

# C O P Y

## HISTORY OF THE HARRISBURG STEAM HEAT & POWER CO.

At a preliminary meeting of the following named gentlemen, held in the Board of Trade Rooms, September 16th, 1886, the Harrisburg Steam Heat & Power Co. was organized:-

E.Z.Wallower  
Col. W.W.Jennings  
J.W.Jones  
Wm.M.Donaldson  
John H.Weiss  
H.A.Kelker  
John Wallower, Jr.  
H.W.Stone  
H.F.Quickel

John I.Beggs  
H. Cohen  
Joseph Strouse  
David Fleming  
R.A.Johnston  
A.H.Charles  
W.L.Gorgas  
Jacob Tausig  
Harry C.Ross

Col. W.W.Jennings acting president, and Mr. J.I.Beggs, Secretary.

Committee on By Laws was named as follows:-

Harry C. Ross  
W.M.Donaldson  
E.Z.Wallower

The following men were elected as directors:-

Col. W.W.Jennings	E.Z.Wallower
Geo.W.Reilly	H. Cohen
Thos.H.Heist	W.M.Donaldson
David Fleming	Joseph Strouse
J.W.Jones	

Permanent Officers were elected as follows:-

E.Z.Wallower	President
John I.Beggs	Secretary, Treasurer and Manager

A charter was received from the State of Pennsylvania on October 13th, 1886, granting permission for the company to occupy all the streets and avenues of the City of Harrisburg.

The question of a site for the location of a plant was taken up and a suitable location was found at No.128 Short St., extending through to Tanners Street. This property was purchased from Col. W.W.Jennings, October 7th, 1886, for \$5,000.00.

A contract for the following underground steam mains was awarded to the American District Steam Co., Lockport, N.Y., at their estimate of \$48,089.04. \$5,000.00 of this amount was taken of stock in the steam company, and the balance paid in cash.

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From plant to 3rd and Walnut Sts.	950 ft. of 10"
On 3rd St., Walnut to Market	487 ft. of 8"
" " " " " State	1075 ft. of 6"
Market St. - 2nd to 4th.	1075 ft. of 6"
2nd St. - Market to Locust	800 ft. of 6"
2nd St. - Market to Chestnut	550 ft. of 5"
Front St. - Chestnut to South	2000 ft. of 5"
Market St. - 4th to 5th	450 ft. of 5"
4th St. - Walnut to Market	500 ft. of 4"
Chestnut St. 2nd to Front	400 ft. of 4"
Walnut St. - 2nd to Front	487 ft. of 4"
Locust St. - 2nd to Court	250 ft. of 4"
Strawberry St. - 3rd to Court	150 ft. of 4"
Pine St. - 3rd to Front	975 ft. of 4"
Walnut St. - Tanners to 5th.	375 ft. of 5"

Of the above mains installed in 1886, the following are in operation after 36 years of service:-

Third St., Walnut to Market	487 ft. of 8"
Third St., Locust to State	880 ft. of 6"
Second St., Market to Chestnut	550 ft. of 5"
Front St., Chestnut to South	2000 ft. of 5"
Chestnut St., 2nd to Front	500 ft. of 4"
Walnut St. - 2nd to Front	487 ft. of 4"
Strawberry St. - 3rd to Court	150 ft. of 4"
Pine St. - 3rd to Front	975 ft. of 4"

In repairing leaks along these lines, from time to time, we have discovered that in some places the lines are about worn out while in other places they seem to be in fairly good condition. They are overloaded and should be replaced by larger mains.

The contract for excavating for the above mentioned steam mains was awarded to Jacob F. Schlayer at this bid of .17¢ per lineal ft. At the present time the prices for excavating vary from \$2.50 to \$3.50 per lineal ft., showing the advance of 36 years in prices.

Mr. P.H. Bernheisel was selected as architect to lay out the plans for the power plant building.

