

**ORDINANCE NO. 07-01 AC CMS**

**AN ORDINANCE AUTHORIZING THE EXECUTION OF A HYDRO DEVELOPMENTAL COST SHARING AGREEMENT BY THE CITY OF OBERLIN WITH AMERICAN MUNICIPAL POWER-OHIO, INC. AND REPEALING ORDINANCE NO. 06-41 AC CMS**

**WHEREAS, the City of Oberlin (hereinafter "Municipality") owns and operates an electric utility system for the benefit of the Municipality, its citizens and taxpayers; and**

**WHEREAS, by working jointly with American Municipal Power-Ohio, Inc. (hereinafter "AMP-Ohio") and the other municipalities which are members of AMP-Ohio, the Municipality can supply its electric utility consumers with reliable service at reasonable rates; and**

**WHEREAS, a need has been identified for an environmentally sound, reasonably priced and reliable long term power source for the Municipality's electric utility consumers; and**

**WHEREAS, a number of licenses for the construction and operation of several regional hydroelectric facilities at existing dams may be available to AMP-Ohio or its member via purchase, application to the FERC or other cooperative arrangements; and**

**WHEREAS, AMP-Ohio desires to provide Municipality with the opportunity to participate in the development of new regional hydroelectric facilities, primarily located on the Ohio River, utilizing conventional as well as newer technologies, in order to provide the Municipality's electric utility consumers this reasonably priced, environmentally sound and reliable source of long term power; and**

**WHEREAS, AMP-Ohio anticipates that no less than 30,000 kilowatts (kW), and potentially 250,000 kW of hydroelectric capacity may be available; and**

**WHEREAS, it is necessary for the Municipality to enter into a contract (Agreement) with AMP-Ohio to provide for preconstruction development funding to allow for analyzing the technical, permitting, and economic aspects of the potential new hydroelectric projects (hereinafter the "Hydro Projects") and determine if the Municipality, in conjunction with AMP-Ohio and other participating municipalities, should proceed to construct, own and operate one or more new Hydro Projects; and**

**WHEREAS, under the terms of the Agreement, AMP-Ohio will report the results of the developmental studies to the Municipality prior to the Municipality committing to proceed with construction of one or more Hydro Projects if and only if in the Municipality's sole discretion it determines to do so; and**

**WHEREAS, Municipality desires to obtain, pursuant to the Agreement, rights to an amount up to a nominal 2,600 kW of capacity of the Hydro Projects on the same terms and conditions as the other participating municipalities; and**

WHEREAS, it is necessary for the Municipality to commit itself to pay, pursuant to the Agreement, a *pro rata* share of the developmental costs of the Hydro Projects in proportion to the kW of capacity from the Hydro Projects that Municipality chooses to reserve to the total kW reserved by all participating municipalities, such commitment limited, however to a financial obligation of no more than \$32.84 per kW reserved; and

WHEREAS, Municipality had, pursuant to Ordinance 06-41 AC CMS authorized execution of a similar development agreement, but which was limited to the Hydro Matrix technology and AMP-Ohio has determined that conventional as well as newer technologies such as Hydro Matrix, must be explored.

NOW THEREFORE, BE IT ORDAINED by the Council of the City of Oberlin, County of Lorain, State of Ohio, a majority of all members elected thereto concurring:

SECTION 1. That the form of the Hydro Projects Developmental Cost Sharing Agreement attached hereto as Exhibit 1 is hereby approved, subject to and with any and all changes therein as hereinafter provided.

SECTION 2. That the City Manager is hereby authorized to execute a Hydro Developmental Cost Sharing Agreement substantially in the form of Exhibit 1 for up to a nominal amount of 2,600 kW, with the cost to the Municipality capped at \$32.84 per kW which cannot be exceeded without further action of this Council.

SECTION 3. That the authorization contained herein shall not obligate the Municipality to incur any liability for the actual construction of any Hydro Project without further action of this Council.

