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# business review

FEDERAL RESERVE

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## **KILOWATTS COOPERATE ON THE DELAWARE**

*Electric power is one of our fastest-growing industries. This article, about power in the Third District, tells how local utilities work together to produce cheaper power.*

## **COUNTY BANKING CHANGES: 1953 vs. 1952**

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# KILOWATTS COOPERATE ON THE DELAWARE



Ben Franklin should have known better than to fly a kite in a thunderstorm—he might have been killed. But he was curious about electricity. Almost on the very site where he drew electricity out of the clouds over Chestnut Street in Philadelphia is a central control board from which electric power produced by utility companies on both sides of the Delaware River is dispatched on the most-favored-station principle to one of the country's most heavily industrialized areas.

Dr. Franklin, who did a lot of experimenting with electricity, never knew what it really was. Neither did Thomas Edison, whose invention of the incandescent lamp was quickly followed by the organization, in 1880, of the first electric company in the United States. Now, the country's investor-owned power industry sells \$5 billion worth of electricity annually and has \$23 billion of capital tied up in generating and distributing equipment. Curiously, we still do not know just what electricity is.

Electricity, whatever it is, is a peculiar commodity. It is about as commonplace and almost as indispensable as water. Practically every room in every home has one or more electric outlets. From millions of these plug-in receptacles, kilowatts are always on tap—day and night, summer and winter—to light our homes, sweep the floors, wash the clothing, preserve and cook food, heat

the bath water, cool the air in summertime, warm our beds in wintertime, and to perform scores of other personal services.

Though not a primary source, electricity is the most widely used form of industrial power. This is because it is so cheap and so convenient. Electricity is easily piped to industrial plants and within each plant easily distributed to the various machines and work places. It can be used in small quantities to run the miniature motor of a jeweler or in large quantities to power mammoth motors in a steel mill. It is always available for consumption, either regularly or intermittently, at constant or irregular flow, as work may require. Furthermore, for most industries, electric power is one of the smallest items of cost. Very few industries produce their own power. They can usually buy it cheaper because electricity can be produced most efficiently in large quantities by the power utilities that specialize in this service.

## Power is big business

On going through one of the financial manuals that describes the life and times of the country's



power companies, two things are especially outstanding. First, it takes a lot of money to go into the business; and, second, most of the money is sunk good and hard in so-called fixed capital, which means that it can be used for absolutely no other purpose. In the power business, a \$25 million concern is rather small and companies with assets of a half billion dollars or more are by no means unusual. In any case, regardless of size, usually three out of every four dollars of investment are tied up in fixed plant account. The technology of power makes it that way and there is little that can be done about it. Anyone going into the business must be prepared to invest a lot of money—the investment in most power companies is five times the annual revenue.

Another peculiarity about the business, somewhat related to the observations just made, is that most power companies usually have ten times as many stockholders as employees. The striking disproportion between the amount of capital and labor required to make kilowatts is apparent when you see one of the big Delaware River plants in operation. Outside one of these river-front temples of power you see nothing but coal going into the building and apparently nothing ever coming out. But that is just because kilowatts are invisible. All day long, crane-operated buckets scoop great gobs of coal out of a river barge, and a conveyor belt carries the coal to bunkers on the top floor of the station. Batteries of pulverizing mills grind the coal to talcum-powder fineness for feeding like gas into the fiery furnaces. Massive piping conveys the steam generated in the boilers to the turbo-generators. These huge pieces of machinery are the heart of the power plant. The high-pressure steam drives the turbines which spin the generators that produce electricity. Coal, the super-

intendent tells you, is being consumed at the rate of 150 tons an hour, and the two spinning generators produce 364,000 kilowatts of electricity hour after hour.

Going from one department of the plant to another you see comparatively few workers amidst this maze of machinery. One or two men in the boiler control center periodically look at the gauges, recording temperature, pressure, and other pertinent information. The electrical control room looks just like you would expect an electrical control room to look—it houses a huge panel with lights flashing red or green, and scores of meters that speak only the electrical language of volts, watts, and amperes. A guard is always at the entrance and a maintenance crew is indispensable; but for the most part the machinery seems to know what to do without much human direction. Things seldom go wrong

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## WHAT IS A KILOWATT?

A kilowatt, without getting too technical, is equal to  $1\frac{1}{3}$  horsepower; or, to avoid fractions, three kilowatts of electric generating capacity correspond to the working power of four draft horses. The 85 million kilowatts of electrical generating capacity in the United States is the equivalent of 113 million horses—and that's a lot of horses.

Kilowatt hours measure the amount of electricity generated, consumed, or sold. For example, a 50,000-kilowatt generator running at full capacity for one hour would produce 50,000 kilowatt hours. In mid-1953, electric output in the United States was in the order of  $8\frac{1}{2}$  billion kilowatt hours a week.

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and when they do the meters tell the technicians where to look for the trouble.

At a hydro-electric plant like Philadelphia Electric's Conowingo station on the Susquehanna River in northern Maryland, where the power of falling water is used to generate electricity, the disparity between the amount of capital and labor employed is even greater than in a plant operating on coal, oil, or gas. It takes an average of only about seventy people to run the \$50 million Conowingo project. There are no steam turbines, no fire boxes, no boilers—but big money was required to buy the land, build the dam, and impound fourteen square miles of Susquehanna River water.

### **How kilowatts go to market**

It takes big money not only to produce but also to distribute electricity. As a matter of fact, the transportation and distribution of power costs more than its production. Unlike carrots, kilowatts cannot be wrapped up in cellophane and distributed through a large chain-store organization. The power company must personally deliver every single kilowatt to the point of use, to each of its thousands of customers. That takes an elaborate system of transformers, trunk lines, distributing lines, and related electrical paraphernalia.

