

State of Indiana
Indiana Utility Regulatory Commission

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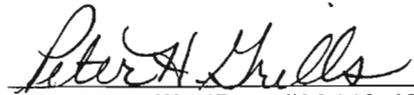
IN THE MATTER OF THE VERIFIED)
PETITION OF INDIANA MICHIGAN POWER)
COMPANY FOR APPROVAL OF ALTERNATIVE)
REGULATORY PLAN FOR DEMAND SIDE)
MANAGEMENT (DSM) AND ENERGY)
EFFICIENCY (EE) PROGRAMS FOR 2015 AND)
ASSOCIATED ACCOUNTING AND)
RATEMAKING MECHANISMS, INCLUDING)
TIMELY RECOVERY THROUGH I&M'S)
DSM/EE PROGRAM COST RIDER OF)
ASSOCIATED COSTS, INCLUDING ALL)
PROGRAM COSTS, NET LOST REVENUE,)
SHAREHOLDER INCENTIVES AND CARRYING)
CHARGES, DEPRECIATION AND OPERATIONS)
AND MAINTENANCE EXPENSE ON)
CAPITAL EXPENDITURES.)

CAUSE NO. 44486

**CITY OF FORT WAYNE'S FIRST CORRECTED
SUBMISSION OF TESTIMONY IN RESPONSE TO JOINT
MOTION AND IN OPPOSITION TO SETTLEMENT AGREEMENT**

The City of Fort Wayne, through it counsel, hereby submits its *First Corrected Testimony* of Douglas Fasick in response to the Joint Motion (with Exhibits) filed by Indiana Michigan Power Company and the Office of Utility Consumer Counsel in this Cause, and in opposition to the Stipulation and Settlement Agreement.

Respectfully submitted,


Peter H. Grills, Esq., #29440-49
Attorney for City of Fort Wayne

BINGHAM GREENEBAUM DOLL LLP
10 West Market Street
2700 Market Tower
Indianapolis, Indiana 46204
(317) 635-8900
(317) 236-9907

43 **CERTIFICATE OF SERVICE**

44
45 I hereby certify that a copy of the foregoing *City of Fort Wayne's Corrected Submission*
46 *of Testimony in Response to Joint Motion and in Opposition to Settlement Agreement* has been
47 served upon counsel listed on the attached Service List electronically and via hard copy, upon
48 request, this 22nd day of September, 2014.

49
50 
51 Peter H. Grills

52
53 BINGHAM GREENEBAUM DOLL LLP
54 10 West Market Street
55 2700 Market Tower
56 Indianapolis, Indiana 46204
57

58
59 **SERVICE LIST**

60
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kkrohn@oucc.IN.gov
Phone: 317-232-2494
Fax: 317-232-5923

- 62
63 Q: Could you please state your name and business address?
64
65 A: My name is Douglas J. Fasick, C.E.M. and I work for the City of Fort Wayne's City
66 Utilities Department. My business address is 200 E. Berry Street, Suite 250, Fort Wayne,
67 Indiana.
68
69 Q: Have you testified previously in this proceeding?
70
71 A: Yes
72
73 Q: On whose behalf did you submit your previous testimony?
74
75 A: The City of Fort Wayne.
76
77 Q: Did you provide a description of your employment history and experience in this
78 previous testimony?
79
80 A: Yes.
81
82 Q: On whose behalf are you submitting this testimony?
83
84 A: The City of Fort Wayne's City Utilities Department.
85
86 Q: Are you also sponsoring exhibits along with your testimony?
87
88 A: Yes, Fort Wayne Settlement Agreement Exhibits 2, 3 4, and 5.
89
90 Q: Do you describe those exhibits later in your testimony?
91
92 A: Yes.
93
94 Q: Have you reviewed the Stipulation and Settlement Agreement (Settlement Agreement)
95 between the Office of Utility Consumer Counselor (OUCC) and I&M in this Cause?
96
97 A: Yes.
98
99 Q: What is the purpose of your testimony?
100
101 A: The purpose of my testimony is to address the Settlement Agreement's failure to
102 recognize the issues raised by the City in connection with its participation in I&M's 2015
103 DSM Plan.
104 Q: What is your understanding of the effect of this Settlement Agreement if it is approved by
105 the Commission?
106

107 A: My understanding is that the 2015 DSM Plan as filed by I&M will be adopted as
108 proposed with only those modifications addressed in the Settlement Agreement.

109
110 Q: Why does the City object to the Settlement Agreement?

111
112 A: The City objects to the Settlement Agreement because it fails to address participation by
113 the City's water and wastewater operations in any of the DSM Programs, and specifically
114 the City's combined heat and power (CHP) project.

