
Minneapolis and St. Paul Stumble

Henry Ford Wins the Power Struggle for the High Dam

Brian McMahon

In 1923 the Federal Power Commission (FPC) awarded a license to the Ford Motor Company to operate the hydroelectric power plant at the High Dam on the Mississippi River, thereby ending an intense battle for control that had lasted over a decade. During most of that time Minnesotans who followed the negotiations assumed that the Municipal Electric Company, a collaboration comprised of the cities of Minneapolis and St. Paul and the state of Minnesota, would receive the license, but the bitter rivalry between the two cities led to their elimination from consideration. The FPC noted that “On account of the natural jealousies that have always existed between the two towns, the Municipal Electric corporation has never functioned efficiently in the 10 years of its existence, and there is little prospect that it ever can. . . .”¹

Throughout that decade prior to the decision in 1923, there was mounting frustration at the loss of energy flowing untapped over the High Dam, equivalent to that generated by 100,000 tons of coal.² Henry Ford won the license because he was prepared to immediately proceed with construction of the hydropower plant, thereby breaking the deadlock, and because he would also build a major automobile manufacturing facility adjacent to the dam site in St. Paul. Besides being an extraordinary personal accomplishment for Ford, the resolution of this issue was also a major milestone in a seventy-year national policy debate regarding hydroelectric power on navigable rivers.

The proposed manufacturing plant at the High Dam site would be Ford’s third in the Twin Cities, replacing earlier structures in Minneapolis and St. Paul. Within ten years of its founding in Detroit in 1903, the Ford Motor Company had expanded to a network of over fifteen assembly plants around the country and another dozen throughout the world. The primary reason for expansion was to save on the cost of shipping. Ford executives understood that it was far less expensive to transport tightly packed auto parts on rail freight cars than to ship finished auto-

mobiles. The cars were then assembled from the various parts within local markets using relatively unskilled workers with a minimum of tools and machinery. At that time the railroad industry was heavily regulated and freight charges varied considerably by geographic districts, so Henry Ford would strategically locate his plants within cities that had the least expensive rates. Dispersing plants around the country also enabled Ford to provide superior maintenance and service for his dealers and generate local good will by creating jobs.³

Henry Ford and Branch Assembly Plants

Throughout the early decades of the twentieth century, the Twin Cities was a rail hub for the entire northwest area of the country. In 1914 Ford built a ten-story assembly plant in Minneapolis, at Fifth Avenue and Fifth Street, and a three-story assembly plant in St. Paul, at University Avenue and Rice Street. Both structures are still standing. As these buildings were being erected, Ford was perfecting the movable assembly line in Detroit that would require a completely new type of factory: a sprawling, single-story, modern plant. The multistory factories in Minne-

apolis and St. Paul, which relied on the force of gravity to move assembled parts from the top down, were functionally obsolete even before they were completed. Ford would soon need a new factory in the Twin Cities to take advantage of the enormous productivity gains offered by mass production.

By the early 1920s when the success of his company in the highly competitive auto industry seemed assured, Henry Ford appears to have felt secure in drawing upon his deeply held beliefs in deciding where to locate his branch plants. Ford had a life-long fascination—perhaps obsession—with waterpower, manifested as a child when he built a dam and waterwheel in his schoolyard. In 1909 Ford bought property in Dearborn, Mich., abutting the Rouge River, and the following year built a small but functioning hydroelectric dam.⁴ He later built his personal estate on this site, and in 1915, working with Thomas Edison, installed hydroelectric turbines at a powerhouse on the property.⁵ When visiting California in 1919, Ford declared, “For our new project we are already looking about for waterpower sites. . . . We shall have a plant on this coast and all over the country. In fact we propose to dot the whole world with our factories.”⁶

When the technology of hydroelectric power progressed to the point where it became economically viable, Ford built plants on the Menominee River in Michigan, and at Green Island, N.Y., on the Hudson River, utilizing hydroelectric power.⁷ In early 1922 he captivated the country with plans for a seventy-five-mile industrial city at Muscle Shoals, Alabama, using waterpower from the Tennessee River. This, he claimed, would be a model industrial community to be replicated throughout the entire country. Ford was particularly



View, about 1923, of the Mississippi River, looking north, showing Lock and Dam Number 1 and the foundation of the hydroelectric plant (far right) built by the Army Corps of Engineers. This work was done before Ford purchased the adjoining site for his plant. Photo courtesy of the Minnesota Historical Society.

taken with the Mississippi River, which he preached could “run the country” if the river’s wasted waterpower could be harnessed. He became a zealous promoter of hydropower and advocated that farmers utilize the potential waterpower in every creek and brook that crossed their property.⁸ Ford’s hydropower projects also reflected his related belief that assembly plants should be “decentralized” and located in agricultural communities with sources for hydropower, providing farmers seasonal opportunities to work in a factory. Ford thought of hydropower as a means of decentralization. Power should not be distributed to plants, he argued, but rather plants should be located near the sources of power. Hydroelectric power was nature’s way of promoting decentralization.⁹

Ford saw that rivers could also offer a second advantage. If navigable, they provided a transportation alternative to the railroads. Ford was also an early proponent of what is today called “green manufacturing”; he viewed waterborne transportation as having the least intrusive impact on the environment. Ultimately, however, Ford’s most compelling criterion for selecting the locations of his plants was probably based upon his

fiercely independent personality and his conviction that he needed to protect his company from the monopoly powers of energy companies, the coal industry, and railroads. Ford and all large-scale manufacturers of that era were particularly dependent on a reliable and reasonably priced transportation network and supply of power.¹⁰ With over 50,000 employees at one Detroit manufacturing plant, utilizing a “just-in-time” manufacturing process, disruptions in the supply of materials or energy would be disastrous.

