatly over the period. In other classifications the trends are relatively stable. Residential lights 1,983,000 kw h - 1920, 7,935,000 kw h in 1936, an increase of 300 percent. Business sales were 1,067,000 kw h in 1920, 4,815,000 in 1936, an increase of 351 percent.

Municipal power 1926 - 132,500 kw h, 1936 77,143 kw h, a decrease of 42 percent. The years 1927 and 1928 show average sales of 118,000 kw h annually. In 1929 sales of municipal power dropped to 63,555 kw h, in 1936 they were 77,143 kw h, and the average per annum over the whole period was 85,000 kw h.

In 1920 municipal lighting used 942,384 kw h, and in 1936 - 1,828,191 kw h, an increase of 94 percent.

Classified Sales - 1937
Unit 1000 kw h

Commercial Power	8820	kw h
Residential	8649	"
Business	5658	"
Municipal Power	1804	"
Municipal Lights	103	"
Total	25034	kw h

The total sales in Denver, Pueblo and Colorado Springs over the 1919 to 1936 period are as follows:

Unit 1000 kw h

Denver	2577004	kw h
Colorado Springs	318890	"
Pueblo	352636	"
Total	3248530	"

These three municipalities with 38 percent of the population of the state, have consumed almost 49 percent of total energy sold by all privately and municipally owned electric utilities from 1919 to 1936.

THE FUTURE OF THE ELECTRIC POWER INDUSTRY IN COLORADO

Any consideration of the future development of electric energy, and its consumption in the state must regard the probability of the trans-mountain diversion of western slope waters to the eastern slope irrigated districts. In recent years it has become generally recognized that proper conservation and utilization of the water resources of Colorado involve diversion from the abundant water production west of the Continental Divide to supplement the smaller production of the eastern slope, reduce the recurrent shortages of water in the Arkansas and South Platte River basins, and thus help stabilize agricultural conditions in eastern Colorado.

In designing any proposed diversion of waters, two major principles must be preserved; First, the amounts of water guaranteed the southern basin states of the Colorado River region by the Colorado River Compact, must be substantially unchanged; Second, the present needs and future interests of the residents of the western slope in Colorado must be protected in any diversion stipulation.

Transmountain Diversions.

There are four practicable large scale transmountain diversions under consideration. The plans and contract of the Colorado-Big Thompson diversion are complete and preparatory work is under way.

The Blue River-South Platte, and the Gunnison-Arkansas diversions are being urged by residents of the districts to be benefited. Preliminary investigations appear to indicate that both projects may be approved within the next decade. The fourth needed and favorably considered project is the Animas-Rio Grande diversion. This diversion is, in principle, just as important to the San Luis Valley as the others are to the regions they would benefit.

The estimated amounts of water considered available for diversion are:

Colorado-Big Thompson	310,000	acre	feet
Blue River-South Platte	440,000	"	"
Gunnison-Arkansas	500,000	"	"
Animas-Rio Grande	130,700	"	"

Each of these projects is necessary if proper utilization of the state's waters is to be achieved. They appear practicable, and are essential to the stabilization of eastern slope agriculture. They will probably solve the interstate problem of water division between the states affected and the eastern and western slopes of Colorado if they are accompanied by adequate protection of the present and future needs of the western slope.

Installed Capacity of Present and Future Power Plants.

One significant feature of the proposed diversions is the amount of hydroelectric energy that each project will eventually produce. The Colorado-Big Thompson project will result in an additional installed hydro-electric capacity of 160,500 kw. Seven plants are planned; two near

Fort Collins for pumping water to the distribution canals of the irrigated areas, capacity 18,000 kw. and five plants that will eventually give an installed capacity of 142,500 kw. for commercial use.

The estimates for the Blue River project are not complete, but it will probably result in a total installed capacity for commercial use somewhat larger than that of the Big Thompson project. The Gunnison-Arkansas and Animas-Rio Grande capacities have not been determined. A tentative estimate of the possible capacities of future hydroelectric energy resulting from the construction of the diversions indicated above is about 550,000 to 600,000 kw. installed capacity.

The present capacity of 90 privately and municipally owned electric utilities plants as of January, 1938 is as follows:

	Capacity-Kw.
Steam plants	183,202
Hydroelectric plants	65,792
Internal Combustion plants	14,260
Total Capacity	263,254

Private industrial plants total 23, with and installed capacity of 85,500 kw.