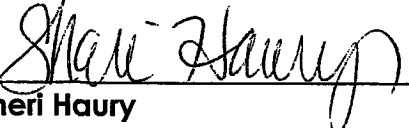
SECTION 4. That Ordinance 06-41 AC CMS, adopted June 5, 2006, is hereby repealed.

SECTION 5. This Council finds and determines that all formal actions of this Council concerning and relating to the adoption of this Ordinance, to the extent required to be, were taken in an open meeting of this Council and that all deliberations of this Council and any of its committees that resulted in those formal actions were in compliance with the Law.

SECTION 6. This Ordinance shall be effective at the earliest time permitted by law.

PASSED:      1<sup>st</sup> Reading – January 2, 2007 (E)  
                  2<sup>nd</sup> Reading –  
                  3<sup>rd</sup> Reading –

ATTEST:

  
\_\_\_\_\_  
Sheri Haury  
INTERIM CLERK OF COUNCIL

  
\_\_\_\_\_  
Daniel Gardner  
PRESIDENT OF COUNCIL

POSTED: January 3, 2007

EFFECTIVE DATE: January 3, 2007

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**HYDRO PROJECTS  
DEVELOPMENTAL SUBSCRIPTION AND COST SHARING AGREEMENT  
BETWEEN AMERICAN MUNICIPAL POWER – OHIO, INC. (AMP-OHIO)  
AND  
THE CITY OF OBERLIN (MUNICIPALITY)**

WHEREAS, AMP-Ohio has made a preliminary determination that its Members can beneficially utilize the output of one or more new hydroelectric power generation facilities at existing regional dams, utilizing conventional as well as newer technology, to be constructed, owned and operated by participating AMP-Ohio Members, or by AMP-Ohio on behalf of participating Members, of approximately 250 megawatts (MW), (hereinafter “Hydro Projects”);

WHEREAS, AMP-Ohio has preliminarily determined that the Hydro Projects may be economically and technically feasible and environmentally desirable;

WHEREAS, it is prudent to conduct further economic and technical studies to determine, among other things, the projected costs of the Hydro Projects and to design and permit said Hydro Projects and to acquire, by application, purchase or other arrangements, FERC Licenses for the same (hereinafter “Developmental Phase”), in order to determine if the Hydro Projects should be constructed and if the Municipality, along with other AMP-Ohio Members, should commit to the construction of the same;

WHEREAS, Municipality desires to participate in the Developmental Phase and to reserve up to a nominal 2,600 kilowatts (kW) of the Hydro Projects’ capacity;

WHEREAS, in order to fund the costs of the Developmental Phase, Municipality agrees to pay AMP-Ohio for Municipality's *pro rata* share of the costs of the Developmental Phase of the Hydro Projects up to, but not including, a commitment to construct the Hydro Projects;

WHEREAS, Municipality will subsequently authorize, and enter into only if it so chooses, additional agreements to authorize the construction and to finance Municipality's aliquot share of the costs of such construction of the Hydro Projects that, when aggregated with other such commitments, will allow the financing and construction of one or more Hydro Projects.

NOW, THEREFORE, in consideration of the following mutual promises, AMP-Ohio and the Municipality agree as follows:

SECTION 1 - TERM.

The term of this Agreement shall be in effect until December 31, 2009. Municipality shall notify AMP-Ohio of its desires regarding the actual construction of the one or more Hydro Projects no later than the date Construction Subscriptions are due for any given Hydro Project, as specified in Section four (4) of this Agreement. AMP-Ohio warrants that it will promptly cease all Developmental Phase activities if it is unable to enter into Hydro Developmental Cost Sharing Agreements with AMP-Ohio Members or groups of Members for at least 30 MW of Hydro Projects' Capacity.

SECTION 2 - SERVICES.