By the early 1920s, locating factory sites on navigable rivers was the overarching strategy of Ford’s expansion plans. These sites offered a redundant source of transportation and navigation, lessening his company’s vulnerability to single-source providers. If the railroad proved too expensive, he could use barges. If there were a shortage of affordable coal, he would have hydroelectric power. Complementing his choice of river locations was his pioneering decision to create a vertically integrated company that controlled virtually every aspect of the automobile manufacturing process, from raw materials to transportation. He owned a railroad, a fleet of boats, an airline company, foundries, rubber planta-

tions, power plants, and coal, iron, and silica mines. This was the context shaping Henry Ford’s search for a new site in the Twin Cities.

Consequently Ford was drawn to the Mississippi River in the “western suburb” of St. Paul—a site that had been the subject of intense scrutiny and controversy on both the local and national stages for over seventy years. Before Ford could proceed with acquiring this property many thorny policy issues would have to be resolved.

The U.S. Army and Hydroelectric Power

While rivers can provide both navigation and hydroelectric power, the process of achieving these two benefits can sometimes produce conflict. To generate the maximum amount of hydroelectric power, it is desirable to build dams tall enough to provide sufficient water drop, or “head,” to power the turbines that produce electricity. The shipping industry, on the other hand, preferred a series of lower locks and dams providing more gradual level changes in the river for navigation. The federal government exercised jurisdiction over navigable rivers through the War Department and the Army Corps of Engineers. Because hydroelectric technology only became viable in the early twentieth century, navigation interests had traditionally held sway whenever a conflict arose. The Corps steadfastly maintained that navigation should take priority over hydropower and opposed the building of hydroelectric or even dual-purpose dams.

In the early twentieth century the federal government did not even have an energy policy, but that was soon to change. Hydropower interests, with support from environmentalists, challenged the exclusive use of the rivers by shipping companies. A number of hydroelectric dams were already being built on navigable rivers, which caused great concern within the Army Corps of Engineers. A contentious public policy debate ensued between energy and navigation interests as well as a conflict over who should own and control the rights to the power once it was produced. This conflict stalemated federal action for a period

of seventy years, stalling projects slated for the Mississippi River, among others. Conflicting claims by federal, state, and local governments, and between the public and private sectors, were enlivened locally by the bitter rivalry between the two cities that shared the Mississippi River, Minneapolis and St. Paul.

There is approximately a 100-foot drop in the level of the Mississippi River between the Falls of St. Anthony in Minneapolis and the harbor in St. Paul downriver.¹¹ The river below St. Paul had a depth of approximately six feet, which was sufficient for navigation. Heading upstream from the mouth of the Minnesota River nine miles to St. Anthony Falls in Minneapolis, however, the river had a depth of only about 2-½ feet, which is not navigable under normal circumstances.¹² As a result, St. Paul was the natural head of navigation on the Mississippi River and therefore developed as a regional transportation and commercial center.

Minneapolis, on the other hand, utilized the river at the St. Anthony Falls as a source of power, first to run the lumber and flour mills, and later for hydroelectric power. The first commercial hydroelectric plant in the country was built in 1882 in Minneapolis by the Minnesota Brush Electric Company, later known as the Minneapolis General Electric Company.¹³ Taking advantage of the abundant supply of power, Minneapolis developed as a manufacturing center. These different historical patterns of development were at the very core of the civic and economic identities of the two cities. Discussions of whether the Mississippi River should be utilized for navigation or for power became highly charged because so much was at stake.

The different development patterns in St. Paul and Minneapolis were theoretically quite complementary, but the cities were never able to achieve a cooperative relationship; their rivalry was so intense it led them to challenge each other's strengths. In 1850, commercial interests in Minneapolis made efforts to attract shipping to their city by clearing the river channels of rocks and debris and offering bonuses to any ships that could reach their city. In 1867 there was a proposal to build three locks and dams upriver from



View of Lock and Dam Number 1 showing the foundation for a hydroelectric plant completed six years before Ford purchased the adjoining site for his assembly plant. Image taken from the city of St. Paul's application to the Federal Power Commission in 1921, courtesy of the Minnesota Historical Society.

St. Paul, between the mouth of the Minnesota and the St. Anthony Falls.¹⁴ This would make Minneapolis the new head of navigation, which greatly concerned St. Paul. These initial proposals for locks and dams were for navigation only and did not anticipate the possibility of hydroelectric power.¹⁵

Building Lock and Dam No. 1

In response to strong lobbying from Minneapolis, in 1894 Congress authorized the Army Corps of Engineers to build two locks and dams between St. Paul and Minneapolis. Construction started with Lock and Dam No. 2, also known as the Meeker Island Lock and Dam, which opened in 1907 just above what is now the Lake Street Bridge. Construction began on Lock and Dam No. 1, located three miles down river, in 1903.¹⁶

While the dams were under construction, Professor Benjamin Groat from the University of Minnesota suggested that if one higher dam with a water drop or "head" of thirty feet was built, rather than two separate dams with thirteen feet of head each, considerable hydroelectric power could be produced.¹⁷ This led the university, conservationists, and others supporting hydroelectric power to lobby for a single new High Dam. Their efforts

were bolstered by unrelated federal legislation in 1907, which called for increasing the depth of the navigation channel along the length of the Mississippi River from four-and-a-half feet to six feet to enhance shipping. Because Lock and Dam No. 1 was not yet completed, the Corps was compelled to review its design to insure that it was compatible with the deeper channel.

