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UTILITY FINANCIAL SITUATION FAVORABLE TO DISTRICT HEATING

SALES PRESSURE RAISES STEAM REVENUE

BIG ATTENDANCE AT DISTRICT HEATING SCHOOL
JUST one of many advantages accruing to the Electric Utility that enters District Heating is the fresh incentive it brings to the creative intellect of the engineering department.

These men, who are now devoting their time to the involved mathematics of electrical installation, operation and maintenance, will be intensely interested in the many new engineering problems of your District Heating project.

Your engineering department, as well as every other department of your utility, will be engaged in developing a new and interesting business for you, that, according to the experience of many electric utilities, is capable of returning a profit far out of proportion to the capital investment required.

In contemplating District Heating, there also are other points to bear in mind—that every power plant displaced by your steam service compels the use of your electric service; that your present boiler plants and organization can be utilized for District Heating Service—with a consequent reduction in overhead on both businesses; that District Heating is today a proved money-maker, more in demand than ever before; and that the Electric Utility is the logical source of supply.

ADSCO will gladly place all the facts before any executive interested. Write us.

AMERICAN DISTRICT STEAM COMPANY

NORTH TONAWANDA, N.Y.
at the edge of the forest and guess what is in the interior. We want to explore into the very heart of it."

This attitude on the part of large investment trusts is quite common. Charged with the responsibility of investing millions, and in some cases hundreds of millions, of other people's money, large investment trusts are employing engineers and maintaining costly research departments to dig up information that will enable them to discover hidden opportunities. By looking ahead and investing in industries before the undeveloped profit possibilities become common knowledge, these trusts are assured of handsome profits for their shareholders.

It is not surprising, then, to learn that large investment trusts in the Electric Utility field are making studies of District Steam Heating. The present merger movement is making District Heating increasingly attractive. Such mergers result in boiler plants being abandoned which in many instances provide an ideal nucleus for a District Heating installation.

This, however, is but a minor factor. The principal consideration is one of increased sales and greater profits. In order to justify the large capitalization of a big merger it is necessary for the company to show continually increasing progress. It is quite possible that the time will arrive when the sale of current for light and power will not increase with the same rapidity that it has in the past. When this time comes, it will be necessary for the utility to take on new lines if it expects to keep on making a satisfactory showing, and District Steam Heating is the most logical field.

One of the principal reasons for mergers in other lines of business is the opportunity afforded the combined companies for developing new fields—perfecting new processes—adding new products—cutting down operating and selling expenses.

The spectacular rise of the Radio Corporation of America and other powerful companies demonstrates what can be done by combining businesses that are more or less related. The Dupont interests are an outstanding example of what big business can do when it looks ahead and takes advantage of latent opportunities.

Like the Dupont interests, some of the most progressive Electric Light and Power companies have realized that opportunities for profits are not confined to any one business. Instead of waiting for electric sales to level off, they have enlisted District Heating to build greater profits. Learning of their success, other companies are now contemplating immediate installations.

Among the advantages that accrue to the Utility Company that is in a position to furnish both electricity and steam for heating and process work is an increased in electric sales resulting from the business of large buildings that would otherwise generate their own electricity and quite naturally do their own heating. In large cities this factor in itself is of sufficient importance to warrant the utility entering the Steam Heating business.

Perhaps the principal reason why District Steam Heating is being looked upon with such increasing favor is the fact that the Electric Utility is in an ideal position to finance such a project. Electric securities are popular with the public. The industry has the ear of the banker and investment houses throughout the nation are "set up" to quickly sell their issues. The Electric Utility also has property which provides a sound basis for financing.

From the standpoint of net return on capital invested, the operation of a properly designed, installed and managed District Steam Heating System compares favorably with other Public Utilities, as has been so ably proved during the past few years by the large Heating Companies.

Our country has become so prosperous that we are demanding luxuries and all labor saving devices. What greater luxury can we have than that most important and necessary utility, "HEAT", delivered to our premises from an outside source, the same as water, gas and electricity.

It does not require the imagination of a genius to picture what an ideal condition would exist, particularly in our large cities, if, during the heating months, the smoke belching from hundreds of stacks could be eliminated and the vast number of coal and ash trucks removed from our congested streets. A visit in winter to the downtown section in any of the cities now enjoying the luxury of District Steam Heating certainly shows a contrast to those cities not so served, where the air is laden with smoke and soot.