AMP-Ohio agrees to assume responsibility for all aspects of the Hydro Projects development, design, feasibility, and permitting including securing other Hydro Projects Cost Sharing Agreements from its other Member municipalities, and all other matters necessary to allow the complete, timely and successful development of the Hydro Projects, including making arrangements to attempt to secure Construction Subscriptions from AMP-Ohio Members at levels sufficient to allow construction of one or more Hydro Projects. Municipality agrees by execution of this Agreement, to a Developmental Subscription of up to a nominal 2,600 kW of Hydro Projects' capacity. As set forth in Section 4 hereof, said Developmental Subscription shall entitle the Municipality to an option to participate in future Hydro Projects developed hereunder, via a timely Construction Subscription, of the ownership or beneficial use of a nominal amount of capacity, from one or more Hydro Projects developed hereunder, equal to its Developmental Subscription as percentage of the total of all such Developmental Subscriptions times any given Hydro Project's nominal capacity.

SECTION 3 - REPORTING.

During the term of this Agreement, AMP-Ohio from time to time shall provide Municipality with reports on the development of each Hydro Project developed hereunder. Such reports shall set forth AMP-Ohio's arrangements among AMP-Ohio's other participating Members, the status of legal, engineering and other aspects of each such Hydro Project, along with an accounting of the costs associated therewith that have been expended and invoiced to date.

Additionally, AMP-Ohio shall make available to the Municipality upon request all studies or documents relating to each such Hydro Project in its possession.

#### SECTION 4 – CONSTRUCTION SUBSCRIPTIONS, REPAYMENT

Upon conclusion of the Developmental Phase, or at such earlier time as AMP-Ohio deems appropriate, AMP-Ohio shall offer each member municipality that has entered into a Developmental Subscription a Construction Subscription of an amount of capacity in the Hydro Projects developed hereunder at least equal to its Developmental Subscription as percentage of the total of all Developmental Subscriptions, times the given Hydro Project's nominal capacity. Construction Subscription means a binding commitment by an AMP-Ohio member municipality sufficient to allow the financing of such member's aliquot share of the costs of the construction of a given Hydro Project, including repayment of all costs of the Development Phase to AMP-Ohio and its Members that have entered into Developmental Subscriptions that when aggregated with other such commitments, will allow the construction and operation of the given Hydro Project. AMP-Ohio shall not be required to construct any given Hydro Project unless a sufficient number of member municipalities expressly and affirmatively determine to do so.

#### SECTION 5 - RATES, CHARGES AND BILLING.

(A) Developmental costs incurred pursuant to this Agreement shall be charged to Municipality in proportion to Municipality's Developmental Subscription of the Hydro Projects to the total of all Developmental Subscriptions. Such charges shall be invoiced monthly as incurred by AMP-Ohio. The Municipality shall pay the invoiced amounts no later than the due date shown on the invoice. The amounts due shall be considered paid when actually received by AMP-Ohio during normal business hours, or deposited in AMP-Ohio's account and available for AMP-Ohio's use. Amounts not paid on time or before the due date shall be payable with interest accrued at the lesser of: (i) the then current prime interest rate per annum of Citibank, N.A., or its successor, prorated by days from the due date to the date of payment; or (ii) the maximum rate that is authorized by law. The Municipality may elect to pay a monthly leveled, estimated cost, with periodic trueups to actual, by so indicating in the execution block of this Agreement.

(B) Municipality understands that the total developmental costs of the Hydro Projects prior to construction are not currently determinable. AMP-Ohio has projected it may incur less than one million dollars (\$1,000,000) in such costs (including AMP-Ohio's previously incurred costs

related thereto). Based upon the minimum 30 MW of total Developmental Subscriptions, the maximum Developmental Subscription cost is \$32.84 per kW. Municipality hereby authorizes its *pro rata* share of such costs in an amount of up to \$32.84 per kW over the term of this Agreement. Any costs in excess of such \$32.84 per kW may not be billed to the Municipality without the Municipality's prior written agreement.

#### SECTION 6 – NOTICES

Any notices given or required to be given hereunder to the Municipality shall be sent to the following addresses:

Oberlin Municipal Light & Power System  
Attn: Steve Dupee, Electric Director  
289 S. Professor Street  
Oberlin, OH 44074

Any notices given or required to be given hereunder to AMP-Ohio shall be sent to AMP-Ohio at the following address:

AMERICAN MUNICIPAL POWER - OHIO, INC.  
Attn: President  
2600 Airport Drive  
Columbus, OH 43219

Said addresses shall be updated by the respective Parties by written notice to the other Parties as necessary.