Outside every power house you see a fenced-in area of electrical equipment and a sign proclaiming in bold and forbidding letters, "Danger—High Voltage." This is the transformer yard, or the "shipping department," of the station. Power coming from the generators cannot be sent over wires for long distances without considerable losses caused by the wire's resistance—like the friction encountered by water flowing through a pipe. Transformers step up the pres-

sure (voltage) and reduce the volume of current, thus reducing the loss of current caused by resistance. At the Conowingo transformer yard, for example, electricity is stepped-up to 220,000 volts for the 58-mile trip to the bulk power substation in suburban Philadelphia. The large steel reinforced aluminum cables supported "high above the earth on graceful steel towers which march majestically across the countryside" also sweep majestic cost-of-construction figures into the books of the power company.

Substations perform a kind of wholesaling function. There, step-down transformers reduce the high-voltage incoming power to low-voltage outgoing power for distribution to customers in the area. The distribution requires, of course, a vast network of lines and transformers to reduce voltage still further to the conventional 220 or 110 for household use.

### **Power in the Third District**

Power in the Third District is supplied by no less than nineteen companies. The area served by each company is shown in the accompanying map. Some companies operate exclusively within the district; others cut across district lines into neighboring territory and there is no necessary relation between size of company and size of territory served. How much electric power is consumed in an area depends upon how many people live in the territory, how they make their living, and how well they live.

The Philadelphia Electric Company is the largest of the companies; it generates almost half of the power produced in the entire district. The company serves Philadelphia and Delaware Counties, most of Chester and Montgomery Counties, the lower half of Bucks County (which is the industrialized section including the new Fairless

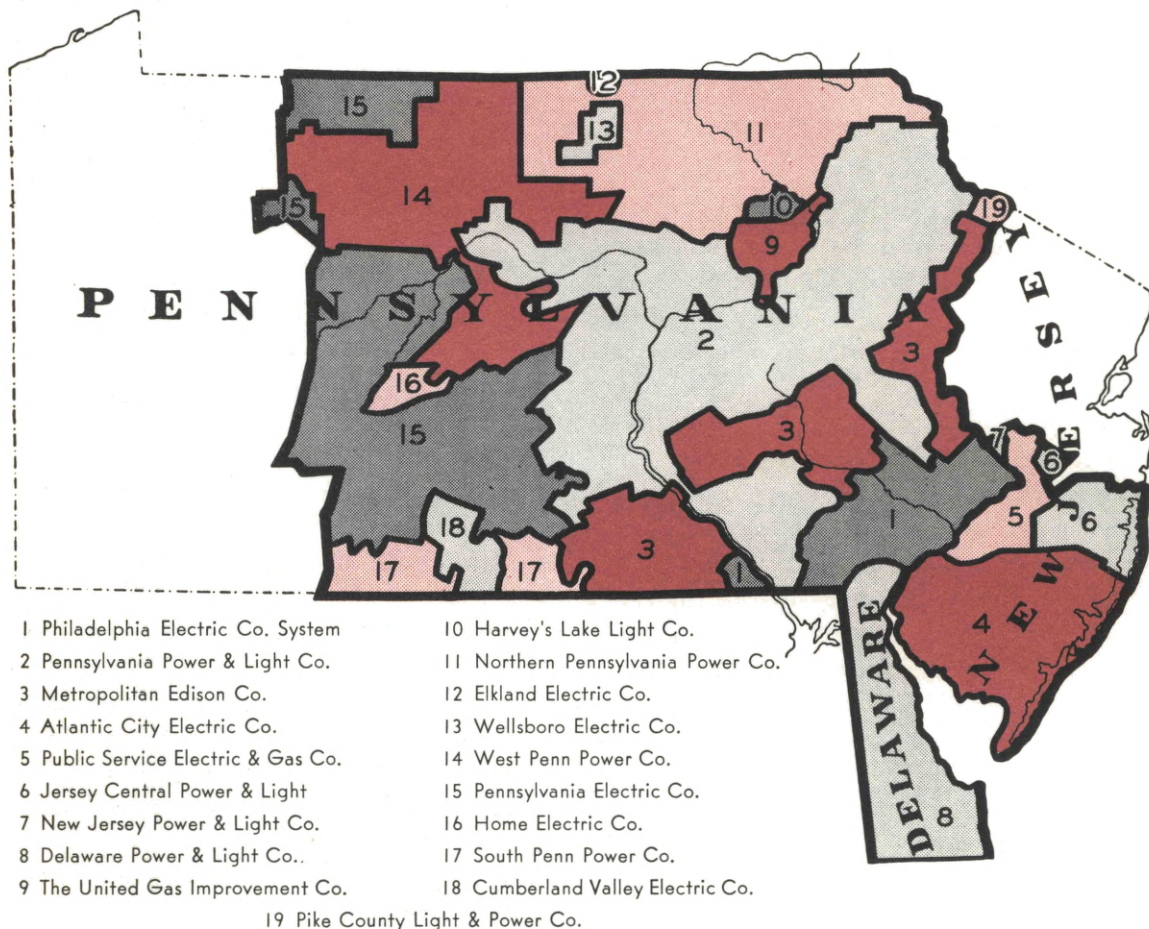


steel mill at Morrisville), the southeastern tip of York County, and a small area in northern Maryland. This is the part of the district where industrial establishments are counted by the thousands and people by the millions. To supply electricity for this great and growing industrial beehive, Philadelphia Electric operates six great steam plants (four on the Delaware and two on the Schuylkill) and the huge Conowingo hydro-electric plant—the seven stations having

a total capacity of more than 2 million kilowatts. It takes more than 7,000 people and over a half billion dollars of power-producing and distributing equipment to serve this area. The region has expanded rapidly during and since World War II and so has the company. The area has never been retarded for want of power.

In terms of square miles of area covered, Pennsylvania Power & Light Company is the largest operating in the Third District. The com-

### THIRD DISTRICT POWER PATTERN



pany's lines run from the New York State border on the upper Delaware in the east to well beyond Lock Haven and Carlisle in the west, and extend to the Maryland line in the south. With less than half the generating capacity of Philadelphia Electric, Pennsylvania Power & Light serves a territory more than four times as large. The company's far-flung lines distribute power into 29 counties, forming a jigsaw territory which includes the richest farmland of the state, a large part of the hard-coal territory, and a variety of industrial communities. Pennsylvania has an unusually large number of cities of moderate size, and Pennsylvania Power & Light Company serves a surprisingly large number of those within the Third Federal Reserve District.