The contract for the original installation of six 125h.p. return tublar boilers, with Harvis setting, including the installing of a Berryman Feed Water Heater, was given to the Harrisburg Fdy. & Mche. Works at their price of \$15,000.00 erected. The boilers were set in continuous row and were connected by 6" steam pipes to a main 15" header, suspended from the boiler house roof, this header dropping down over the end of No.1 boiler and passing out to Tanners St. main.



The contract for the erection of the Power Plant was awarded to Wm. Gates, for \$5,500.00 for a brick building, with slate roof. After completion of the boiler house, the office was laid out in a small room, about 10 ft. square, suspended from the roof of the building, the work room was also in a small room about 10' x 20', suspended from the roof of the building. This room contained all the stock of the company, also the headquarters for the workmen. It was almost impossible to work in these rooms on account of the dust and dirt from the boilers and it was necessary to keep all books in drawers when not in use.

General inspection and test of the plant was made March 21st, 1887, at 3:P.M. and steam was kept on for ten weeks. Steam was supplied to 13 consumers, with 384,426 cu. ft. space. The steam bills amounted to \$128.85 for the ten weeks service.

In the installing of service pipes to consumers premises there was a charge made of \$1.00 per lineal ft. from curb line into cellar. Reducing valve, steam traps and cooling coils were furnished at actual cost.

April 11th, 1887, Mr. J.I. Beggs, resigned as Secretary, Treasurer, and Manager. Mr. W.M. Donaldson was elected as his successor. May 30th, 1887, Mr. R.H. Gallagher was elected Superintendent of the Co.

#### COST OF ORIGINAL PLANT

Franchise	\$10,268.60
Real Estate	10,723.75
Traveling expense	167.50
Mains installed	50,366.10
Office Furniture	20.50
Boilers	15,000.00
Meters	118.40
Service pipes	101.43
Incidentals	499.40
<b>Total</b>	<b>\$87,265.68</b>

*Statement  
21 May 1887*

On August 22nd, 1887, a contract was given to the company to furnish the steam for heating the State Capitol Buildings, also the Governor's Mansion, for a flat rate of \$4800.00 per season for the Capitol buildings, and \$380.00 per season for the Mansion.

The following additional mains were installed at a cost of \$16,030.00:-

Plant to Fourth and North Sts.	- 10"
North St., 3rd to 6th	- 4"
Locust St., Court to 3rd	- 4"
Front St., South to State	- 5"

The plant was started from the season on October 1st, 1887, furnishing steam to 48 consumers, with 3,040,000 cu.ft. space, the steam bills amounting to \$9,858.66.

June 25th, 1888, Mr. Donaldson resigns as Secretary and Mr. H.B. Gerhardt elected to fill the position.

July 2nd, 1888, a contract was given to Wm. Gates for the erection of an office and work shop on the front of the property, facing Short St., at a cost of \$1225.00.

June 17th, 1889, Mr. Wallower resigned as president and Col. W.W. Jennings was elected to fill his position.

The following were the rates for heating in force at that time:-

1" steam meter	\$ .40	per 1000 lbs.
1" " " " " "	.75	per 1000 lbs.
1 1/2" " " " " "	2.10	per 1000 lbs.
2" " " " " "	5.50	per 1000 lbs.

The meters used were of the make known as the Holly Steam Meters and measured the steam as it entered the building. The meters were fairly accurate unless tampered with, and in a number of cases this was done, by screwing up the adjusting screw and and throwing the gears out of mesh.

Mr. H.B. Gerhardt resigned on March 3rd, 1890, as secretary and Mr. Wm. Jennings elected in his place. Mr. Thos. Adams was elected as Superintendent in place of R.H. Gallagher, who was dismissed from the service of the company.

The contract for installing the heating plant with all underground mains was awarded to the company by the Trustees of Dickinson College, Carlisle, Pa. This work was installed in 1890.

March 3rd, 1890, the purchase of the old Wesley A.M.E. church was made at a cost of \$3500.00. This church was used as an addition to the work shop and also as a warehouse. Frame building two stories high, 25' wide and 50' long. The meter testing room was made on the 2nd floor, also a tool room in which all tools belonging to the company were kept.