At that point, hydropower advocates had an opening. They lobbied for a single, dual-purpose dam—one that could serve both navigation and hydropower interests. Congress responded in 1909 and directed the Corps to study that possibility. The Army Corps suspended construction on Lock and Dam No. 1 and created a board of three engineers to undertake the study. The board quickly determined that Lock and Dam No. 1 could be readily modified to meet the requirements of the newly mandated channel depth, and also affirmed findings from an earlier study done that year that only a new "high dam" built on the site of Lock and Dam No. 1 would make hydropower economically feasible. The two smaller dams would not produce sufficient water "drop." A decision on whether to proceed with hydroelectric power was quite complicated because of the unresolved policy issues, but the board, nonetheless,



After acquiring his industrial site and receiving the license to operate the hydroelectric plant, Ford rebuilt the foundation completed earlier by the Army Corps of Engineers. Photo courtesy of the author.

recommended that the Army Corps of Engineers construct a new “high dam” at its expense, with the additional cost for hydroelectric power to be financed by an entity other than the Corps.

The Corps objected, maintaining its consistent position in support of navigation and opposition to hydroelectric power. Reluctantly, it held a public hearing in 1909 to determine if there was interest in hydropower development, and to discuss financing possibilities for the proposed High Dam. There was considerable interest from the cities of St. Paul and Minneapolis, as well as the state, on behalf of the University of Minnesota, and private power companies from St. Paul and Minneapolis. The interest of the private companies troubled the cities and state. They strongly argued that it was the right of the state to control natural resources, not that of the federal government, which seemed more open to privatizing the hydropower. To protect their position, the local public entities agreed to work together to form the Municipal Electric Company and to prepare a development proposal.¹⁸

After the hearing, the Board recommended to Congress that the existing Lock and Dam No. 1 be raised to thirty feet, and that construction be undertaken by the local governmental collaborative. The bids

of the private companies lost out mainly because the state and the two cities owned or controlled most of the key real estate along the river which would have been flooded, and which they were unwilling to relinquish. At this point the Army Corps modified its opposition to hydroelectric power and argued that it alone should build the High Dam even if it was a dual-use facility. The matter was eventually resolved by a new national water act signed by President William H. Taft on June 23, 1910, that gave the Corps responsibility for building both navigation and hydropower projects. The act also addressed the issue of allocating costs, requiring a hydropower operator to reimburse the federal government for expenses incurred by the Corps. The act provided for a license period of fifty years, but did not specify the amount to be paid as a user fee, calling for “reasonable compensation.”¹⁹

In 1912, the Minnesota congressional delegation led by Congressman Fred C. Stevens of St. Paul drafted a legislative amendment to the river and harbor bill that would give “the twin city high dam corporation control of the water power to be developed.” It called for annual payments of three percent of the additional cost of construction over what the dam would have cost for navigation purposes only. Minneapolis and St. Paul and the

University of Minnesota all supported this legislation.²⁰

Leaving aside the thorny issue of user fees to another day, the Corps proceeded with building a new High Dam atop a reworked Lock and Dam No. 1. When the reservoir above the dam was filled in 1917, it submerged Lock and Dam No. 2, three miles upriver, which had been completed just five years earlier. To ensure water safety, the top five feet of Lock and Dam No. 2 were removed. The issue of operational control of the hydropower plant and the question of user fees continued to be debated for the next three years. Matters were partially resolved by the passage of a new Water Power Act in 1920. This law established a Federal Power Commission, which was charged with creating and administering a decision-making process.²¹

The Municipal Electric Company

During the intervening decade, Minneapolis, St. Paul, and the University of Minnesota made little progress toward creating a workable plan for the Municipal Electric Company to finance and operate the hydropower plant. Their long-standing rivalry ultimately undermined the deliberations between the two cities, and St. Paul saw an opportunity to preempt Minneapolis and embarked on an audacious effort to secure the waterpower entirely for itself. On July 11, 1921, St. Paul filed an application with the Federal Power Commission for exclusive rights to all hydropower at the new High Dam, catching Minneapolis, the state, and Northern States Power (NSP), a private utility, completely off guard.²² Leading up to the public hearing before the FPC, Minneapolis charged that St. Paul was secretly working with the Ford Motor Company and was “interested in getting the power rights for a private corporation.”²³

On October 18, 1921, the Federal Power Commission met to consider applications for the hydropower license, and the two cities and the Northern States Power Company presented their cases. St. Paul outlined its plans for a major industrial complex that would utilize the hydropower of the High Dam. Minneapolis



The original application by St. Paul for the license for the hydroelectric plant to the Federal Power Commission did not mention the Ford Motor Company by name. It included this aerial perspective for an industrial park by noted local architect A.H. Stem. Courtesy of the Minnesota Historical Society.

was put in the awkward position of requesting the license, when its actual goal was have the Municipal Electrical Company be awarded the license. In doing this, officials from Minneapolis held out hope of forcing the participation of St. Paul. NSP presented itself to the FPC as the compromise choice that would distribute power to both cities.