Public Service Electric and Gas Company, comparable in size with Philadelphia Electric, operates in northeastern New Jersey—for the most part outside of the Third District. This company's lines run southwest across the state of New Jersey into this district, where its Burlington station supplies power to Trenton and as far southwest as Camden. The company distributes power to the thickly populated Newark area and also to the most highly industrialized part of New Jersey within our district. These three companies—Philadelphia Electric, Pennsylvania Power & Light, and Public Service Electric and Gas—serve the district well through cooperative arrangements and facilities.

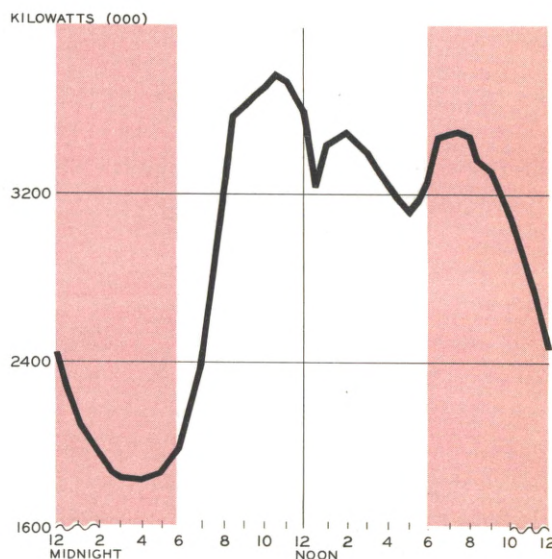
If it seems surprising that so many companies (19 utilities) operate in the district, it should be remembered that formerly there were still more, each serving a restricted area. The present power pattern, though it still may have the appearance of a crazy quilt, is the result of a great many consolidations of small companies into larger units that produce power more economically than the component units before consolidation.

### On call but not in stock

One of the outstanding peculiarities of the power business is that electricity cannot be stored. There is no such thing as an inventory of finished kilowatts, stored on the shelf and ready for delivery on call as in the case of cigars, canned corn, or most other commodities. Power companies must always stand ready to produce the number of kilowatts that customers want when they want them.

Another peculiarity of the power business is that the demand for kilowatts is anything but regular. The amount of electricity consumed fluctuates from hour to hour, from day to day, and from one season to the next. Consumption is naturally greater during the daytime when industries are operating than at night; more electricity is used on cloudy days than on clear days, and usually more during winter with its shorter days than during summer. Irregularity

DAILY LOAD CURVE





of demand is illustrated in the preceding chart showing the load curve on a certain day in March for a group of companies along the Delaware River. The low point occurred at 4 a.m., and the peak at 10:30 a.m., followed by two secondary peaks at 2 p.m. and 7:30 p.m.

For any one company, the peaks are likely to be higher and the valleys deeper, and the load curve will differ from one concern to another. For example, a company in the hard-coal region may have its peak in the morning; a company supplying a seashore resort area is likely to have its peak in the evening. Each company must have, of course, sufficient generating capacity to meet its peak demand whenever it occurs, which means that the difference between its average load and its peak load represents costly reserve capacity frequently idle. If two or more companies in adjacent territories operate in unison, the combined area can be served more economically than if each company operates independently. This is precisely what is done in the Delaware Valley.

### **Cooperating kilowatts**

The Pennsylvania-New Jersey Interconnection is a working agreement among three major companies—Philadelphia Electric, Pennsylvania Power & Light, and Public Service Electric and Gas—to pool their power-producing resources for most economical operation. The properties of the three companies are linked by a high-voltage interconnection in the form of a triangle. At each point of the triangle each company has a large substation—Philadelphia Electric in suburban Philadelphia, that of Pennsylvania Power & Light near Allentown, and the Public Service Company's substation near Newark, New Jersey. The so-called "220 k.v. ring"—the

"shorthand" jargon for the 220,000-volt line—is the backbone of the interconnection system. A number of smaller adjacent companies are coordinated through the three major companies constituting the ring, so that actually a total of 13 companies makes up the Pennsylvania-New Jersey Interconnection. Each of the three major companies is connected to two links of the ring, so the possibility of a breakdown caused by stormy weather in any part of the area is remote. Over 200 separate generators in more than 60 generating stations throughout the territory feed power into this ring, which is always kept "hot," electrically.

Integration of the generating facilities of these companies reduces both investment and operating costs and also improves reliability of service. Investment is reduced because less total generating capacity is required to carry the combined interconnected load—one company's peak falls into another company's valley. Furthermore, it is possible to increase generating capacity in size of units and at locations on the interconnection that will result in greatest overall economy. Finally, the day-to-day and hour-to-hour power needs of the entire area served can be supplied at any moment by that combination of generating units having the lowest cost.

### **The nerve center of power on the Delaware**

At 10th and Chestnut Streets, diagonally across the street from this Bank, are the Interconnection office and the Philadelphia Electric Company load dispatcher's office. Here is the nerve center of the inter-company power hook-ups. In the Philadelphia Electric load-dispatching office an entire wall is covered by a huge panel-board loaded with diagrams and meters. The diagrams serve as memory charts of major



switching operations, and the meters record in megawatts (thousands of kilowatts) the electric power generated at various points throughout the entire system and the amount consumed. Facing the array of meters and instruments are the dispatchers, constantly receiving intelligence through earphones from all parts of the system and doing the appropriate switching from one line to another and occasional blocking—that is, shutting down certain circuits for necessary repair and maintenance work. Similar operations are going on constantly in the load-dispatching offices of Pennsylvania Power & Light Company, Public Service Electric and Gas Company, and other companies in the “pool” with which the interconnection supervisor maintains constant communication.