Any notice sent via prepaid U.S. certified mail shall be deemed received by the receiving Party on the date signed for as received on the certified mail card. Any notice sent via prepaid U.S. regular mail, by personal service, facsimile, or courier or like service shall be deemed received when received by the receiving Party.

#### SECTION 7 – MISCELLANEOUS

(A) Assignment. The terms, provisions, covenants and conditions of this Agreement and the rights and obligations of the Parties thereto shall not extend to, inure to, bind, be transferred to or vest in the successors or assigns of either Party other than by operation of law, unless the prior written consent of the other respective Party or Parties shall be obtained, such consent not to be unreasonably withheld.

(B) Third Party Reliance. This Agreement is solely for the benefit of the Parties hereto and the term and conditions contained herein do not inure to the benefit of any third parties.

(C) Governing Law. This Agreement and any controversies arising hereunder are to be construed and determined in accordance with the laws and Constitution of the State of Ohio.

(D) Prior Agreement. The previous Hydro Matrix Developmental Agreement between the Municipality and AMP-Ohio (AMP-Ohio Contract No. C-1-2006-4801) shall be deemed to be void and of no further force and effect.

IN WITNESS WHEREOF, the authorized representatives of the Parties hereby execute this Agreement.

**THE CITY OF OBERLIN, OHIO**

By: [Signature]

Title: CITY MANAGER

Date: 1/4/07

**APPROVED AS TO FORM:**

By: [Signature]  
Municipal Legal Advisor

Date: 1-4-07

**PLEASE CHECK ONE:**

- The Municipality elects levelized Monthly Billing of its Developmental Costs
- The Municipality DOES NOT elect levelized Monthly Billing of its Developmental Costs

**AMERICAN MUNICIPAL POWER-OHIO, INC.**

By: [Signature]

Marc S. Gerken, PE  
President

Date: 1/11/07

**APPROVED AS TO FORM:**

By: [Signature]  
John W. Bentine, Esq.  
General Counsel

Date: 1-12-07






OBERLIN MUNICIPAL LIGHT AND POWER SYSTEM ♦ 289 SOUTH PROFESSOR STREET ♦ OBERLIN, OHIO 44074

Phone (440)775-7260

Fax (440)775-1546

MEMORANDUM

**To:** Rob DiSpirito, City Manager  
**Re:** Hydro Matrix Project Update - New Developmental Phase Feasibility Study  
**From:** Steve Dupee, Electric Director  
**Date:** December 11, 2007



On June 5<sup>th</sup>, City Council passed ordinance No. 06-41 to authorize the execution of a developmental phase cost sharing agreement with AMP-Ohio. The purpose of the agreement was to allow Oberlin to participate in a study to determine the feasibility of utilizing a hydro generation technology called "Hydro Matrix" on the Ohio River. This technology, developed by VA Tech, Inc. utilizes the concept of removable mini-turbine modules that potentially can be installed on existing dams or weir structures to generate hydro electricity. The study estimated to cost \$1,000,000 would include an engineering analysis, structural analysis, financial consulting, licensing issues, etc. and take approximately one year to complete.

Unfortunately, in September, I received news that a fatal flaw had been discovered prior to the study commencing. VA Tech released surprising news to AMP-Ohio that the matrix design would not produce the energy output as originally anticipated for the one of the dam sites (Smithland Dam) that AMP-Ohio was pursuing the hydro license for. With lower energy output numbers, AMP-Ohio determined that this technology would not be economically viable. To that end, the AMP-Ohio Board of Trustees decided to no longer pursue the hydro matrix technology for the Smithland Dam. The Board also agreed that the relatively minor expenses already incurred would be absorbed by AMP-Ohio and not billed to participating member communities under the developmental phase cost sharing agreement.