The staff of Federal Power Commission spent the next several months reviewing the three applications. During that time, the FPC was simultaneously dealing with Ford's proposal for Muscle Shoals, which had become caught up in national politics. At the same time, Henry Ford's name was being raised as a possible candidate for president in 1924, opposing Calvin Coolidge. These national developments were closely followed in the Twin Cities' press and undoubtedly influenced the behind-the-scenes negotiations at all levels.

Trying to avoid being caught up in the battle between Minneapolis and St. Paul, the staff of the Federal Power Commission recommended that Northern States Power Company be awarded the license. Colonel William Kelly, the chief engineer for the Commission stated, "To give a license to either municipality would be to give it exclusive use of a valuable resource to which the other municipality has equal rights." The FPC report out-

lined the history of the project dating back to 1911, noting that Minneapolis contributed about 75 percent of the land required for flowage, compared to 25 percent for St. Paul. It also recognized that "local jealousies prevented agreement on the terms of legislation" required to establish the Municipal Electric Company, and held out little hope for future cooperation.²⁴

In a move that took all observers by surprise, the FPC rejected the highly publicized recommendations of its staff to award the permit to NSP and supported the position of Minneapolis for an indefinite delay. Apparently the FPC hoped that during this delay "the cities of Minneapolis and St. Paul and the University could get together and present a workable plan for ownership of the power." Officials at NSP were stunned at the last-minute reversal and complained, "If it is deemed advisable to let water still run and continue to waste coal, so be it."²⁵

The FPC's decision in favor of indefinite postponement did not ensure cooperation between the cities. Rather, the acrimony intensified over the next year and the debate spread throughout the entire state as issues became intertwined with the larger national public policy debate.

Ford's "Ten Big Things"

Up until this time, Ford's role in the discussion was unofficial, but that dramatically changed on January 9, 1923, when the company announced plans for a \$10 million (about \$120 million in 2007) assembly and manufacturing plant on the site of the proposed industrial development that St. Paul had already started to assemble. The plan specified "Ten Big Things" including:

1. The Ford factory of St. Paul, ultimately employing 14,000 men and having a payroll of \$25,000,000 annually.
2. A new railway line to be built by the St. Paul road costing more than \$2,000,000.
3. A new industrial district of some 700 acres south of the new Ford factory, built up along the new line of the St. Paul road.
4. A big barge line, wharves, and river terminal on the Mississippi River to be built and operated by Ford.
5. Two new bridges across the river. One will be built by the St. Paul road and the other by St. Paul and Minneapolis jointly, the latter crossing the river at St. Catherine Avenue [later known as Ford Parkway].
6. A complete, modern, and up-to-date hydroelectric laboratory, to be donated by Henry Ford to the University of Minnesota in the event the power from the high dam was used.
7. Shops of the Ford factory open at all times for the use of students of all the colleges of the Twin Cities who were enrolled in vocational training.
8. A new park of six and one-half acres, to be built by St. Paul on the Mississippi river boulevard, south of the Ford units to preserve the river view looking south and to mask the factory looking north.
9. The plant as a great magnet drawing all sorts of accessory and other supplemental industries to it by its activity.
10. An increased population, estimated at 75,000 people, divided between St. Paul and Minneapolis.²⁶

A month earlier Ford had submitted its own application to the Federal Power

Commission for a one-year preliminary permit for use of the High Dam, but the company said it was committed to building the manufacturing plant whether or not it received the permit for the hydropower.²⁷

Ford had considerable experience with the Army Corps of Engineering and the federal government contracting process. In 1916, as he was preparing to build a plant on the Rouge River in Dearborn, Michigan, he persuaded the Corps to dredge the river to facilitate the construction of his new industrial complex. The supervising staff of the Corps opposed the dredging, on the grounds that it would be “in the interests of one company and not worthy

of being undertaken by the United States.” Notwithstanding these concerns, the Corps did widen and deepen the channel. In addition, Ford received a military contract to build 112 submarine chasers, called the Eagle boats, as America was preparing to enter World War I. By connecting this contract to the cost of building his new plant, Ford managed to receive additional millions of dollars in government support for constructing his factory complex.²⁸

St. Paul quickly endorsed the Ford project over its own application, saying it “is but carrying out in a concrete way the plans submitted to the commission.”²⁹ Minneapolis then sought to block the ef-

forts by Ford at the state legislature by proposing a bill that would create its own municipal power company. St. Paul embarked on a statewide campaign to win the support of the general public and the business communities, portraying the Ford proposal as a way to break the impasse between the cities. Representatives from St. Paul carried their message to business and farmer groups in Minneapolis, Duluth, Mankato, and Red Wing touting the regional benefits that would flow from the project. The Ford plant, they claimed, would be a boon to the smelting industry throughout the northwest enhancing the mining and rail industries. It would also be equally beneficial to farmers who would be able to take advantage of Ford’s plan to develop the Mississippi River as a major shipping channel.

As the next hearing of the Federal Power Commission on the question of the dam approached, the Ford Motor Company mounted an aggressive public relations campaign, which included making increasingly grandiose claims. Henry Ford, for example, said that if he were awarded the power rights, he would upgrade the company’s plans from a basic assembly plant to a full manufacturing facility, thereby increasing employment from 3,000 or 4,000 to 14,000 people.³⁰ It was also widely reported in the media that Ford planned to build a new \$6,000,000 railroad line from the Twin Cities to Duluth where he could access raw materials.³¹ Ford said that he would “use the river extensively from the start,” and “balance the movement of manufactured products down the river by bringing coal up the river to the plant.” These promises were extremely effective at winning support for the Ford proposal from around the state.