An engineering survey and report covering a proposed investment will reveal very closely what may be expected in the way of earnings. Several Utilities Companies are now having such reports prepared, as the first step in their investigation to determine the profit possibilities in District Heating for their various properties.

Naturally the Investment Trust is interested in promising figures.
THE richest gold mine in the world will not produce a maximum of profit unless a relatively high degree of intensity is applied in operating that mine.

The same law of cause and effect holds good throughout the entire business world. In the field of District Heating will be found projects that are sweeping on to amazing achievements. District Heating has been carried on for several years, many of the local people, who may be logical prospects for District Heating, do not know anything about the service. Actually, there is scarcely a growing and progressive city of any size in the heating zone which cannot support a profit-making District Heating plant if the management of such a plant realizes the need of “getting out and selling the service.”

The present condition as a public utility, and its probable development, we have available a wealth of utility information covering the history of other services, such as water, gas, and electricity.

For example, it is but a short time ago that the electric companies could not understand how they could afford to go after industrial business, since their cost records showed distinctly that generating and distributing costs ran anywhere from 4 to 6 cents per kilowatt hour; and, in order to compete with operating costs of reciprocating engines and other equipment of the industrial plants, electricity for power purposes would have to be sold at rates below the cost of generation and distribution.

Eventually, however, after a few years, it was discovered that the actual energy needed to turn those motors could be generated at an insignificant additional cost over the previous operating cost of the utility. The profit possibilities were made apparent. There was a concerted rush to motorize industry on rapidly declining power rates. Today the industrial power requirements represent a substantial part of the total profit of practically every Electric Utility situated in commercial centers.

There are still a few District Heating Utilities duplicating that experience of the electric companies — failing to recognize the possibilities for added profits — allowing competitive business to pluck the juicy plums that hang over their heads, without an effort to get a share for themselves.

In District Heating are to be found instances where the utilities are ideally situated in the heart of a fertile market, yet they are still operating only their original boiler plant and distribution system. Their early vision of a large and growing public service institution has been dimmed by passing years, and they fail to note that with each new day comes a more urgent need for their service.

Here and there a building is taken off the steam service — to be equipped with oil burners or some other system for individual generation of heat — and no active resistance is made by the District Heating Utility.

In every such case which has been made the subject of investigation, it became apparent that with even a little sales effort, the steam company could have held these accounts. However, in the total absence of any aggressive sales work, it is to be expected that an occasional customer will be lost; and, with competitive equipment being so industriously exploited by high pressure salesmen, it is surprising that the steam companies’ lost business does not reach far greater proportions.

Any business which is so dependent for net profit on gross volume of sales as is the utility business, can scarcely hope for maximum results unless an energetic and ceaseless effort is made to increase the number of customers served and extend the scope of the utility’s application.

No matter how much better one product is than another, it will not sell itself in any volume. Those who are able to use the better product and who constitute the potential market, must first be told of the existence of such a product and then be convinced of its superiority. If this work is properly done, volume sales will be the result. The job requires salesmanship.

By salesmanship we include every effort that is made toward effecting sales, and this embraces advertising, personal sales solicitation, engineering assistance where required, service work after the sale is consummated, and subsequent contact to maintain the good will and business of the customer. What is true of a product is equally true of a utility service.

Those closely associated with District Heating work have a comprehensive understanding of the outstanding merits of a District Heating service as compared with any other method of heating; but the general public is by no means equally familiar with the advantages of District Heating. It is a surprising fact that in towns and cities where District Heating has been carried on for several years, many of the local people, who may be logical prospects for District Heating, do not know anything about the service. Actually, there is scarcely a growing and progressive city of any size in the heating zone which cannot support a profitable District Heating plant if the management of such a plant realizes the need of “getting out and selling the service.”

For the benefit of those who already have the interest of a growing District Heating Company at heart, let us examine both into the factors deterrent and those conducive to District Heating success.

In looking into the present opportunity for District Heating, its
Back up your good engineering with good equipment

An engineer's reputation is at stake every time he makes a choice of equipment. Therefore, he should avoid taking chances with makeshifts. In selecting expansion joints—specify ADSCO. You know you can depend upon them to give unfailing service.