The property adjoining the church was purchased April 10th, 1891, for \$800.00. This property was purchased with a view of using the same at some future time to the best advantage of the company, either as an addition to the warehouse or boiler plant, but was finally used as a storage yard for river coal, in front and as an addition to the boiler house in which the economizer was located later on.

Owing to the increasing business in the supplying of steam for heating, the revenue derived from the sale of same was sufficiently large enough to enable the company to declare the first dividend on May 16th, 1892, of 4% cash, annually. This was raised on April 1st, 1893, to 5%, payable annually. On March 26th, 1894, this dividend was changed from cash to scrip, the scrip dividend was to be used in the form of additional stock. This practice was continued until July



1st, 1895, when it was changed back from scrip to cash dividend of 6%. This cash dividend was continued until the property was taken over by the Harrisburg Light & Power Co. in 1913.

In May of 1893 it was found necessary to purchase two additional boilers of 125 h.p. each, making a total of 8 boilers of 1000 rated horse power. These two boilers were purchased from the Hbg. Fdy. & Mche. Wks., at a cost of \$4,000.00 erected.

Owing to the death of Col. W.W.Jennings, Feb. 28th, 1894, Wm. Jennings was elected president and J.K.Greenawalt, Jr., Secretary and Treasurer.

On June 10th, 1895, an extension of steam mains was ordered to be made on 3rd St. from State to Liberty, also on State Street from Third to the property of Wm. Jennings, No.232 State St., also from Third St. on State St (west side) to the residence of C.W.Lynch. All these extensions to be paid for by taking stock in the company.

July 27th, 1896, the old hand fired boilers were dispensed with and the boilers equipped with Wilkinson Automatic Stokers, at a cost of \$5236.00 for eight boilers. These stokers were installed and worked very satisfactory, with the exception that they could not be forced like the hand fired boilers, in case of steam going down, as the stokers were geared to move at only one speed and this could not be changed so that when steam dropped it required a longer time to raise it than with the hand fires.

The same time, the stokers were installed, the contract was given to E.Mather for the installation of a water filter, 1200 h.p., at a cost of \$1550.00. This filter was used to filter all water before being fed to the boilers. This worked very satisfactory.

December 31st, 1898 it was found necessary to purchase two more boilers (\$2000.00), two new stokers (\$1350.00), making a total of 10 boilers in the plant.

The heating of the Capitol Buildings, which was contracted for in 1887 and discontinued in 1889, was taken up again May 10th, 1899 and after some discussion the company was again given the contract for heating the Capitol buildings for a five-year term at a maximum contract of \$16,500.00 per season.

June 15th, 1900, a contract was given to the Green Fuel Economizer Co. for the installation of a Green Fuel Economizer. This economizer was installed and worked very satisfactory. At the same time a contract was given to the American Blower Co. for the installation of two fans to be used for induced draft in stack, costing \$2153.00. The economizer consisted of a series of 4" tubes, set in cast iron base, connected at top and bottom by cast iron headers. These tubes were used for passing the water through for the boilers, and the gases from the boilers passing between the tubes and utilizing practically all of the heat units in the gases before being sent out the stack. The cost of the economizer and stack installed was \$7007.00.

June 19th, 1900, it was found necessary to purchase additional real estate, and the property of Mrs. Mary Green, adjoining the warehouse was purchased for the sum of \$1017.00. This property was used for storing coal.

September of 1902, it was found necessary to increase meter rates 10%, which made the rates as follows:-

1/2"	meter	.45¢	per	1000
1"	"	.83¢	"	"
1 1/2"	"	2.30	"	"
2"	"	5.50	"	"

December 5th, 1902, a new 150 h.p. boiler was purchased at a cost of \$2447.16. This makes a total of 11 boilers with 1650 h.p. rating.