Growing Support for Ford

The business community in Minneapolis at first supported the Minneapolis application and opposed the Ford plan, but it was eventually won over. Business leaders in Minneapolis said they were particularly concerned about the “socialistic” proposal by Minneapolis Mayor George E. Leach for a municipal power company, which was somewhat surprising because Leach was a Republican. Eventually their capitalist value system trumped



As this cartoon from the front page of the St. Paul Pioneer Press on December 26, 1922, shows, public sentiment clearly did not support Minneapolis’ proposal for a municipally owned power company.



Henry Ford, far left, with his son Edsel, third from left, and a number of officials from the Ford Motor Company visited the site of his future factory on April 25, 1923. Photo courtesy the Minnesota Historical Society.

their hometown boosterism. Perhaps for the first time in local history, a vision for an integrated regional economy evolved during this debate. “The establishment of this plant is a most significant indication of the desirability of the two cities getting together politically, economically, and in every other way,” W.L. Harris of the New England Furniture and Carpet Company in Minneapolis declared, “That should be the objective of both cities.” He further stated, “It is time we quit competing and find out more points of natural affiliations as the financial and business center of the Northwest. We not only need more bridges across the river which separates us, but we need to bridge our differences with a view to becoming one big composite center even though we are separate municipalities. In the final analysis, it is of small concern which side of the river the plant is located on.”

A former mayor of Minneapolis said, “Let us look at this in a practical common sense way, just as we would look at a problem in our private business. You can’t grow if you play the dog in the manger. If you can’t have the Ford in Minneap-

olis, let’s have him in St. Paul.”³² Douglas A. Fisk from the Minneapolis Civic and Commerce Association agreed stating, “Minneapolis wanted the Ford plant and



Henry Ford (third from left) was personally involved with the negotiations for his Muscle Shoals proposal on the Tennessee River with Secretary of War John Weeks (on left) of the Federal Power Commission, occurring at the same time as his application for the Mississippi Lock and Dam Number 1. Photo courtesy of the author.

worked for it. That is as natural as it was for St. Paul to go after it. But by the fact that God had located the best site on the St. Paul side of the river, we had the short end of the argument from the beginning. Henry Ford made his decision and bought his land on the St. Paul side.” Business leaders in Minneapolis abandoned their mayor and joined the calls of support for the Ford application

Trying to regain the offensive, Mayor Leach tried attacking Ford’s labor policies by calling him “the feudal lord of Detroit.” Rather than being an economic savior for the region, Leach railed, “a great part of the business (of that city) depends upon the condition of his digestion every morning. If he gets peeved at the railroads, the coal mines, the police force he is just as likely as not to shut down his factory for a month or six weeks until he can have his own way!” St. Paul Mayor Arthur C. Nelson, in response, supported Ford and lined up St. Paul labor chief William Mahoney to defend Ford’s labor practices.

The allure of an economic boon for the entire region that the Ford proposal offered rapidly gained public and legislative support. In desperation, Leach offered to lease his city’s share of the power to Ford, if Minneapolis were to receive the permit. This had the effect of undercutting his earlier

attacks on Ford. In addition, the Federal Power Commission let it be known that “Minneapolis would lose all advantages for preference granted municipalities and states in the Federal Power Act if they intended to sublease the power to Ford or any other private corporation.”³³

The Minneapolis bid effectively ended on February 21, 1923, when the Minnesota Legislature defeated the High Dam enabling act sponsored by Minneapolis, just days before the Water Power Commission was to meet in Washington. This left only Northern States Power to challenge Ford, but it quickly withdrew from the competition, reasoning, “Apparently the people of the Twin Cities want Ford to have the power.” A newspaper account described their withdrawal as “one of the greatest acts of commercial renunciation in the history of the country,” adding that, “Students of the high dam fight are almost wholly united in the opinion that defeat of the Leach bill placed the company in the position of prior applicant for the power.”³⁴

At the hearing before the Federal Power Commission, St. Paul, Minneapolis, the state of Minnesota, and Northern States Power all agreed to support the Ford Motor Company in its efforts. The two cities also agreed to expedite the building of a bridge across the river “to make the large Ford manufacturing plant as accessible to Minneapolis residents as those in St. Paul.” On March 3, 1923, Ford was granted a temporary permit for use of the High Dam, which required that it apply for a permanent license within four months.