In addition to the plants shown above, there is an unknown number of small plants, the capacity of which is not publicly revealed; therefore, it appears probable that construction of needed and practicable transmountain diversions of water may result in an additional total installed capacity of hydroelectric power nearly twice as large as the total now known for all existing power plants.

From the preceding statements, it appears that an evolution in the generation of electric energy in Colorado is in its inception. The potential power in the waters of Colorado streams is virtually inexhaustible. Fuel-produced energy involves the consuming of irreplaceable natural resources. When the generation of hydroelectric power shall be made consonant with the construction of beneficial transmountain diversions, using these same waters on the irrigated lands, thereby assisting in the stability of industrial production which is essential to the state's progress, then it is logical to use the diverted waters to produce all the hydroelectric energy possible from this prime natural power. As the full design of diversion matures, the generation of hydroelectric energy [redacted] may cause to be retired all fuel using plants, except as certain small municipalities may prefer their own, using perhaps, internal combustion engines. The time may come when the dream of proper conservation and utilization of the waters produced in Colorado shall have become a reality.

When present research and experiments produce improved methods of transmission and distribution, eliminating much of the loss now

sustained by distributors, the amounts of energy available for popular consumption will be increased, and costs per kw-hr. in rural areas probably lessened. It is evident that a greater use of electric power, both in the industrial and mining regions, must be anticipated. It may be confidently expected that urban groups in the lower income brackets will be able to participate in the benefits to be derived from the use of electric current on a much larger scale than at present.

Electric energy is used in all phases of manufacturing, wholesale and retail merchandising, communication systems, electric advertising, county, state and federal offices and institution and other non-profit institutions, street lighting, and all forms of domestic usage, as well as many other uses too numerous to mention.

In Colorado, other than individual consumption in towns and cities, the largest use of electric energy is in manufacturing and mining. From the detailed studies of district consumer use, the following percentages are pertinent to the years 1919-1936.

Regional Areas.	Towns	Industry	Mining	Total
East of Mountains	42.8	43.0	14.2	100.0
Mountain and Plateau	19.4	6.5	74.1	100.0
State Total	38.0	35.8	26.2	100.0

Relative average values of major products 1919-1936, expressed in percentages of values (See Average Population and Selected Factor graph):

Regional Areas.	Agriculture	Manufacturing	Mining	Total
East of Mountains	26.1	65.7	8.2	100.0
Mountain and Plateau	48.1	26.6	25.3	100.0
State Total	30.0	58.6	11.4	100.0

Manufacturing

The manufacturing industry in Colorado has been successfully developed despite comparative isolation from populous markets, definite handicaps in costs of transportation of raw materials and distribution of products, and the fact that the position of the southern Rocky Mountain region, situated between the prosperous and populous Middle West and the Pacific Coast regional areas, has perhaps been adversely affected from a transportation standpoint by the long haul theory of rail rates. In fairness to the carriers it should be said that the long and short haul principle, if obviously inequitable, would not be permitted by the I.C.C. in the state.

An investigation of the carrier reports of the principal roads, covering the period 1919-1936, reveals the difference between ton-mile revenues and costs, applicable to freight movement, within the boundaries of the state and lines of the same carriers lying outside of Colorado.

Without going into extensive tabulations on the subject of railway economics, a few simple comparisons between Colorado intrastate road systems and lines of interstate roads operating inside the Colorado state lines are presented.

The following tables indicate the ratio of revenue and expense per ton-mile of revenue-earning freight handled by the D. & R. G. W. and the D. & S. L. railways, using as the base of comparison the system-wide average revenue per ton-mile of revenue-earning freight handled by six railroads, all of which operate interstate with respect to the State of Colorado, namely: Santa Fe, Missouri Pacific, Union Pacific, Burlington, Rock Island, Colorado and Southern.

A/This base revenue per ton-mile factor is 1000.

Systemwide Operation

	Revenue 1	Expense 2	Difference 1 minus 2
6 Railroads	A/1000	0722	0278
D&RGW	1144	0856	0288

Systemwide (Less Colorado) Operation

	Revenue 1	Expense 2	Difference 1 minus 2
6 Railroads	0973	0694	0279
D&RGW	1054	0766	0288

Colorado Statewide Operation

	Revenue 1	Expense 2	Difference 1 minus 2
6 Railroads	1036	0766	0270
D&RGW	1225	0919	0306
D&SL	1387	1081	0306
D&RGW and D&SL combined	1306	1000	0306

Source: Annual Reports of Carriers to the Interstate Commerce Commission 1918-1936.