The supervisor of interconnection is responsible for selecting the equipment to be operated during each period of the day, and for loading this equipment so as to obtain maximum operating economy. Daily estimates have to be made of anticipated loads and capacity, and these estimates must be revised several times each day. An aid in making these estimates is the daily equipment schedule which shows precisely what generators throughout the system are available for duty.

### **Power “orchestration”**

The job of dispatching kilowatts from where they can be produced at least cost to where they are needed most urgently is somewhat similar to the job of a train dispatcher. As the system load increases, it is the responsibility of the interconnection dispatcher to order an increase in generation at the most economical location. This information is obtained from the loading chart, which shows the cost to the fraction of a mill of producing kilowatts by each generator

in the system. Like an orchestra conductor signaling for changes in tonal power, so the interconnection dispatcher calls for the various generators throughout the system to come in so that kilowatts may be produced most economically. Naturally, he would never play “Let’s Put Out the Lights.” In the power “orchestration,” due account is taken of the water available at run-of-river and storage hydro-electric plants so as to take full economic advantage of available water power.

The interconnection office also keeps the necessary records and coordinates the accounting among the member companies. Savings—the difference between the generating company’s cost and the value of the energy delivered to the receiving company—are divided equally among the sending and the receiving companies. Such savings amount to thousands of dollars each year.

### **Larger areas of cooperation**

The interconnection is part of a larger power grid over which electricity can be interchanged. Transmission lines to the north connect this area with the New York and New England region, and several transmission lines to the south link this area with the power companies in the Baltimore-Washington territory. Thus in the event of a power failure in, let us say, Massachusetts, that area can draw upon power stations in Connecticut which in turn can draw upon those in New York, which in turn can draw upon those in the Philadelphia region. The advantages of such a power grid are obvious.

### **Electric power consumption**

The use of electricity in this district has grown at a tremendous rate. Sales of the leading power-

*(Continued on page 12)*



# COUNTY BANKING CHANGES: 1953 vs. 1952

Plus signs dominate the following table of year-to-year changes in loans, investments, deposits and earnings. In the case of loans there were no exceptions. Every county had an increase in loans from June 1952 to June 1953. But the size of the increase varied widely, ranging from a few percentage points to more than one-third and averaging 12½ per cent. With respect to investments, the picture is more diverse, but the number of counties reporting increases in securities portfolios outnumbered those reporting declines by two to one. Growth in deposits also

was the rule, although declines were reported in seven Third District counties.

Increases in earnings before income taxes were quite general. Comparison of first-half 1953 with first-half 1952 shows increases ranging from 15 to 25 per cent in more than half of the counties.

The aggregates on which the figures are based were derived from mid-year condition statements and first-half earnings reports of member banks, with appropriate adjustments to compensate for mergers and changes in membership.

	Percentage change from June 30, 1952 to June 30, 1953 in—			Percentage change from the first half of 1952 to the first half of 1953 in—
	LOANS	INVESTMENTS	DEPOSITS	
<b>PENNSYLVANIA</b>				
Adams .....	+15.4	+ .8	+ 9.2	+21.8
Bedford .....	+15.6	+ 6.1	+ 7.6	+21.8
Berks .....	+15.1	+ .3	+ 4.1	+23.7
Blair .....	+12.9	+ 5.6	+ 6.2	+16.4
Bradford .....	+ 8.4	+ 2.3	+ 4.8	+31.9
Bucks .....	+15.7	+ 6.6	+17.3	+29.1
Cambria .....	+12.9	— .5	+ 3.6	+21.7
Carbon .....	+ 5.8	+ 3.6	+ 2.4	+21.1
Center .....	+12.2	+ .6	+ .7	+15.3
Chester .....	+ 8.8	+ 4.4	+ 5.5	+13.7
Clearfield .....	+14.2	— 6.9	+ 1.4	+16.5
Clinton .....	+10.5	— 8.9	— 5.9	+19.4
Columbia .....	+14.1	+ .2	+ 3.5	+19.2
Cumberland .....	+ 8.9	+13.9	+14.4	+18.4
Dauphin .....	+ 9.6	+ 2.7	+ 7.0	+13.2
Delaware .....	+ 9.4	+ 8.1	+ 6.5	+ 7.9
Elk .....	+ 6.0	— 6.0	— 7.6	+44.0
Franklin .....	+15.8	+ 4.9	+ 2.7	+23.0
Fulton .....	+ 8.8	+ 6.0	+ 7.6	*
Huntingdon .....	+18.9	+ 1.4	+10.2	+15.8