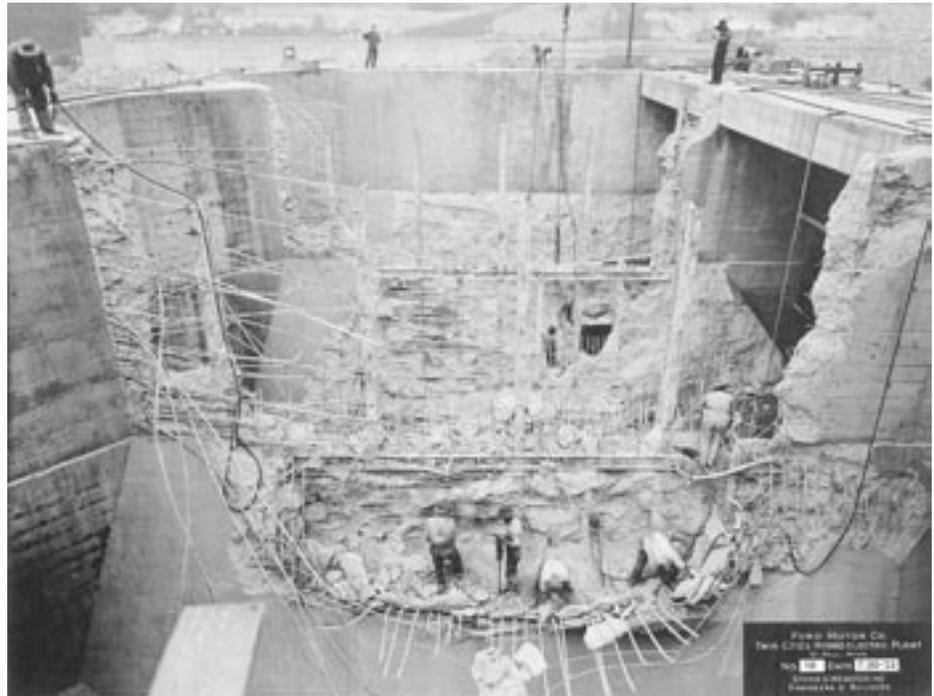
Henry Ford Wows St. Paul

Henry Ford, with his son Edsel and other company officials, made a surprise visit to the High Dam on April 25, 1923, and promised St. Paul one of the finest manufacturing plants in the United States. After viewing the site he said, “I am tremendously pleased with its location. It is the finest location in the country.” Later as he viewed the river from atop the bluff, he added, “This scene calls for a plant that will harmonize. I intend to put up a beautiful building that will in no way detract from its beauty.” The local press greeted the “auto king” enthusiastically and traded good-natured banter about a range of issues from his presidential as-

pirations to whether he planned on buying a local railroad or newspaper. On his whirlwind tour, Ford found time to talk with a “deaf, dumb inventor” who had approached the entourage with a written note. Ford and the inventor then walked away from the group privately exchange-

ing notes. The press also enthused that “Ford would like to become a permanent St. Paul resident,” based upon his statement that “If we stay here a few weeks we wouldn’t leave.”³⁵

The entire trip was a media sensation demonstrating Ford’s enormous appeal



Ford had to substantially demolish the foundation for the hydroelectric plant built by the Army Corps of Engineers to allow for the installation of more advanced turbines, as seen in this photograph from July 1923. Photo courtesy of the author.



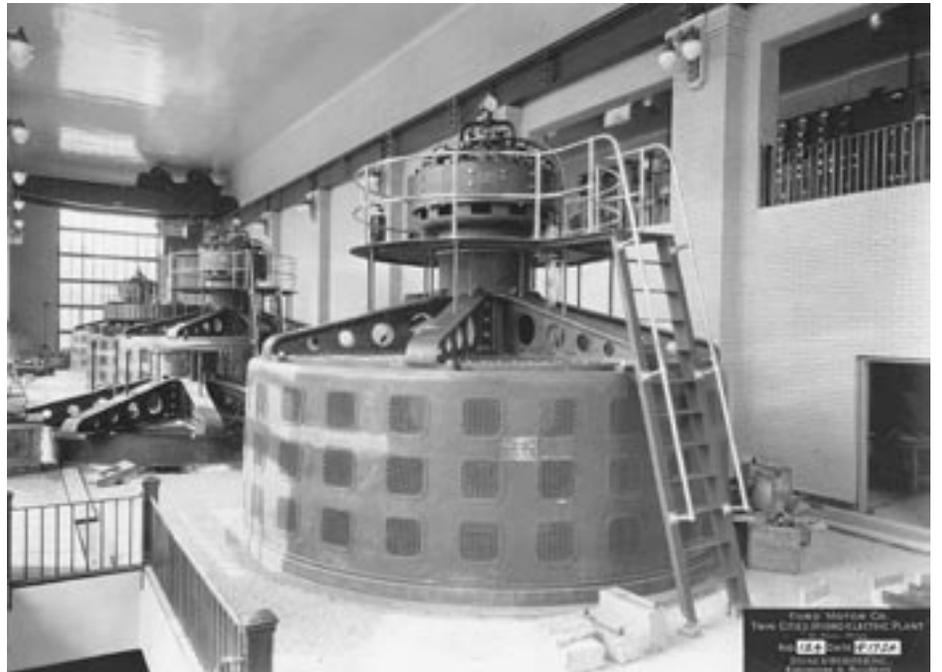
This photograph from August 1923 shows the modifications to the original foundation of the hydroplant undertaken by Ford. Photo courtesy of the author.



By November 1923, the structural framework for the new hydroelectric plant was installed. Photograph courtesy of the author.



The hydroelectric plant featured new vertical turbines of the reaction type with a rated power of 4,500 horsepower each. Photo courtesy of the author.