ADSCO Expansion Joints are used in 90% of the country's great District Heating projects. Thousands of them have never been touched since their installation—from 10 to 25 years ago. That's performance!

They are made in a complete range of types and sizes for every kind of pipe line service—the conveying of steam, water, gas, oil and other liquids. With them you can meet every requirement of temperature and pressure.

They combine such cost reducing features as double and single joints in all designs—with or without anchorage, service and drain outlets.

You buy direct from the factory. They cost less to install. By their years of trouble-free service they bring credit to your engineering skill and judgment. Plan now for ADSCO Expansion Joints on that next job.

Write for complete literature and prices.

ADSCO
EXPANSION JOINTS

ADSCO SEMI-GUIDED JOINT WITH TIE RODS
Has all the features of semi-guided joint plus protection provided by tie rods against slip pulling out of body.

ADSCO DUXPLEX-SLEEVE GUIDED EXPANSION JOINT
For pressure up to 500 lbs. and temperature to 750 degrees F. Air-cooled slip eliminates excessive packing and maintenance costs and assu res a tight joint.

ADSCO EXTERNALLY-GUIDED EXPANSION JOINT
For 4, 6, 8, 10 and 12-inch traverse, 125 and 250 lbs. pressure. Extensively used in high and low pressure lines where external guide is not required.

ADSCO SEMI-GUIDED EXPANSION JOINT

Mail the enclosed post card for Descriptive Bulletins on Adasco Expansion Joints and other Adasco Products.

The dotted lines illustrate some of the combinations of ADSCO Expansion Joints.
In the past several years much has been accomplished in raising the efficiency of boiler plant operation and economy in transmission of steam. Of all the attention that has been given to District Heating, we are probably safe in estimating that 85% has centered around the boiler plant and distribution system and not over 15% given to sales and customer contact. Certainly District Heating is an engineering business, but on the other hand it is very largely a sales proposition, so far as the net profit from operations is concerned.

A certain amount of business is always relatively easy to get. Boiler plants become obsolete, inefficient or in need of costly repairs. Owners are always anxious to save capital investment and are immediately interested in the District Heating service. New buildings, of course, eliminate tremendous investment in heat-generating equipment by taking District Heating service, and there are always a number of people sufficiently familiar with the advantages of District Heating to desire the service as soon as it is available. The disappointing feature comes in seeing District Heating companies taking on the business that comes to them readily but making no serious effort to secure 100% of the available business in the district served. This, of course, cannot be said of the more progressive companies who are enjoying and have enjoyed for some time the prosperity which comes from successful sales work well directed.

In every business a certain amount of gross income is necessary to take care of the actual cost of operation or business overhead before any net profit can be shown. As soon as the volume of business begins to mount beyond this figure, then the increase in net profit pyramids at a surprising rate and it is from this point onward that the benefits of salesmanship are most apparent. Some District Heating plants have been getting by with just enough revenue to take care of their operating costs and a meager net earning, largely, perhaps, because of their indifference to the need for selling their service to the customers not now served, and for continuing their sales effort with present customers to counteract the sales work and advertising being carried on by the utility companies' natural competitors.

The annual cost of service and the comparative economy of operation are, admittedly, major factors in building and retaining a market for a District Heating plant. The District Heating executive must remember, however, that his competitors are in a position to take unfair advantage of his service in making comparisons of operating costs and this is the one point of attack where such competitors can hope to influence their prospective customers. These competitors are careful to avoid including in the items of cost of individual generation everything but the bare item of fuel, and the comparison is made between this total and the annual cost of steam service from the heating company. A comparison of this kind frequently can be made to indicate a saving by individual generation.

It is immediately apparent to all who are familiar with District Heating service that this is not in any sense a fair comparison. Unless the true facts are properly presented to the building owner at the right time, he may make up his mind to revert to his own steam generation. The first indication the steam company will have of this decision will be his...
notice to discontinue steam service, and when he has gone this far it is extremely difficult to secure his reconsideration. He is reluctant to admit to himself that his judgment has not been sound, and frequently he has already committed himself for the purchase and installation of equipment.