It was also found necessary to have more storage space for coal and after considering several locations, it was decided to purchase the Holman property on 10th St. near State St., 429' x 100' and was purchased for \$10000.00 March 31st, 1903. This is the property that is now used as a storage for coal, storage for poles and has the three buildings on that now contain the meter department and the 10th St. office.

On account of the extension of Capitol Park, it was found necessary to find other quarters for the steam plant, and several locations were inspected. After some consideration as to the advantages of each location it was decided to purchase the Donner property on Walnut St., now occupied by the Rife Hotel and Majestic Theater, and the transaction was completed Jan. 10th, 1905 at a cost of \$55,000.00. It was the intention of the company to install at this location an underground plant, with all boilers etc. below the street level and the store room and supply room on the street level on one side of the property, and office on the street level on other side of property. This property was held until March 1st, 1907, when it was sold to J.L. Kerr for the Reiss Theater interests, for the sum of \$80,000.00. The property was then used for the erection of the Majestic Theater.

On March 4th, 1907, the property at 4th and Chestnut Sts., from Mulberry St. Bridge, west on Chestnut St, 110' and extending to Cherry St., was purchased from the Reiss Theater interests for the sum of \$31,000.00. The intention of the company was, when the proper time came to install the steam plant at this location, with the office at 4th and Chestnut Sts. and the plant in the rear. The contract for the work was given to Westinghouse Church Kerr Co. of N.Y. with the understanding that the same could be cancelled at any time if other arrangements for location of plant were made. This property was held for some time, and June 18th, 1907, the triangular piece of property belonging to the Hbg. Gas Co. and fronting on Cherry St. was purchased at a cost of \$17500.00. The entire property was later disposed of, the same being sold to Samuel Fishman. It now contains a large garage, dance hall, store rooms, and warehouse.



There was an extension to the steam mains on Fourth St. from Market St. to Blackberry Sts. to supply steam to Mr. Harris Cohen.

April 16th, 1907, it was decided to install a coal storage bin of 500 tons capacity, and an ash hopper of 300 load capacity. The coal storage bin was constructed by means of trusses suspended from the boiler house roof and running the entire length of the boiler house. It was made of  $3/8$ " steel plates, riveted together, having doors in front of each boiler, so that the supply of coal to each boiler could be handled by opening these doors and allowing coal to go down through the chute to the storage box on each boiler. The coal was taken up to the bunkers by means of a large belt on which were secured steel buckets. These buckets passed down to the underground coal storage bin and securing its supply of coal and carrying the same up to the roof depositing the same in a steel trough, having doors in front of each boiler through which it could drop the supply of coal to any boiler needing same. The coal passed along through the trough by means of a spiral worm operating and pushing coal to any place the same was needed. The ash hopper was constructed of reinforced concrete, having door in the bottom, under which the carts were located and loaded by opening this door. The ashes were carried up to storage by means of steel buckets, fastened to a steel chain, driven by a steam engine. The installation of these two storage bins made it possible to keep coal and ashes out of the way and giving the entire boiler house floor space for firing purposes, saving the trouble of having to haul in coal on Sundays and holidays. The cost of the installing of these storage bins was \$7500.00.

On August 4th, 1907, it was decided to extend the steam mains on the following streets:-

Market St. from Second to Front Street

Locust St. from old Public Library to River St.

Forster St. from Sixth St. to Tabernacle Baptist Church

On account of the increasing amount of steam fitting work which the company was doing it was found necessary to install pipe cutting and threading machines, and on September 17th, 1907, two Steever Pipe Machines were purchased, one cutting from  $2\frac{1}{2}$ " to 4" costing \$610.00 and the other cutting from  $2\frac{1}{2}$ " to 8" costing \$900.00. These pipe machines are still in use.

November 17th, 1908, a 5" main was run on Fifth St. from Walnut to Strawberry St.

April 20th, 1909, a 6" main was run on Front St. from State St. to North St.

May 17th, 1909, Mr. J.K.Greenawalt resigned as Sec. and Treasurer on account of ill health and N.B.Lau was elected as his successor.