115
116 The City's concerns are based on past dealings with I&M regarding the project, the lack
117 of clarity in the proposed 2015 DSM Plan, and certain testimony given by Mr. Walter in
118 this proceeding.

119
120 Q: Have you provided a description of the City's CHP project in your previous testimony?

121
122 A: Yes.

123
124 Q: Have you previously testified regarding the energy-intensive nature of the City's
125 wastewater operations?

126
127 A: Yes.

128
129 Q: Have you also testified as to the opportunities to reduce energy consumption and electric
130 demand on I&M's system through the implementation of the City's proposed CHP
131 project?

132
133 A: Yes. There can be large reductions in energy consumption and electric demand due to the
134 improved system efficiencies experienced with on-site generation such as CHP, and at
135 the same time, natural gas usage can be reduced.

136
137 Q: Mr. Walter proposes in his rebuttal testimony that "I&M and the City work together to try
138 to identify a CHP project that qualifies for the C&I Custom" Why does this not satisfy
139 the City's concerns?

140
141 A: First, there is no commitment in the Settlement Agreement to address the City's issues.
142 Second, there is no need to try and identify a CHP project. I&M has known about the
143 City's CHP project since 2009. I have had many discussions with I&M about the project
144 and more formal contacts have been made seeking to approach the project from the
145 standpoint of a partnership with I&M.

146
147 Q: Can you describe Fort Wayne Settlement Agreement, *Exhibit 2*?

148
149 A: This is a letter from Mayor Henry dated April 17, 2013, explaining these City's
150 sustainability initiatives and describing in some detail the City's proposed CHP project.
151 In his letter, Mayor Henry expresses his belief that the City of Fort Wayne and Indiana

152 Michigan Power have an excellent opportunity to collaboratively work together on these
153 initiatives.

154
155 In response to Mayor Henry's letter, the City was referred to Marc E. Lewis, I&M's Vice
156 President for Regulatory and External Affairs. Mr. Lewis referred the City to Lee
157 Rodenbeck, I&M's Customer Services Engineer. Mr. Rodenbeck coordinated a meeting
158 between I&M's Engineering Department and someone from AEP who had experience
159 with CHP projects. There was no commitment or follow up, however, by I&M or AEP in
160 terms a partnership or collaboration in developing the project.

161
162 Q: Can you describe Fort Wayne Settlement Agreement, *Exhibit 3*?

163
164 A: This is a letter from me to Mr. Rodenbeck dated July 22, 2013, advising I&M that the
165 City had started its preliminary design of the CHP Project. The letter describes the
166 engineering parameters of the project and emphasizes the importance that the City
167 understands I&M's requirements for the project. The City's Design Team requested a
168 follow-up meeting with I&M and enclosed several electrical designs for the project.

169
170 Q: Can you describe Fort Wayne Settlement Agreement, *Exhibit 4*?

171
172 A: This is a letter dated September 5, 2013 to Kim Reeder, I&M's Manager of Energy
173 Efficiency Programs. The letter advises Mr. Reeder that the City had been referred by
174 Mr. Lewis and explains that the City was seeking a financial and technology partnership
175 with I&M regarding the CHP project. The status of the project was reported and a
176 completed application under I&M's Renewable and Demonstration Pilot Program was
177 enclosed.

178
179 Q: And, finally, can you describe Fort Wayne Settlement Agreement, *Exhibit 5*?

180
181 A: This is another letter sent to Kim Reeder dated March 19, 2014 from me. The letter
182 provides a description of the project and its engineering parameters. We advised I&M
183 that we were completing our financial evaluation and that a key component would be the
184 financial incentives available. As required by I&M's Renewable and Demonstration
185 Pilot Program, we enclosed an updated and completed application form, construction cost
186 estimates, location description and aerial photos, and the RFP for the electric generators.

187
188 Q: Did the City ever get a written response to its application?

189
190 A: No the City never received a written response. It was necessary for us to call to find out
191 the status of the application, only to discover later that the City's project was not eligible
192 under I&M's DSM programs. After all of the discussions with I&M regarding the CHP
193 project, the correspondence and the information submitted, the City had never been
194 advised that the project would not be eligible for I&M's DSM programs.