Probably the greatest barrier to lower rail rates in Colorado is the regional situation and the topography of the state. The differential is a fact, and a change to some other type of motive power and lighter train lines, though it might modify costs and produce greater speed in transi through the state, would, if applied to carrier lines without the state, result in relative reductions or improvements in rail carriage.

Electrification of Railroads

A few years ago electrification of railroads was considered as feasible and inevitable in a reasonably near future. The objective would be desirable if carrier earning power appeared to be increasing and costs of installation could be reduced. Electrification appears to depend, generally, upon low cost current over widely extended areas, that can be applied to large main track mileage. The service must be reliable, and assured from more than one source of supply. The power must be had under long time contractual term Finally, due to large costs of equipment installation, it must be definitely cheaper than fuel-produced power. Electrification of rail lines in Colorado awaits a conbination of conditions not yet in prospect,yet lower transportation costs are vital to the development of the manufacturing industry in Colorado. That development would beneficially affect rail business and the electric power industry.

Electric Power and Mining

It has been shown briefly how largely mining use of electric energ bulks in the state picture. There is another view of the tremendous importance of mineral production to the well-being of Colorado. While the protecti of indispensable agricultural areas by transmountain diversion of water and the importance of cheaper and more abundant electric power to the industrial section from Pueblo to Greeley are being considered, it is well to remember the dominant part played by mining and smelting in building Colorado. The following data, taken from Arthur Ridgway's "Transportation," and Hafen-Baker' "History of Colorado," emphasize the importance of mining to both transportat and industry.

CLASSIFICATION AND PERCENTAGES OF COMMODITIES HAULED

CLASS	D & R G W 1880-1925	D & R G W 1918-1936	S & S L 1918-1936	Other Interstate 1918-1936
Products of Mines	75.0	55.4	87.2	32.3
Agriculture	5.0	13.1	1.7	29.9
Forests	4.0	5.6	2.8	5.4
Livestock	2.0	3.9	3.1	5.1
Manufacturing	14.0	19.8	4.4	23.8
Miscellaneous	-- -	2.2	0.8	3.5
Total	100.0	100.0	100.0	100.0

It will be seen that transport of products of mines has fallen to a considerable extent, about 20 percent in the case of the D & R G W railway. Increases in agriculture and manufacturing have apparently made up a little o half the loss. Further, losses in volumes of traffic have been more harmful ti percentages indicate.

A resumption of mining activity on a scale more commensurate with the state's mineral resources appears essential to the prosperity of the state as a whole. Mining revival, together with modern electrically operated smelters and furnaces, would beneficially affect railroad transportation, and the use of electric energy, to say nothing of its affect on many communities once large producers of mineral wealth.

Highway Illumination

On the subject of transportation it may be well to speak of the illumination of principal highways with intensive traffic flow. In view of the experiments now being made with various types of gas or fuel produced illumination, and the as yet uncertain possibilities of electric lighting from future hydroelectric generation, both as to comparative costs and supply, it would appear that highway lighting for night driving in Colorado is not a problem for consideration until conditions as to costs and supply are clarifi by future experiment.

Rural Electrification

Rural electrification has assumed a position of national importance in the last three years. The first project initiated in Colorado was the Mesa County project, which was granted an appropriation in June, 1936. Projects have been installed or are now being installed in Mesa, Prowers and Morgan Counties and the San Luis valley. An allotment was made in August, 1938, for a rural project in Uncompahgre valley.

Referring to the population survey made in conjunction with the electric power survey of the Colorado State Planning Commission, the study has been used in relation to the sales tabulation for each district. The chief purpose for which the population study was undertaken was to estimate approxim ately the possible users of electric current within the serviceable zone in each district. Actual projects must be based on local surveys of the immediat areas to be served, requiring field investigations.

The estimate here presented is intended only as a guide to indicate the possible effect of rural electrification within the consumer districts in the near future. Fundamentally, all estimates as to the enlargement of elect services to the rural public living within the serviceable zone depend upon t possible increase in installed capacities through contemplated additions to large hydroelectric installations as such accretions to produced power may affect the sales price of electric current.

The results of the estimate of possible future farm family consumers and of the possible amounts of electric current that may be used, based on a consumer usage probable in the near future, are shown in the tabulation presented below. An estimated factor of eight-hour load was assumed for farm family usage.