So, where does this leave us? AMP-Ohio has received overwhelming response from members interested in additional hydro-power. In fact, 60 members had committed to the hydro matrix feasibility study totaling 127,000 kilowatts. In an effort to meet the growing demand for environmentally-friendly, renewable energy for its members, the AMP-Ohio Board has authorized staff to continue efforts to develop hydro-generation. To that end, AMP-Ohio has engaged Montgomery-Watson-Harza (MWH) to perform a screening study for hydro development at ten (10) Ohio River dam sites with a potential generation output of 250,000 kilowatts. This study will assist AMP-Ohio in determining the available and viable sites for the development of hydro-generation. Once this study is completed, AMP-Ohio proposes to hire a consultant to perform a developmental phase feasibility study for developing new hydro projects on the Ohio River considering both conventional technology as well as other technologies like hydro matrix.

Since our authorizing ordinance and agreement passed by City Council limited the original study to hydro-matrix technology only, we would need to pass a new ordinance to include analysis of conventional technologies. AMP-Ohio has prepared a new developmental cost sharing agreement and authorizing ordinance.

The study would still be limited to a cost of \$1,000,000 and our capacity share would remain at a not to exceed amount of 2,600 kilowatts.

Below are some question/answers to summarize our interest in the developmental phase feasibility study. For ease of understanding, I am going to express numbers in kilowatts.

- (1). What is the recommended kilowatt capacity share that Oberlin would reserve?

*AMP-Ohio is recommending that Oberlin reserve a total capacity of up to 2,600 kilowatts.*

- (2). If a hydro generation project is ultimately developed and Oberlin receives a full 2,600 kilowatts, how much hydro generation would be in its power supply.

*If Oberlin receives a total of 2,600 kilowatts, hydro generation would make up approximately 20% of its total power supply portfolio.*

- (3). How much will this type of hydro power cost per kilowatt-hour?

*It depends on the technology used. Conventional hydro plants cost between 5 to 6 cents per kilowatt-hour. Hydro Matrix costs were originally expected to be between 4 to 5 cents. New estimates are well over 5 cents. For your information, our average cost of wholesale power is budgeted for 2007 at 5.8 cents.*

- (3). What would it cost Oberlin to participate in the study?

*Under a worst case scenario, meaning that*

*(A). Only 30,000 kilowatts is developed and there are only 30 megawatts of interest from members (highly unlikely), then Oberlin's share of the developmental costs would be approximately \$85,364 or \$7,115 per month.*

*(B). Under a better case scenario, that all members who participated in the hydro matrix study (127,000 kilowatts) are still interested and participate in new study at the same level, Oberlin's share would be \$20,472 or \$1,706 per month.*

- (4). What happens to the developmental phase feasibility study costs paid by Oberlin if a hydro generation project is developed?

*Oberlin would be paid back all of its developmental phase feasibility study costs. The \$1,000,000 spent for the feasibility study would be rolled into the overall financing for the project. If the project does not move forward, then Oberlin would not receive their developmental costs back.*

- (5). What are the advantages to this type of generation?

- \* Renewable generation*
- \* Potentially attractive power supply costs*
- \* Brings diversification to power supply portfolio*
- \* Water is fuel, therefore, not subject to price volatility associated with non-renewable resources such as natural gas, diesel fuel, coal, etc.*

## Recommendation

I recommend that we participate in this new developmental phase feasibility study. It is important that we support renewable energy development and continue investigating options for expanding renewable energy in our power supply portfolio. In my opinion, hydro projects on the Ohio River hold the most promise for providing additional base load renewable energy. For your information, on Tuesday, December 5<sup>th</sup>, I met with the Public Utilities Commission to present this information and PUC has recommended participation in the study.

I have attached a copy of the authorizing ordinance as well as the developmental phase cost sharing agreement from AMP-Ohio. I respectfully request that this ordinance be placed on the January 3<sup>rd</sup> City Council agenda on first reading only. In the meantime, if you have any questions, please let me know.

Thanks Rob.

/sd