	LOANS	INVESTMENTS	DEPOSITS	NET CURRENT EARNINGS
Juniata .....	+11.7	+ 5.0	+ 4.3	+17.0
Lackawanna .....	+20.0	— 3.2	+ 1.8	+41.3
Lancaster .....	+ 8.4	+ 3.7	+ 3.1	+16.6
Lebanon .....	+12.5	+ 5.3	+ 7.0	+ 9.0
Lehigh .....	+12.3	+ 2.0	+ 3.2	+19.9
Luzerne .....	+10.2	— 5.2	+ 1.2	+11.0
Lycoming .....	+ 4.1	+ 5.8	+ .8	+18.8
McKean .....	+ 6.9	— 4.5	— 2.8	+14.5
Mifflin .....	+11.6	+ 1.9	+ 6.9	+21.6
Monroe .....	+10.1	+ .3	— .1	*
Montgomery .....	+14.0	+ 3.0	+ 6.1	+17.3
Montour .....	+20.1	—14.0	— .6	*
Northampton .....	+ 9.1	+ 2.9	+ 3.8	+16.7
Northumberland .....	+ 8.2	—	+ .1	+ 9.3
Perry .....	+15.0	+ 8.0	+ 9.2	+16.7
Philadelphia .....	+14.2	—15.4	+ .9	+20.0
Pike .....	+14.4	+ 4.7	+10.5	*
Potter .....	+14.3	+ 1.1	+ 6.8	+32.0
Schuylkill .....	+11.5	— 1.9	+ 1.0	+15.0
Snyder .....	+18.6	—	+ 6.8	+ 9.6
Sullivan .....	+ 6.2	— 1.0	+ .4	*
Susquehanna .....	+12.9	+ 2.0	+ 2.5	+17.6
Tioga .....	+10.9	+ .9	+ 1.4	+10.8
Union .....	+13.9	— 7.5	+ 1.5	*
Wayne .....	+ 4.2	— .4	+ 1.9	+19.4
Wyoming .....	+ 9.0	+ 2.0	+ 3.7	+ .8
York .....	+13.0	— 1.3	+ 4.3	+28.3
<b>NEW JERSEY</b>				
Atlantic .....	+11.0	+ 3.9	+ 4.7	+ 4.1
Burlington .....	+10.3	+ 7.9	+ 8.7	+18.7
Camden .....	+36.7	—11.4	+ 4.9	+14.3
Cape May .....	+12.1	+ 6.3	+10.1	—11.9
Cumberland .....	+23.6	+ 2.4	+ 3.7	+21.2
Gloucester .....	+12.4	+ 1.5	+ 3.6	+19.8
Mercer .....	+11.5	— 1.8	+ 1.1	+11.5
Ocean .....	+17.0	+14.5	+10.9	+22.7
Salem .....	+14.4	— 1.3	+ 3.1	+28.1
<b>DELAWARE</b>				
Kent .....	+17.0	— 8.8	— .5	+17.7
New Castle .....	+ 8.8	— 7.9	— 3.7	+19.6
Sussex .....	+ 3.1	+13.4	+ 4.4	+ 8.0

\*Not shown because of limited number of member banks in county.



producing companies that account for most of the power generated in the district rose from 3 billion kilowatt-hours in 1925 to 19 billion in 1952. As the chart shows, the use of electricity has just about doubled every decade. This is characteristic not only of the power industry of this district, but of the entire country. Indeed, the growth in the use of power is astonishing. Not many industries have been growing like the electric power industry, which has doubled and redoubled its output during the past two decades.

The use of electricity has been increasing in practically all categories. In the Third District, about 37 per cent of the sales of electricity is used for residential and commercial purposes and about 57 per cent is for industrial and railroad use—the remainder going to municipalities. As a servant in the typical American home, electricity is constantly assuming wider duties. The modern home now has available about 50 different electrical appliances, ranging from blankets and bottle warmers to electric ranges and water

heaters, and the list is constantly growing. Outstanding among the recent additions to household appliances are TV receiving sets, dishwashers, food freezers, and room air conditioners.

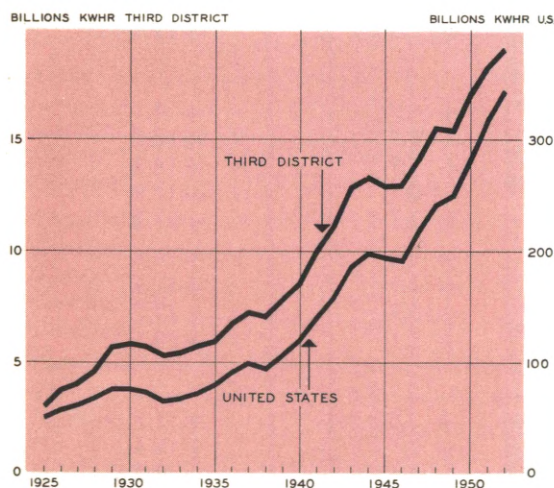
Booming sales of room air conditioners should make the power people happy, but at the same time it also creates a problem for some of them. Traditionally, the peak in power consumption occurs in December, following a mid-summer low. The summer period is normally utilized for maintaining generating equipment. Because of the addition of air conditioners and other cooling equipment, however, it is a constantly increasing problem for many companies to find the time to do their maintenance. Obviously, if the summer period fills up too much, additional capacity will have to be installed to permit maintenance. This fact is most pronounced in the Baltimore-Washington area where the peak load for the month of July was greater than the peak load of December 1952.

The industrial demand for electricity is likewise expanding rapidly because of the fast wartime and postwar growth of manufacturing industries and the universal applicability of electrical power in industry. Particularly heavy demands for electrical energy are made by the rapidly expanding atomic energy program and the production of aluminum.

### More power

The fast-growing electrical power industry seems to have no bounds. On top of a huge postwar expansion program, power companies are planning substantial increases to existing generating capacity. The Philadelphia Electric Company, which has already spent \$320 million since World War II to expand and modernize capacity, is planning to spend an additional \$385

### POWER SALES



million by the end of 1958. Similarly, Pennsylvania Power & Light Company is in the middle of a big expansion program; in fact, almost every power company has a section in its annual report outlining the amount of expenditures for additional generating capacity required for the future needs of the territory it serves. Power companies across the country are expected to spend \$12 billion in the four years 1953-1956 to boost United States capacity to about 125 million kilowatts. That would be an increase of 50 per cent over present generating capacity. Power people are no mere word-of-mouth optimists; they back up their forecasts with cash and lots of it.

### **And now—nuclear power**

The electric power industry has an important interest in the atomic energy program, not only as a market for power but also as an ultimate source of electrical power. Nuclear fission has opened a vast new source of heat energy. There

is now a real prospect of utilizing atomic power economically at central stations with fissionable materials taking the place of conventional fuels, and nuclear reactors and heat transfer systems replacing conventional boilers. This does not mean that present electric-power generating equipment is doomed to quick obsolescence; if it did, electric utilities would not be planning such huge sums for expanding capacity. Whether operating on nuclear fuels or conventional fuels, all central stations will continue to use steam turbines, electric generators, and other present-day equipment. It has been estimated that a full-scale plant operating on nuclear fuel, capable of generating 200,000 kilowatts, would cost about \$50 million. From this it is apparent that you do not get kilowatts for nothing when produced in a plant operated on nuclear fuels. Atomic energy will no doubt be used to produce electricity at central stations when it becomes economical to do so, and from present appearances it is more likely to be an evolutionary rather than a revolutionary change.