There is no service which carries with it a broader and stronger foundation on which to erect a forceful and conclusive sales argument, than does District Steam Heating. To offset the fallacious arguments of lower cost from individual generation, the Sales Department of the steam heating utility not only should be armed with facts covering competitive methods of heating, but must be enthusiastic over the benefits of the service they have to sell and be able to demonstrate to building owners that the margin of convenience, dependability, safety and freedom from responsibility far more than offset an apparently different in annual cost. In making comparative statements of alternative methods of heating, the Sales Department should include, among the items of cost under "Individual Generation," not only the cost of fuel but in addition an adequate amount for labor, plant depreciation, plant maintenance, supplies and equipment, indirect costs such as redecorating, workmen's compensation, insurance, the value of space occupied by boiler plant and equipment, the costs incidental to labor turnover, and occasional breakdowns and a great number of other similar items of cost peculiar to individual cases.

There is one item in the above list over which there is considerable controversy. Building owners frequently object to the item of plant depreciation being regarded as a saving effected through taking district steam heating service. This item, very rightly belongs in the column of savings. The bookkeeping account of depreciation on a boiler plant is purely a bookkeeping record for the purpose of writing off the investment and thereby assure provision for its replacement from and in accordance with its own depreciation. As soon as the steam company constructs and maintains a boiler plant for that customer's service, then the steam company takes care of plant depreciation and there is no longer need of the customer providing for the replacement of his plant, since this has already been done by the steam company. Because of this, the bookkeeping item of depreciation on the part of the customer is no longer necessary, and the annual amount is a direct saving.

The item of labor is another one on which there is a considerable difference of opinion. All labor, however, has a definite cost, and if a man's services are relieved from the boiler plant, they can be profitably employed in other work. A fair estimate of the labor saved on the basis of present cost of such labor must necessarily be included to provide a reasonable comparison of heating costs.

It is very seldom that a carefully worked-out tabulation of all items of heating costs by the individual method of generation fails to show that district heating service effects a marked economy even in point of actual cost.

By applying these facts in a constructive plan of sales work, the District Heating Company whose sales curve has leveled off or is falling short of expectations can re-establish its dominant position and broaden the scope of its public service.

Never has District Heating so completely filled the requirements of the times as it does today. The business is there; it can be converted into sales and increasing profit. The benefits will accrue to those heating companies which, realizing the need for salesmanship, plan and organize and thereafter aggressively push their sales work.

BIG ATTENDANCE AT DISTRICT HEATING SCHOOL

Great Interest Manifest in District Heating Problems at Special Study Sessions Held at Purdue University, May 20th to 25th

JUST a year ago the ADVOCATE carried an article on the Second Annual District Heating School held at Purdue University. The third of these yearly educational meetings has just been completed.

The subjects were presented by means of class-room work, and lectures, covering the solution and explanation of a problem on the development of a typical District Heating project over a two-year period.

In general, the subjects treated were:

- Accessory apparatus for district heating.
- Principles governing the flow of fluids.
- Meters—testing methods, practices and policies.
- New methods of steam heating.
- The flow of steam in pipes.
- Principles underlying the design and construction of underground distribution structures.
- Heat losses from the distribution system and their prevention.
- Welding.
- Methods of estimating steam consumption and maximum demand.
- Distribution system design.
- The theory of rates.

Various methods of charging in use in District Heating.

The ideas behind heat utilization work.

Customer's relation work.

In the following statement Professor C. H. B. Hotchkiss of Purdue, Chairman of the Purdue Committee of the District Heating School, gives a clear outline of the purposes of the school and an interesting review of the sessions just closed.

"Perhaps no one thing so strongly emphasizes the faith which the steam heating utilities have in the future of District Heating, as does their establishment of the District Heating School to which they can send their employees for a basic training. It represents the conviction of their managements that the time is not far off when they will want to have available men who have a sound training in the essentials of steam heating as practised by utility companies.

"Recent expansions of plants and of personnel appear to have called forcefully to the attention of managers the fact that little or no instruction in District Steam Heating has been given in the country's educational institutions. So long as the heating utilities contemplated no expansions
such a condition was a matter of little, if any, concern. But with expansions accomplished, and with others in sight, the necessity for preparing their employees more thoroughly became more apparent to the leaders of this industry. In the first place, then, the District Heating School represents faith and confidence in the future.