195 Q: Does the City have other concerns that its CHP initiative is not addressed in the
196 Settlement Agreement?

197

198 A: Aside from the long history of trying to get I&M to work with the City on this project
199 without success, I&M has now terminated its Renewable and Demonstration Project
200 Program. The only program for which the City might be eligible is the C&I Custom
201 program, which Mr. Walter acknowledges has historically supported only lighting
202 projects. Mr. Walter also testified that "CHP projects were not planned as potential
203 projects within the scope of the C&I Custom Program..." Again, this suggests that there
204 are going to be issues in getting the City's project considered by I&M.
205

206 Q: What would the City like to see the Commission do?
207

208 A: If the Commission is going to consider a Settlement Agreement, the City would ask the
209 Commission to:

- 210 1) Incorporate I&M's commitment to work with the City on its CHP project in the
211 Commission's Order.
- 212 2) Clarify the language in the 2015 DSM Plan to ensure that the City's CHP project
213 will be eligible for consideration under the C&I Custom Program.
- 214 3) Require I&M to begin a constructive discussion with the City regarding the
215 technical feasibility and cost-effectiveness of the City's CHP project by
216 November 15, 2014.
- 217 4) Require I&M and the City to file a Report with the Commission by March 31,
218 2015 addressing the outcome of the review of the project by I&M and the City.
219

220 Q: Is the City asking the Commission to approve its CHP project at this point?
221

222 A: No. The City only asks that the Commission require I&M to work with the City to
223 determine how CHP can be successful at wastewater treatments throughout Indiana.
224 There is tremendous potential for benefits to both electric ratepayers and city utility
225 ratepayers
226

227 Q: Does this conclude your testimony Mr. Fasick?
228

229 A: Yes it does.

VERIFICATION

230
231
232
233 I, Douglas J. Fascik, Senior Program Manager, Utilities Energy Engineering and
234 Sustainability Services for the City of Fort Wayne's City Utilities Department, affirm under
235 penalties of perjury that the foregoing representations are true and correct to the best of my
236 knowledge, information and belief.

237

238 Dated: Sept 22, 2014
239
240

Douglas J. Fascik
Douglas J. Fascik



CITY OF FORT WAYNE

THOMAS C. HENRY, MAYOR

April 17, 2013

Mr. Paul Chodak
President and Chief Operating Officer
Indiana Michigan Power Company
P.O. Box 60
Fort Wayne, IN 46801-0060

Dear Paul,

When I took office, the City of Fort Wayne was already working on several sustainability and green initiatives. From these initiatives, City Departments were able to find ways to improve their processes through innovative ideas. One successful program developed was the Green City Business. Due to the success of our Green City Business Program, the City has joined with area partners to form the Northeast Indiana Sustainable Business Council (NISBC). This is a nonprofit organization responsible for training and helping businesses become more sustainable in the 10 county region of Northeast Indiana. Thanks to all the collaborative efforts of the Council and City departments, the City of Fort Wayne won the 2011 Indiana Association of Cities and Towns Green Community of the Year Award.

The City is currently proposing two new initiatives in which I believe I&M and the City would have a common interest. First, I continue to challenge our City Utilities Engineering Department as environmental stewards, to evaluate and propose innovative ways to become more sustainable and energy neutral while providing safe and reliable water and sewer services. The department has done an excellent job of establishing cost effective benchmark goals while making significant process improvements at our Water and Wastewater facilities. These benchmarks were established through comprehensive energy audits that were conducted at both the Three Rivers Filtration Plant and Water Pollution Control Plant. Results from the audit at the Water Pollution Control Plant indicate the most attractive and cost effective process improvement is optimizing use of the methane gas produced at the facility for electrical generation and heat reclamation. Second, the City of Fort Wayne has purchased a fleet of electric vehicles for several departments and we are currently looking at installing combination parking meter/charging stations throughout the City in another effort to become a premier Green City.

With methane optimization promising to be a viable renewable energy resource, along with the combination meter/charging stations, I believe the City of Fort Wayne and Indiana Michigan Power have an excellent opportunity to collaboratively work together. I would like to discuss how these initiatives could meet the needs of your Integrated Resource Plan while helping the City expand upon its Green City program.

I have asked a member from our City Utilities Engineering staff to make arrangements with your staff to meet in the next couple of weeks to begin the collaborative effort.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas C. Henry".

Mayor Thomas Henry

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CITY OF FORT WAYNE

THOMAS C. HENRY, MAYOR

C. Lee Rodenbeck, PE
Customer Services Engineer
Indiana Michigan Power
110 E. Wayne St.
Fort Wayne, IN 46802

July 22, 2013

Ref: Combined Heat & Power (CHP) at Water Pollution Control Plant

Dear Lee,

This letter is to inform I&M that the City of Fort Wayne has started preliminary design on a Combined Heat and Power project at our Water Pollution Control Plant located at 2601 Dwenger Avenue. It is the City of Fort Wayne's intent to utilize the methane gas produced from our digestion process to supplement the Water Pollution Control Plant's heating and electrical needs. Based upon the facility's current methane production rates, we estimate our cogeneration element will be capable of producing between 700 and 800 kW so the design team is looking at either two 350 to 400 kW units or one 700 to 800 kW unit. In the future, City Utilities anticipates the cogeneration element could potentially increase between 1 MW and 2 MWs.