## **REPORT FROM THE FARM**

County agricultural agents are the specialists farmers consult about their problems. They are asked questions every day about cropping practices, production techniques, and marketing methods. These on-the-spot representatives of each state's agricultural extension service, therefore, are well-versed in the day-to-day situation as it unfolds in their respective counties. They are busy men at almost any season but particularly so when crops are being harvested. We

found this to be the case when we tried to reach them for a run-down of local conditions in some of the more important agricultural counties of this district. You must get up early in the morning to catch these farm advisers before they take off for the field on their daily rounds.

### **Price-wise, our farmers are not too bad off**

In talking with county agents in various parts of the Philadelphia Federal Reserve District we



learn that price-wise the over-all situation here has deteriorated less than in some parts of the country where agriculture is not so diversified. The extent of this diversification was pointed up in the August 1953 issue of the *Business Review*. We do have our specialists — farmers who grow nothing but fruit, raise only poultry, or produce little else beside tobacco. But they are in the minority.

The very nature of the district's agricultural economy, however, is such that few farmers have all their eggs in one basket. Consequently, as price declines in one market often have been accompanied by stability or even increases in another, farm purchasing power here does not appear to have been affected so severely as in areas wholly dependent on one crop like livestock, wheat, or cotton.

### **Weather-wise, it's been good until recently**

From the standpoint of growing conditions, too, crop diversification has proved fortunate over a good part of the current season, because what one crop could do without another needed. An unusually wet spring was hard on early potatoes, but most grains yielded well. Although hot weather in July caused premature ripening and undersizing in early fruits, it gave a late-planted corn crop a much-needed boost. But all is not rosy, weather-wise. Insufficient rainfall and excessively high temperatures since mid-August have caused much concern for both vegetable and field crops. Pastures have deteriorated rapidly, forcing dairy and livestock farmers to make heavy inroads on their winter feed supplies. On a crop-by-crop basis, the situation in this district shapes up about as follows.

### **Livestock feeders face uncertainty**

Our farmers in Lancaster County and other nearby areas are reluctant to commit themselves heavily to the business of fattening and finishing grass-fed steers shipped in from the western-range states. Their hesitancy is understandable in view of the near-chaotic conditions which prevailed in cattle markets a while back. But local cattle prices have steadied or even firmed a little recently; moreover, near-failure of pasturage in some range areas is contributing to offerings of steers suitable for fattening at quite reasonable prices. So, farmers in the feeder business are in somewhat of a dilemma. These new offerings look tempting, but the losses incurred in marketing well-fattened animals last spring and in the early summer are still fresh in mind.

### **Poultrymen are encouraged**

Down in Sussex County, Delaware, where broilers are *the* crop, deflationary tendencies are perhaps less noticeable than elsewhere in this Federal Reserve District. Baby chicks are in heavy demand. Broiler production, already above its year-ago level, is still rising. The market has strengthened beyond early expectations and prices, too, are stronger. At current levels, it appears that growers are likely to make some money this year.

In Ocean County, New Jersey, a prime area for both poultry and eggs, this year's outlook also is promising. Markets have held up well in point of volume and only a little less so as to price. Egg prices have shown the least fluctuation. Another note of optimism in this area of our agricultural economy is a decline in feed costs. And to poultrymen and dairymen alike, that's a big item.

### **Fruit growers are in a strong position**

Franklin and Adams County orchards are yielding good crops of apples, peaches, and cherries this season. Volume is up from a year ago and quality is high. Processing demand for apples is particularly strong, and prices are higher than a year ago. Much the same situation prevails in the fruit-growing areas of southern New Jersey. In Gloucester and Burlington counties, this has been an extremely good year for peaches. Prices in all principal markets held up well, averaging somewhat higher than in 1952. Late apples are not sizing properly, however, because of the hot, dry weather.

### **Dairy farmers are hopeful . . . but they have their problems**

Bradford County dairymen producing for the New York milk market have been receiving a little more for their fluid milk than a year ago, and prices recently advanced slightly. In Chester County, too, the price is up—principally on the prospect of some reduction in output. Dairy products have been in good demand in Salem County, New Jersey, but output also has been declining because of poor pastures. From all corners of the district there are reports of heavy supplementary feeding by dairymen. In some counties a winter shortage of hay threatens; in others the whole winter feed picture is indicative of a tight situation. This sort of feeding so early in the season is not the kind of farm economics our dairymen relish. They have another problem too—labor. There are not too many satisfactory year-round workers available. They com-

mand high wages and, even so, many are lost to higher-paying jobs in industry.

### **In vegetables and field crops, it's a mixed situation**

Vegetable growers in Philadelphia, Bucks, and some of the nearby counties in New Jersey were doing right well until the drought intensified, and the heat made things worse. Sweet corn and tomatoes, in particular, looked like excellent crops. But too many days of hot, dry weather have forced harvesting of these and other truck crops now in season. Peak volume reaching the fresh market and the canneries in too short a time for ready absorption has depressed prices and caused heavy losses through spoilage. Some canneries have set a daily limit on tomato receipts; others have simply paid the farmers under contract for whatever was delivered and have processed as much as they could—working seven days a week under terrific pressure.

Up in Lehigh County, early potatoes were of rather poor quality. The crop moved slowly and prices were low. The late crop looked fairly promising but the drought and heat changed that. Lancaster County's early plantings of tobacco have done rather well but later-planted fields have been hard hit. It looks like a smaller crop this year, so the market should be strong at higher prices than were received last season. Grain and hay crops harvested in early summer yielded well and quality was high. Corn for silage looked like a fine crop until recently. But here, as in the case of other late crops, the final outturn will depend on the vagaries of the weather from now until harvest time.



