CUSTOMERS

At the beginning of 1939 nearly one and one-half million rural homes in the United States were receiving central station electric service, and more are being connected at the rate of nearly a quarter of a million a year. (See Chart G)

Extension of electric lines into farm and rural areas, until the past four years progressed at a relatively slow rate. The percentage of farms electrified in the United States increased only 7.7 per cent during the ten years from 1925 to 1935. (In Wisconsin this increase was approximately 12 per cent over the same period). It was estimated that some 29,000,000 of the 32,000,000 people living on farms in the United States were not receiving highline electric service in 1935. This figure is particularly significant when it is realized that it represents approximately 23 per cent or nearly one quarter of the nation's entire population.

Rural electrification, however, was recognized as a matter of national concern and on May 11, 1935 the Rural Electrification Administration was established. The Rural Electrification Act, passed by Congress one year later, made R.E.A. a permanent organization and authorized an appropriation of $410,000,000 to carry on a continuous program of rural electric line building for a period of ten years.
The rate at which customers were connected to rural electric lines in Wisconsin during the past ten years is shown in Table V. From an analysis of these data it is evident that the progress in the field of rural electrification, particularly in obtaining new customers, is influenced to a large extent by the income of the farmer. (See Chart E)

For example, during the three-year period from 1928 to 1930, inclusive, utilities in Wisconsin added more than 17,000 rural customers to their lines for an increase of nearly 100 per cent over the total number receiving service at the end of 1927. In 1932, however, when the total gross farm income dropped to a low of only about 47 per cent of the 1929 level, the privately owned electric utilities in Wisconsin reported an actual decrease of 345 rural customers and the municipals added but 75. The greatest increase occurred in 1937 during which time the utilities (private and municipal) added nearly twelve thousand rural customers to their lines. This tremendously increased activity among the utilities generally followed the normal trend in relation to gross farm income, but was undoubtedly accelerated by the stimulus produced by the R.E.A. Some 3,750 customers were connected to R.E.A. cooperative lines during the last half of 1937, the first project being energized in June of that year.

In 1938, cooperatives added approximately 48.2 per cent of the total number of 13,737 new customers, privately owned utilities added 45.8 per cent, and municipal utilities added the balance of 6.0 per cent or 824 customers, which is nearly one and one-half times
the previous high for municipal utilities. of 569 new customers in 1937.

On Chart F is shown graphically the number of rural customers in Wisconsin served by private and municipal utilities and rural electric cooperatives as of December 31, for 1927 to 1938, inclusive. Chart F is based on the total number of rural customers, including all customers served at rural rates such as cheese factories, stores, filling stations, taverns, schools, etc. in addition to farms. As of December 31, 1938 the number of farm customers constituted approximately 87.7 per cent of the total. No reliable information is available on the actual number of farms served before 1938.

As of the end of 1938 slightly more than one-third or 34.7 per cent of the occupied farms in Wisconsin were receiving highline electric service while in the entire United States, according to the Edison Electric Institute, 21.9 per cent of the occupied farms were electrified. Chart J shows a comparison of the per cent and number of occupied farms electrified and the average farm density per square mile in Wisconsin and in the five surrounding states.

In this group of six states, Wisconsin ranks second to Michigan both in total number of farms electrified and in per cent of occupied farms electrified, although Indiana, Illinois, and Iowa each have a higher farm density per square mile of total area.

A study of the distribution of Wisconsin's farm electric customers reveals that the southeastern one-quarter of the state was well over 50 per cent electrified as of December 31, 1938, the remainder of the
state being developed to a smaller extent. The percentage of occupied farms electrified in Wisconsin by counties as of December 31, 1938, is shown on Chart H.