The possible use of electric current in rural regions in Colorado h the natural characteristics long noted in farm buying. Primarily the farmer puts utility at the head of his purchasing needs.

Investigation of the economic strength of all consumer districts in rural regions of Colorado reveals considerable spread in farm family earnings, as well as marked differences in other factors governing probable utilization of electric energy. Reduced future cost of rural electric current should result in a large increase in its utilization.

The tabulation presented below is based upon the population study o this report, upon the data derived from surveys of some half dozen other important factors, including number of farms and an average of farm earnings in each district, and upon the average monthly consumer use in kilowatt-hours reflected in the district tabulation of population classification. The wide spread in monthly consumer use is shown by the figures finally used, varying from 20 to 60 kw-hrs per month in the several districts.

TENTATIVE ESTIMATE OF NUMBER OF USERS AND UTILIZATION
IN THE SERVICEABLE ZONE

District	No. of Rural Consumers	Estimated Annual Use kwh	District	No. of Consumers	Estimated Annual Use kwh
Lower Platte	2150	1290000	Grand County	100	48000
Eastern Plains	1030	370800	Eagle R. Valley	200	96000
Ark.Dry Plains	480	201600	Chaffee County	60	21600
Lower Arkansas	2900	1392000	San Luis Valley	1450	696000
Ark.Dry Plains (Baca County)	800	336000	San Juan Mtn.	50	23400
S. Colo. Coal Field	540	129600	S.West Mining	220	92400
Upper Arkansas	2025	1093500	Cortez	350	147000
Piedmont	1660	697200	Uncompahgre	1850	1110000
Upper Platte	8150	5868000	Western Mining	140	67200
Cent.Colo.Mining	100	36000	Colo.R.Valley	1330	990000
Jackson County	40	19200	Northwestern	500	240000
			Total	26125	14965500

The data shown above are based upon present usage. Increase in production of hydroelectric energy with a possible reduced cost in distributi together with increased use of electrical facilities in the rural home might result in double the number of the consumers estimated and a greatly enlarged volume of capacity usage.

SUMMARY

The attempt to estimate the future of the electric power industry in Colorado is difficult because of lack of data as to future trends in power generation and costs of distribution. In the Mountain States region, Colorado though first in population and industrial development, with ample rail and highway transportation facilities, lags behind most of the mountain states in consumer use of electric energy. Its agriculture is well developed, though a present unstable in the most intensely developed regions, due to uncertainty o the supply of water for irrigated lands. Industrially, it is handicapped by i isolation from large markets, and adverse transportation rates.

With its expensive hard-surfaced highways, its vast potentialities as a superb recreational area should well be utilized. Its former fine stock industry has been hampered locally because of over-grazing, and consequent erosion. It is in the mining industry that vital losses have been sustained. The following data clearly picture what that loss has been:

PRODUCTION VALUES

Years	Metalliferous	Other
1900	50 millions	6 millions
1916	49 "	28 "
1920	22 "	43 "
1932	7½ "	18 "

With the losses indicated in production, the smelting industry has declined and only two large smelters are operating in the state at present. Inspection of the trend curves accompanying the district power consumption tabulations reveal the significant fact that trends in values in agriculture, mining and manufacture have been downward from 1919 to 1936. In the 1920's the charts reveal violent fluctuations consonant with the prevailing unstability of the decade following the World War.

Colorado is richer in natural resources than Germany, France or Italy. Our economy is completely interdependent, but the fact that mining does not produce by one-third what it formerly produced should not cause the belief that mining, as an industry, is finished in Colorado. In the opinion of recognized authorities Colorado stands first in the nation in coal resources. In metaliferous resources the state probably ranks among the first in the nation. Within its boundaries are to be found in native state most of the chemicals used in the world's industry.

Behind this presentation of the potentialities of primary production loom the genii of electric power, whose full influence is not clearly defined. Power reaches from its hidden depths like a giant hand, as yet merely fumbling with the control of the gears not alone of industrial operation, but through application of controlled force to industry, seriously affecting the human complex that is called society.

The discussion of the role played by power in the development of modern industry in Colorado clearly reveals the growing interdependence between units of industrial production. It is the recognition of this inevitable trend that makes for design of large units of power production, using, as far as it is possible, primary natural resources that are invaluable and eternal.