There were four generators installed in the new hydroelectric plant, as seen in this picture from April 1924. Photo courtesy of the author.

and reinforcing the claim made at the Associated Advertising Clubs of the World conference that Henry Ford was the “Best Advertised Man.” The advertising executives proclaimed that there were “two kinds of automobile advertisers—first those who pay for their advertising and second, Henry Ford.”³⁶ There can be little doubt that Ford’s mastery of the media in creating a positive public image was critical to winning the popular and political support, both locally and nationally, needed to secure the license for the High Dam. Oswald Garrison Villard, owner of the *Nation* magazine observed, “In anybody else this would have been denounced as a “grab” and a “steal” deserving of “utmost public condemnation,” but for Ford, “there was only applause.”³⁷

On June 7, 1923, the Federal Power Commission met and formally granted the Ford Motor Company a fifty-year franchise to operate the High Dam power plant. Ford would pay the federal government an annual rent of \$95,440, which was to be revised in twenty years and every ten years thereafter. Ford also had to provide up to 60,000 kilowatt hours per year for operating the federal locks on the Minneapolis side. All surplus power would be sold to the Northern States Power Company.³⁸

Colonel Lewis H. Brittin, from the St. Paul Association (a predecessor of today’s St. Paul Area Chamber of Commerce), the man who was most responsible for attracting Ford to St. Paul, was on hand in Washington to receive the license for the company. He declared that construction on the hydroelectric project would begin within weeks, under the management of the national firm of Stone and Webster. This firm had worked with Ford on other hydroelectric projects including Green Island on the Hudson River and two plants in Michigan. It also had a Twin Cities connection dating back to 1889 when it had purchased Minneapolis General Electric.

With the matter finally resolved, Mayor Leach reflected, “My fight started against the Northern States Power Company and Ford came in at the finish and secured the power. I took a good licking in that fight and now I’m ready to cooper-



The Ford hydroelectric plant was substantially completed in this photograph of the north elevation from April 1924. Photo courtesy of the author.

ate with Ford and do all in my power to aid him to develop his plant and district.”

Having secured the hydroelectric power from the river, Ford turned his attention to navigation. While in Washington, Colonel Brittin met with Secretary of War John W. Weeks and proposed that the federal government operate a barge service between St. Louis and Minnesota.³⁹ Ford offered to guarantee the federal government the necessary tonnage to make the fleet profitable. The initial response from Weeks was positive.

After its engineering analysis of the site, Ford determined it had to redo much of the infrastructure work done by the Army Corps ten years earlier on Lock and Dam No. 1 in order to install the most advanced hydropower turbines. Over three thousand tons of reinforced concrete were removed. The hydroelectric plant started operation in 1924 and has provided most of the power used at the Ford Twin Cities Assembly Plant to the present day.

Henry Ford was not so fortunate with his bid on the Muscle Shoals project, and there is some reason to speculate that the permit for the High Dam was a political consolation prize bestowed because he agreed to drop out of the presidential race. Mayor Leach survived a bruising reelection bid during which he was accused of

opposing the Ford plant and losing some economic development opportunities because of his “socialist” proclivities.

The resolution of the High Dam controversy did not end the bitter rivalry between Minneapolis and St. Paul. Attention shifted to the building of the new “Ford” Bridge, and the cities continued to bicker about its location, timing, and financing for the next several months.

The High Dam Today

Within a few years after the Ford plant was completed, many of the economic claims made by Ford during the hydroelectric battle would never be realized. Employment at the Ford plant has averaged around 2,000 people over the past eighty years, never coming close to the 14,000 employees promised. In addition, Ford did not fulfill his promise to develop navigation on the river or his suggestion that he would build a rail line to Duluth and help revitalize the northern smelting industries.

The Ford Motor Company has operated the hydroelectric facility without interruption since 1923, except during a brief disruption caused by a major flood in 2001. An internal Ford Company memo from 1949 disclosed that the manufacturing plant only utilized an average of 12% of

the power generated from 1923 to 1947, with the rest being sold to Northern States Power Company. The memo stated, "The Company never carried out its original plans (for a large manufacturing facility) because of a change in freight rates which made distribution of parts from the Twin Cities Branch uneconomical. As a result of the curtailment of the manufacturing program, the demand for electrical energy. . . decreased materially and it automatically increased the supply of energy available under the terms of the contract dated June 4, 1923, to Northern States Power Company." The decreased demand for energy was so significant that Ford removed the steam turbo generators from the auxiliary Steam Plant and transferred them to another Ford branch plant.⁴⁰

A more recent filing of the Ford Company states that approximately 85% of the power used at the Ford Assembly Plant is generated by the hydroelectric facility, with the surplus being sold to the Xcel Energy Company, the successor company to NSP. The rent, or "beneficial use of the Federal dam," in 2001 was \$95,440, which was the same amount charged in 1923.⁴¹ (If the annual rent was increased to adjust for inflation it would have been

raised to approximately \$1.1 million by 2005.)⁴² On November 18, 2004, Ford received a new thirty-year license. Three years later it announced plans to close the Twin Cities Assembly Plant and sell all of its assets, including the hydroelectric power plant and its federal operator's license. In late winter 2006, Ford put the hydropower plant out for bids.⁴³ On May 29, 2007, it announced that it would select the bid of Brookfield Power, a hydroelectric firm from Quebec, Canada. Brookfield is currently building a 10-megawatt hydroelectric power plant at St. Anthony Falls in Minneapolis. The sale of the High Dam plant is contingent upon Brookfield receiving approval from the Federal Energy Regulatory Commission, which will hold public hearings over the summer of 2007.

The proposed sale of the Ford hydroelectric plant is currently facing opposition from those who hope to see the 140-acre site continue to be used for manufacturing purposes. Ford agreed to a request from the City of St. Paul that the winning bidder provide up to five megawatts of power for any future redevelopment projects on the assembly plant site, but a number of people fear that is not sufficient to keep the

plant economically competitive for light industry.⁴⁴ (Currently, the plant can generate eighteen megawatts annually.⁴⁵) The conflict over the High Dam moved to the Minnesota Legislature where a number of St. Paul legislators, working with representatives from the United Auto Workers and other labor officials, introduced a bill that would block the company from selling off the hydropower plant for five years.⁴⁶ While that bill did not pass, it seems inevitable that the controversy over Ford and the High Dam that started almost a century ago will continue for a while longer.