It is interesting to note the correlation between the extent of farm electrification and the average land value, average gross income per farm, and the average farm density per square mile, by counties in Wisconsin. This information is also included on Chart H.
CHART E
TOTAL GROSS FARM INCOME AND YEARLY INCREASE IN NUMBER OF CUSTOMERS
BY ELECTRIC UTILITIES AND COOPERATIVES IN WISCONSIN 1928-1938

Note: Farm income data from Wisconsin Department of Agriculture, 1938 figure based on estimates.
Rural electric customer data from Wisconsin Public Service Commission files.
CHART E
TOTAL GROSS FARM INCOME AND
YEARLY INCREASE IN NUMBER OF CUSTOMERS
BY ELECTRIC UTILITIES AND COOPERATIVES IN WISCONSIN
1939-1946

CUSTOMERS ADDRESS
PRIVATE UTILITIES
MUNICIPAL UTILITIES
RURAL COOPERATIVES
CHART F
NUMBER OF
RURAL ELECTRIC CUSTOMERS*
IN WISCONSIN
AS OF DEC. 31.
1927–1938.

LEGEND

SERVED BY PRIVATE COMPANIES
SERVED BY MUNICIPAL UTILITIES
SERVED BY COOPERATIVES

NUMBER OF CUSTOMERS IN THOUSANDS.

YEAR

*Includes all customers served at rural rates. As of Dec. 31, 1938 approximately 87% of these were farm customers.
CHART 7
NUMBER OF RURAL ELECTRIC CUSTOMERS
IN WISCONSIN
AS OF DECEMBER
1957-1958

YEAR

SERVED BY PRIVATE COMPANIES
SERVED BY MUNICIPAL UTILITIES
SERVED BY COOPERATIVES

Approximate 62% of rural homes have electric service.
CHART G
NUMBER OF
FARMS RECEIVING ELECTRIC SERVICE
IN UNITED STATES
AS OF DEC. 31
1927 — 1938

DATA FROM EDISON ELECTRIC INSTITUTE, BASED ON 100 %
OF ELECTRIC & POWER INDUSTRY
CHART J
PERCENT & NUMBER OF OCCUPIED FARMS ELECTRIFIED
AND
FARM DENSITY PER SQUARE MILE
IN
WISCONSIN AND FIVE SURROUNDING STATES
AS OF DEC. 31 1938

MINNESOTA
21,910
11.1%

WISCONSIN
67,590
34.7%

IOWA
46,973
21.9%

ILLINOIS
58,898
26.2%

INDIANA
66,447
34.3%

MICHIGAN
103,712
54.9%

PERCENT BASED ON ALL OCCUPIED FARMS

Data From
Edison Electric Institute Bulletins

U.S TOTAL
1,406,579
21.9%

Average Number Of Farms Per Square Mile

WISCONSIN

ILLINOIS

INDIANA

IOWA

MICHIGAN

MINNESOTA
TABLE V

INCREASE IN NUMBER OF RURAL ELECTRIC CUSTOMERS
BY PRIVATE AND MUNICIPAL UTILITIES AND COOPERATIVES
1928 - 1938

<table>
<thead>
<tr>
<th></th>
<th>Increase in Customers During Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privates</td>
<td>Municipals</td>
</tr>
<tr>
<td>1928</td>
<td>6,349</td>
</tr>
<tr>
<td>1929</td>
<td>4,645</td>
</tr>
<tr>
<td>1930</td>
<td>5,606</td>
</tr>
<tr>
<td>1931</td>
<td>3,374</td>
</tr>
<tr>
<td>1932</td>
<td>(345)</td>
</tr>
<tr>
<td>1933</td>
<td>85</td>
</tr>
<tr>
<td>1934</td>
<td>1,726</td>
</tr>
<tr>
<td>1935</td>
<td>1,425</td>
</tr>
<tr>
<td>1936</td>
<td>5,829</td>
</tr>
<tr>
<td>1937</td>
<td>11,215</td>
</tr>
<tr>
<td>1938</td>
<td>6,284</td>
</tr>
</tbody>
</table>

() Denotes decrease
* First cooperative energized in June 1937.