## PORT PROGRESS

*The considerable attention given industry in the Delaware Valley should not obscure the fact that this region is also an enormous center of commerce. At the heart of this commercial center is the Philadelphia port area—a bulk-breaking station from which ocean, railway, and highway lines of transportation radiate in all directions. Port activity serves as one important measure of commerce in the area. For this reason a recent release of the Delaware River Port Authority attracts the attention of those concerned with business conditions in the Third Federal Reserve District. In December 1951, the Business Review gave a more complete appraisal of the Philadelphia port area.*

Foreign commerce shipped through the Philadelphia port area declined in 1952. The decrease was in line with the trend of total United States tonnage which also was down; but, percentage-wise, the drop here was sharper. The somewhat faster rate of decline came about primarily because a decrease in foreign demand for a few American products had a more-than-proportionate impact on the Philadelphia port area. Over the longer run, however, commerce at the port has been on the upswing. With the tremendous expansion in industry in the Delaware Valley more of the same is anticipated.

A total of 25.9 million tons of foreign commerce was shipped through the Philadelphia port area in 1952, as compared with 27.9 million tons in 1951. This represented a decrease of about 7.2 per cent. Total tonnage for the

United States declined by about 3.3 per cent in 1952. Locally, imports were up fractionally, whereas exports declined from 5.6 million tons in 1951 to 3.6 million tons in 1952. Nationally, ports showed the same general trend—a slight rise in imports and a fall in export tonnage.

### Exports

The lag in foreign commerce tonnage in 1952, locally and nationally, was due to a decrease in exports. It did not come about, however, as a result of a general decline in world demand for American goods; rather, the contraction was caused by significant drops in foreign demand for a few products. Coal and wheat were among the three or four commodities most adversely affected by this selective contraction in foreign demand. Since about 95 per cent of anthracite coal exports of the United States and a larger-than-average amount of wheat were exported through the Philadelphia port area in 1951, total commerce at this port was more than proportionally affected by the slow-down in the export of these products in 1952. This was largely responsible for the sharper decline at the port than for the country as a whole.

Export reductions in coal and wheat together accounted for better than 91 per cent of the total net loss in tonnage through the Philadelphia port area in 1952. The drop in coal shipments amounted to about 1½ million tons, and in wheat exports the loss was 526,000 tons. Lesser export declines were recorded for automobiles, chemicals, and petroleum products. These more than offset export gains of steel products and animal products.

## Imports

Imports in the Philadelphia port area—at 22.3 million tons in 1952—were about six times as large as exports and somewhat higher than in the previous year. The all-time high for imports was 23.6 million tons set in 1950. As is practically always the case, crude petroleum was easily the leading commodity imported through the Philadelphia port area. The port received 17.8 million tons of crude petroleum in 1952—about 670,000 tons more than in 1951. This represented 51 per cent of the nation's crude petroleum imports. Other imports at the Philadelphia port area showing significant increases in 1952 included molasses, residual fuel oil, other petroleum products, fertilizer, lead ores, and burlap and jute bagging.

## The longer-run outlook

Although foreign trade figures for 1952 as compared with 1951 seem to indicate that commercial activity is lagging at the Philadelphia port area, this is not the case from the longer-run view. Since 1939 this port—second in total waterborne commerce tonnage—has been on the upswing. Over that period, foreign commerce handled here has quadrupled. In part, this gain

reflects a nation-wide trend but the increase here has run ahead of the trend.

A characteristic peculiar to the pre-war Philadelphia port area has survived that period of enormous growth. Ships still enter the port loaded with raw materials but leave without cargo. In the five years immediately preceding World War II imports accounted for around 80 per cent of total foreign tonnage here. Since 1947, imports more than matched this, accounting for 85 per cent.

This heavy import balance survives largely because industry in this region, although importing raw materials through the Philadelphia port area, sends much of its manufactured products overseas by way of the port in New York. The New York Port, the largest port in the country, has long attracted goods of this class. This habit still outweighs the many advantages offered by the Philadelphia port.

Perhaps in the future the Philadelphia port area will be able to induce local manufacturers to ship more from here; perhaps not. In any event, the port should continue to grow. Industry in the Delaware Valley has undergone enormous expansion. Even now this industry is bringing raw material imports in tremendous quantities to the Philadelphia port.

# CURRENT TRENDS

More and more observers seem to feel that business may now be at or near the turning point. Whether the long-postponed downturn has arrived or is in the immediate offing no one, of course, can say for sure. Even looking back it is hard to determine exactly when turns take place. Anyone who has leafed through the 500-

odd-page study of "Measuring Business Cycles," by Burns and Mitchell, has an idea of the difficulty of timing and measuring fluctuations after they have happened. But it is still easier to analyze the past than the future. We are living through an interesting but confusing period in which signs point in all directions.



Businessmen, Government officials, and others have been looking for signs of a downturn for a long time. They now seem to be having more success in finding them. The rate of steel output for some time has been below the level of last spring. Automobile production seems too high to be sustained. Businessmen have given indications that they are carefully watching inventories, which recently have been accumulating at a rapid rate. The machinery industry is expecting to cut output, and production of farm machinery already has declined, suggesting that businessmen and farmers will spend less for capital equipment. Housing starts have been dropping.

What makes the picture confusing, however, is that these signs appear in the midst of unprecedented prosperity. Personal and business incomes are at all-time highs. Prices have been fairly steady (even farm prices have shown indications of stabilizing). Although production was down in July this seemed to be largely because of plant-wide vacations; output is believed to have risen again in August. Unemployment currently is as low as at any time since World War II.