Brian McMahon has received research grants from the Minnesota Humanities Commission and the Minnesota Historical Society, and has written widely on the subject of urban history, including several articles and exhibits for the Ramsey County Historical Society. He is currently completing a book on the history of the Ford Motor Company in Minnesota to be published by the University of Minnesota Press. He is a trained architect and Executive Director of University UNITED, a coalition of community organizations and business representatives working to promote development along University Avenue.

Notes

Research for this article has been supported in part by a grant from the Minnesota Historical Society with funds provided by the State of Minnesota.

1. Minneapolis Journal, January 23, 1922, p. 1.
2. Saint Paul's Plan for Development and Utilization of Power at Government Dam No. 1, October 18, 1921, p. 12. A copy of this plan is in the papers of Lewis H. Brittin, Minnesota Historical Society. Hereinafter referred to as Saint Paul's Plan. Lewis Hotchkiss Brittin (1877–1952) was a promoter of industrial development in St. Paul. Brittin earned the rank of colonel during service in the U.S. Army Corps of Engineers. He also was a founder and executive of Northwest Airways (1926–1934), the forerunner of Northwest Airlines.
3. Allan Nevins, *Ford: The Times, The Man, The Company* (New York: Charles Scribner's Sons, 1954), 407.
4. Ford R. Bryan, *Beyond the Model T: The Other Ventures of Henry Ford* (Detroit: Wayne State University Press, 1990), 45.
5. Website of the Henry Ford Estate, National Historic Landmark, www.henryfordestate.org.
6. David L. Lewis, *The Public Image of Henry Ford* (Detroit: Wayne State University Press, 1976), 102.
7. Nevins, *Ford: The Times, The Man, The Company*, 47.
8. Minneapolis Journal, January 12, 1922, p.1; Henry Ford, *My Life and Work* (Garden City, New York: Doubleday, Page & Company, 1922), 185.
9. Howard P. Segal, *Recasting the Machine Age: Henry Ford's Village Industries* (Amherst, Mass.: University of Massachusetts Press, 2005), 37.
10. Allan Nevins and Frank Ernest Hill, *Ford Expansion and Challenge 1915–1933* (New York: Charles Scribner's Sons, 1957), 256.
11. John O. Anfinson, "The Secret History of the Mississippi's Earliest Locks and Dams," *Minnesota History* 54:6 (summer 1995): 256.
12. Saint Paul's Plan, p. 8.
13. Lucile M. Kane, *The Falls of St. Anthony: The Waterfall That Built Minneapolis* (St. Paul: Minnesota Historical Society Press, 1987), 134.
14. Saint Paul's Plan, p. 9.
15. Saint Paul's Plan, p. 10.
16. Anfinson, 257.
17. Prof. George D. Shepardson, "The Best Use of the High Dam Power", *MINNESOTA TECHNO-LOG*, University of Minnesota, (Vol. II, No. 5, March 1922): 1–18.
18. Anfinson, 263.
19. Anfinson, 264.
20. Minneapolis Journal, October 14, 1912, p.7.
21. Anfinson, 266.
22. Saint Paul's Plan, p. ?.
23. Minneapolis Journal, October 16, 1921, p. 1.
24. Minneapolis Journal, January 23, 1922, p. 1.
25. Minneapolis Journal, January 25, 1922, p. 11.
26. St. Paul Daily News, January 9, 1923, p. 1.
27. Application of Ford Motor Company to Federal Power Commission, December 4, 1922. A copy is in the papers of Lewis H. Brittin at the Minnesota Historical Society.
28. Lindy Biggs, *The Rational Factory: Architecture, Technology, and Work in America's Age of Mass Production* (Baltimore: Johns Hopkins University Press, 1996), 141–143.
29. St. Paul Pioneer Press, December 22, 1922, p. 1.
30. St. Paul Pioneer Press, December 22, 1922, p. 6 (smelting industry) and January 26, 1923, p. 9 (increased employment).
31. St. Paul Pioneer Press, February 17, 1923, p. 1.
32. St. Paul Pioneer Press, January 14, 1923, p. 1.
33. St. Paul Pioneer Press, February 16, 1923, p. 1.
34. Minneapolis Evening Tribune, February 22, 1923, p. 1.
35. St. Paul Daily News, April 26, 1923, p. 1.
36. St. Paul Daily News, June 15, 1923, p. 21.
37. David L. Lewis, *The Public Image of Henry Ford* (Detroit: Wayne State University Press, 1976), 188.
38. St. Paul Daily News, June 7, 1923, p. 1; Minneapolis Journal, June 7, 1923, p. 1.
39. St. Paul Daily News, June 7, 1923, p. 1.
40. Review of Twin City Hydro-Electric Project, March 31, 1949, Ford Company Archives, Accession # 429.
41. Ford Motor Company, Application For New License Major Water Power Project Existing Dam, p. H-13.
42. Samuel H. Williamson, "What is Relative Value?" *Economic History Services*, April 2004, at www.eh.net/hmit.
43. Jane McClure, "Power Struggle," *Avenues*, January 2007, p. 3.
44. Minneapolis Star Tribune, May 8, 2007, p. B7.
45. Minneapolis Star Tribune, May 30, 2007, p. D6.
46. *Minneapolis Star Tribune*, February 9, 2007, D.1.