"When the initial moves were in process, looking toward the beginning of such a school, a decision was made which has greatly affected the character of the instruction given. It was then decided the first essential of the instruction should be that it must be simple and basic in character. The leaders of the industry were apparently firmly convinced that the man who knows his fundamentals well is well trained. It was not intended that the instruction should run toward practices, operating or apparatus features, except as might be required to accomplish the real aim of driving home the essential ideas.

"The School represents the idea that such basic instruction can be better given at an educational institution, with time definitely set aside for it, than can be done on the job where the knowledge comes by absorption and by study as the necessity arises. Such surroundings may be ideal for becoming familiar with practices but not for learning essentials quickly.

"With the beginning of the School in September 1927, at which some twenty-five enrolled, instruction was given in what may be called the elements. The second session of the School in May 1928 offered a more diversified program.

"The plans for the third session of the School were prepared in the light of the experience gained during the preceding ones. Several new features were included. Among them was the elimination of the exhibit of material and apparatus. This was made necessary by lack of exhibit space. The other, and major change, was the new practice of night sessions with speakers from the Utility Companies to discuss the applications of the material discussed during the day. Thus it was possible to some extent to tie in the practices with the principles. The addition of night sessions made the total time of the School equivalent to about ten days of day meetings only.

"The School was especially fortunate in securing exceptionally high-grade men to undertake the work of the night sessions. All were equipped to speak authoritatively on their subjects. These night sessions, held in a hotel room, were almost totally informal, and those in attendance were given ample opportunity for open forum discussions with leaders in various departments of District Heating work.

"The subject matter for presentation during the day sessions was thoroughly revised, elaborated, and re-arranged under the critical eyes of both the University Staff and the Educational Committee of the National District Heating Association. The result was an elaborate collection of material carefully arranged for the effective presentation of those phases of District Heating covered by the School.

"Not among the least of the benefits of this School, although not appearing on the program, were the opportunities presented for the forming of new acquaintances and the renewing of old ones. The ideas exchanged and matters discussed informally by those in attendance, while not constituting formal learning as such, are nevertheless of lasting value."

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**Placing to Expand your District Heating System?**

Let ADSCO Engineers Collaborate With You

**DON'T** hesitate to draw upon the experience of ADSCO Engineers when laying out your new steam lines or when planning extensions . . .

There are tricks in every trade, and ADSCO Engineers quite possibly may be able to contribute something from their experience that will add immeasurably to the efficiency and subtract from the expense of your new installation.

Their entire time and attention are concentrated on the designing and installation of District Heating steam lines. Their cooperation has been enlisted in the development of most of the country's great District Heating enterprises.

You can capitalize this experience in your own work. Make a mental note to do it the first time opportunity arises.

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**ENGINEERING SERVICE DEPARTMENT**

**AMERICAN DISTRICT STEAM COMPANY**

*General Offices and Works*

**NORTH TONAWANDA, N.Y.**

**Offices and Agents in Principal Cities**

Specialists in Steam Distribution for Over 50 Years
There's a Reason---
why NORTHEASTERN
gets the tough jobs!

The Consolidated Gas, Electric Light & Power Company of Baltimore had a problem:

A new 200-pound under-ground steam pipe line was required, 2000 to 3000 feet long. Because the greater part of this line had to be constructed below tidewater, it was imperative that a water-proof conduit be employed. WHO should be commissioned to handle the job?

After a very careful study, by the Engineers of the Consolidated Company, of the extremely difficult conditions, the Northeastern Engineers, due to their vast experience with problems of this nature, were called in to look over the situation and submit recommendations.

The job was given to Northeastern. The result is a steam pipe line enclosed in a special ADSCO cast iron conduit—a water-tight installation that will give perfect service and high efficiency for years to come.

Northeastern is constantly called upon to devise ways and means to meet special requirements in the installation of low and high pressure steam mains. The broad experience of this organization with that of the parent Company, American District Steam Company, is available to public utilities, municipalities, industries and other companies requiring authoritative Engineering advice in connection with all types of District Steam Heating Systems, or pipe lines for conveying steam for power and other purposes.

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