### **A new budget**

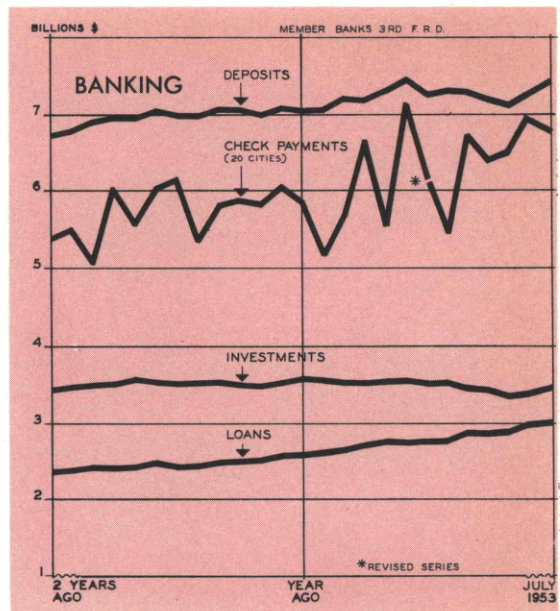
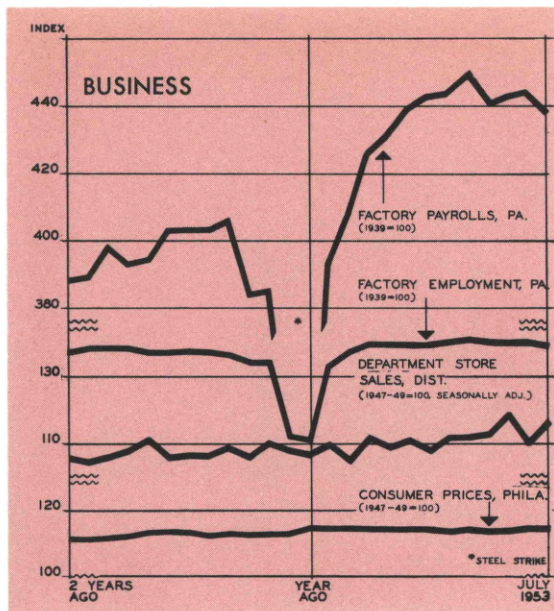
A turning point of another kind has been revealed by the mid-year review of the budget.

Government spending during fiscal year 1954 will be \$2 billion less than was estimated last May. The bulk of the cut is to come out of military spending. This leaves a budget deficit of \$3.8 billion as against the May estimate of \$5.8 billion. On a cash basis, the picture looks even better. Instead of a cash deficit of \$3 billion, it is now estimated that Government cash receipts will fall short of cash outlays by only \$500 million.

The budget review stressed that even more important for the future, and "the essential turning point toward a balanced budget," is the whittling down of commitments for future outlays. In the past few years, the pace at which appropriations and authorizations were made far exceeded the pace at which goods were delivered and expenditures actually made. The result was that during much of the time unexpended funds amounted to more than \$100 billion. For the first time in several years new obligational authority is substantially less than estimated annual budget expenditures, and this lower level of new obligational authority promises lower expenditures not only in 1954 but also in future years.

The effect of lower Government spending on a situation in which other forces may be tending to produce less vigorous business remains, of course, to be seen.

# FOR THE RECORD...



## SUMMARY

	Third Federal Reserve District				United States			
	Per cent change				Per cent change			
	July 1953 from		7 mos. 1953 from		July 1953 from		7 mos. 1953 from	
	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago
<b>Output</b>								
Manufacturing production...	- 2*	+25*	+ 9*	- 3	+22	+13		
Construction contracts†	+ 9	+ 2	+20	- 2	- 1	+ 4		
Coal mining	-14	+ 8	-16	-11	+29	- 6		
<b>EMPLOYMENT AND INCOME</b>								
Factory employment	- 1*	+25*	+ 9*		+12	+ 8		
Factory wage income	- 1*	+42*	+19*					
<b>TRADE**</b>								
Department store sales	+ 6	+ 9	+ 4	- 3	+ 5	+ 4		
Department store stocks	0	+ 9		+ 2	+ 9			
<b>BANKING</b> (All member banks)								
Deposits	+ 2	+ 6	+ 3	+ 2	+ 3	+ 3		
Loans	+ 1	+16	+14	0	+10	+11		
Investments	+ 3	- 4	- 2	+ 7	0	- 1		
U.S. Govt. securities	+ 4	- 5	- 3	+ 9	- 1	- 3		
Other	0	0	+ 1	+ 1	+ 1	+ 4		
Check payments	- 3§	+19§	+12§	- 4	+ 8	+ 8		
<b>PRICES</b>								
Wholesale				+ 1	- 1	- 2		
Consumer	0†	0†	+ 1†	0	+ 1	+ 1		

\*Pennsylvania †Philadelphia §20 Cities

\*\*Adjusted for seasonal variation. ‡Based on 3-month moving averages.

## LOCAL CHANGES

LOCAL CHANGES	Factory*				Department Store				Check Payments		
	Employ- ment		Payrolls		Sales		Stocks				
	Per cent change July 1953 from		Per cent change July 1953 from		Per cent change July 1953 from		Per cent change July 1953 from		Per cent change July 1953 from		
	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	
Allentown...	0	+26	-1	+46						0	+ 10
Harrisburg...	+1	+19	-1	+35						+ 4	+ 8
Lancaster...	+1	+ 9	+3	+17	- 2	+14	-4	+11	+ 1	+ 11	
Philadelphia...	-1	+ 8	-1	+16	-25	+ 9	-8	+ 6	- 6	+ 17	
Reading...	-1	+ 3	-1	+14	-20	+ 8	-7	+ 8	+ 5	+ 32	
Scranton...	0	+ 3	0	+ 7						- 8	+ 2
Trenton...	-2	+21	-1	+44	-28	+ 3	+4	+ 6	+78	+104	
Wilkes-Barre	0	+ 4	-1	+ 7	-20	+ 5	-4	+11	+ 2	+ 17	
Wilmington...	0	+ 9	+1	+28	-10	+12	-8	+ 5	-20	+ 6	
York...	+1	+10	-3	+23	-10	+12	0	+14	- 3	+ 23	

\*Not restricted to corporate limits of cities but covers areas of one or more counties.





## **THIRD FEDERAL RESERVE DISTRICT**