About this time a 6" steam main was also run on Second St. from Locust St. to Cranberry St.

A Wilkinson stoker was purchased for No.11 boiler July 19th, 1904. Webster Feed Water Heater purchased July 19th, 1904.

A 4" steam main was run on Front St. from Chestnut to Cherry St. in August of 1905. An extension of the 6" main was run on 6th St. from North to Forster St. about June of 1905.

One 200 h.p. boiler was installed October of 1905 at a cost of \$2500.00. Two 200 h.p. water tube boilers were purchased May 28th, 1906. A new addition to the boiler house to house the new boilers was built by Coder & Miller, July 1906. Two 200 h.p. boilers were purchased April 16th, 1907, at a cost of \$4990.00 including stokers for same.

During the year of 1910, the following street mains were installed at a cost of \$9600.00:-

- 7" main on 3rd St. from North to Briggs St.
- 6" main on Briggs St. from 3rd to 2nd St.
- 6" main on Green St. from Briggs to No. 705 Green St.
- 6" main on 2nd St. from Briggs to Union St.

Mr. L.A. Cramer was elected superintendent May 23rd, 1910, in place of Mr. Thomas Adams who resigned on account of sickness.

A 6" steam main on Third St. from Briggs St. to Boas St. was installed in June of 1910 at a cost of \$4500.00.

In 1910, the following mains were taken out and replaced by larger ones on account of the increase in business, the old lines being pretty well worn out:-

6" line - Third and Walnut to Third and Locust on Third St. replaced with 9".

4" line on Locust St. from 2nd to 3rd St. replaced with 8" line.

4" line on State St. (North side) replaced with 8".

There was also an extension of 6" main made on Locust St. from River St. to Front St. The cost of the above work was \$13000.00.

February of 1912, after some discussion, it was decided to purchase two fleets for the pumping of the river coal supply for the plants. The same was built for the company by Mr. H.J. Berrier.

December 11th, 1912, the steam heat plant was sold to the Commonwealth of Penna. for the Park Extension Project. The cost of this purchase was \$117,500.00, the company having the right to retain all equipment.

March 3rd, 1913, Mr. Jennings resigned as President.



September 24th, 1912, a charter was granted by the Commonwealth of Pennsylvania to the Capital Heat & Power Co., a new steam heating co., having been orgained by the following gentlemen:-

Mr. G.W.Smallwood      Hon. M.E.Olmstead  
Dr. H.M.Stine      W.S.Snyder  
Charles E.Covert      G.M.Whitney  
and others

for the purpose of furnishing steam heat to the city of Harrisburg for heating purposes. This company made offers to the Hbg. Steam Heat & Power Co. for the purchase of the steam plant and franchise and at the same time offers were made by the Harrisburg Light Heat & Power Co. for the purchasing of the Steam Heat & Power Co. and after quite spirited bidding had been done the property was sold to the Harrisburg Light Heat & Power Co., 1913, and Mr. George B. Tripp was selected as General Manager.

The growth of the steam heating business is shown by the following table, giving consumers, space for each season:-

YEAR	NO.CUSTOMERS	SPACE HEATED
1887	13	384,426
1888	48	3,040,000
1889	64	2,732,208 (capitol
1890	84	5,000,000 (contract
1891	89	5,878,000 (cancelled)
1892	108	6,278,000
1893	128	6,658,600
1894	148	7,046,318
1895	167	8,663,046
1896	187	9,883,442
1897	197	10,865,698
1898	204	11,076,760
1899	214	12,621,754
1900	230	14,119,014
1901	243	15,045,791
1902	266	16,134,303
1903	287	17,198,947
1904	299	17,638,926
1905	313	15,845,682 (Capitol Fire)
1906	345	17,400,878
1907	365	22,736,310
1908	397	23,308,310
1909	423	24,557,405
1910	450	24,152,000
1911	467	24,721,000
1912	497	26,291,000
1913	537	27,483,000
1914	580	30,743,962
1915	631	32,716,961
1916	700	35,779,526
1917	696	37,685,354
1918	740	40,864,854
1919	748	45,567,473

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<u>YEAR</u>	<u>NO. CUSTOMERS</u>	<u>SPACE HEATED</u>
1920	761	43,588,154
1921	815	45,518,931
1922	835	46,410,485

In the first installation of steam mains, we had 10,624 ft. of mains or 2 miles in all (1888). At this time we have 81134 ft. of mains or 4.89 miles. Sizes varying from 3" to 20"

Coal burned and water evaporated by the plants, taking same every ten years is as follows:-

<u>YEAR</u>	<u>COAL BURNED</u>	<u>WATER EVAPORATED</u>
1890	2734 tons	54,426,781 lbs.
1900	9077 "	106,696,849 "
1910	15701 "	261,773,374 "
1920	34976 "	291,662,250 "

In addition to the furnishing of steam, the company carried on a line of merchandise sales and steam fitting work, having installed steam heating plants of various sizes in most any part of the section in and around Harrisburg. Some of the principal buildings in which the heating apparatus was installed by the company were:-

Dickinson College  
State Capitol Building  
Penna. Lunatic Hospital  
Hbg. Academy  
C.H. Mullin Residence  
Highspire School  
Wilhelm Residence  
Valley Traction Co.  
A.M.E. Church  
St. James Rectory  
E.S. Herman Residence  
Chestnut St. Market House  
Soldiers Orphan School  
Mt. Alto Sanitarium  
Masonic Temple  
C.V.R.R. Station & Shops  
Valley National Bank  
King St. School  
Col. T.B. Kennedy  
M.C. Kennedy  
Rouse City Hall  
Cameron School Building  
Vernon School Building  
Sylvan Heights Orphanage  
St. Genevieve Academy  
St. Francis Church  
Damon Cottage  
High School  
Miss Myra Dock  
State Library Building  
Pro Cathedral  
Orpheum Theater

entire plant, boiler house & main  
first building after fire

Mt. Holly Springs  
Highspire, Pa.  
Paxtang, Pa.  
Lemoyne, Pa.  
Steelton, Pa.  
" "

Front and Maclay Sts.

Scotland, Pa.  
Mt. Alto, Pa.  
Hagerstown, Md.  
Chambersburg, Pa.  
" "

" "

Winchester, Va.  
" "

Elizabethtown, Pa.  
" "

Fayetteville, Pa.



Dives, Pomeroy & Stewart  
Friendship Fire Co. Bldg.  
Mt. Pleasant Fire Co. Bldg.  
Susquehanna Fire Co. Bldg.  
and many others

The steam fitting department of the company was a profitable asset as the company had the reputation of doing the best grade of work in this section of the state and their services were demanded on this account. The work was all done by steam fitters and helpers who were experienced in the work as Mr. Adams, the Sup't., made the helpers serve their time before they were classed as steam fitters. The company did not make it a practice to figure low on any of the work as they considered their work as worth more than any person else and they had no trouble to get all the work they could handle at their own price. The largest contract taken by the Company was the State Capitol Building which was built after the Capitol Fire. This was a very large job and the contract was over \$90,000.00.

The steam fitting department was kept in operation until the consolidation of the company with the Hbg. Light & Power Co. when it was discontinued for some reason.

1888, the company had 143 persons depending on them for service and at this time we have 9592 persons depending on them for service. These figures are arrived at by the number of customers times eleven occupants on an average per customer.

We have at this writing 999 meters costing us \$36822.00, 77 valves on street, 89 street traps, 431 expansion devices, 699 service pipes, 366584 sq. ft. commercial radiation, 330062 sq. ft. residential radiation connected to our mains.

The steam heating business sprang into favor from the very beginning of the company and has increased up to the present time and will continue to increase for time to come as its advantages are many and its disadvantages are none. We have at the present time about fifty prospective customers whose applications are held up waiting on the decision of the Public Service Commission.

T.M.ZEIDERS.