As we move forward with the design, it is important that City Utilities design team understand I&M's requirements, how much time I&M will need for design and construction as well as all costs associated with the implementation of the cogeneration element. Therefore, the City Utilities design team is requesting a meeting with I&M's design team to begin this process. For reference, I have enclosed a copy of two conceptual electrical designs City Utilities is considering for your team to review prior to the meeting.

If you have any questions, please feel free to give me a call.

Sincerely,

A handwritten signature in black ink, appearing to read "Douglas J. Fasick".

Douglas J Fasick, C.E.M.
Sr. Program Manager, WPC Plant Engineering and Filtration Plant Engineering
City of Fort Wayne
200 East Berry Street, Suite 250
Fort Wayne, IN 46802
260-427-5235

c: Matthew Wirtz P.E., Deputy Director, City Utilities Engineering
Zachary Schortgen P.E., Program Manager, City Utilities Engineering

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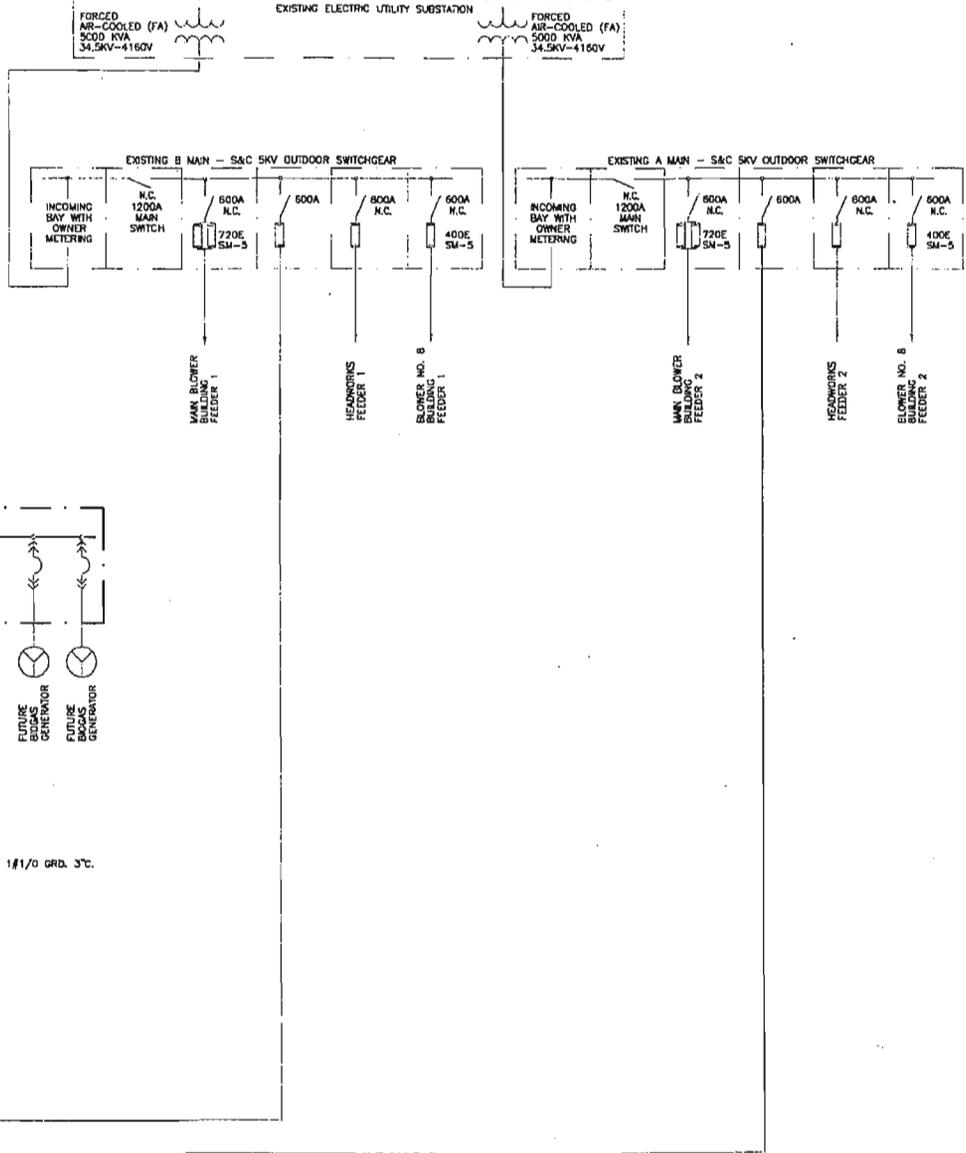
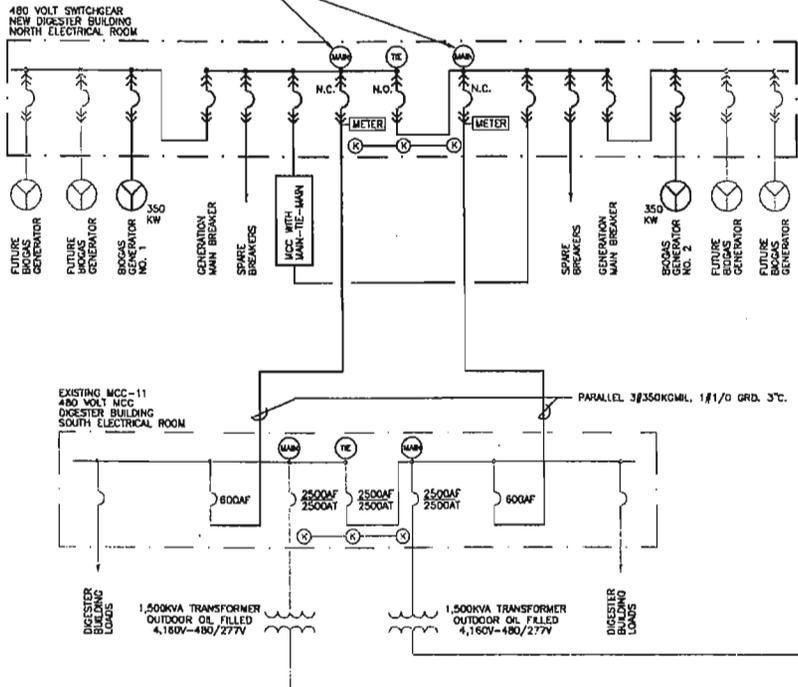
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GENERAL NOTES:

1. A 350KW GENERATOR IS THE LARGEST GENERATOR THAT EACH EXISTING 600 AMP CIRCUIT BREAKER IN EXISTING MCC-11 CAN HANDLE. IF A LARGER GENERATOR IS INSTALLED THE APPROACH BELOW WILL NOT WORK.
2. IF A GENERATOR LARGER THAN 350KW IS INSTALLED THE ELECTRICAL APPROACH IN FIGURE 1B, 2A, OR 2B WILL NEED TO BE FOLLOWED.
3. THIS APPROACH ALLOWS THE GENERATORS TO PARALLEL WITH THE SITE DISTRIBUTION SYSTEM (ELECTRIC UTILITY) AND GENERATE POWER TO OFFSET THE POWER USED BY THE SITE.
4. THE GENERATORS CAN'T FUNCTION AS STANDBY GENERATORS BECAUSE THERE ARE NO POWER OPERATED DEVICES (CIRCUIT BREAKER OR SWITCH) THAT CAN BE USED TO AUTOMATICALLY DISCONNECT FROM THE ELECTRIC UTILITY. THE TOTAL GENERATION BEING INSTALLED IS NOT LARGE ENOUGH TO PROVIDE STANDBY POWER TO THE SITE.
5. THE TWO FEEDERS FROM MCC-11 PROVIDE THE REDUNDANT POWER SOURCE NEEDED FOR THE NEW SLUDGE PUMPS POWERED FROM THE NORTH ELECTRICAL ROOM.

BOTH MAIN BREAKERS SIZED FOR FUTURE EXPANSION TO 2,200KW. POWER MONITOR ON EACH MAIN BREAKER USED TO MONITOR POWER FED TO MCC-11 TO PREVENT OVERLOADING 600 AMP BREAKERS AT MCC-11



CURRENT PROJECT FOR BIOGAS GENERATOR 350KW OR SMALLER - PARALLEL WITH UTILITY BUT NO STANDBY CAPABILITY OVERALL ONE-LINE DIAGRAM

FIGURE 1A
METHANE UTILIZATION - ENGINE GENERATORS
CITY OF FORT WAYNE
WPCP IMPROVEMENTS
FORT WAYNE, INDIANA

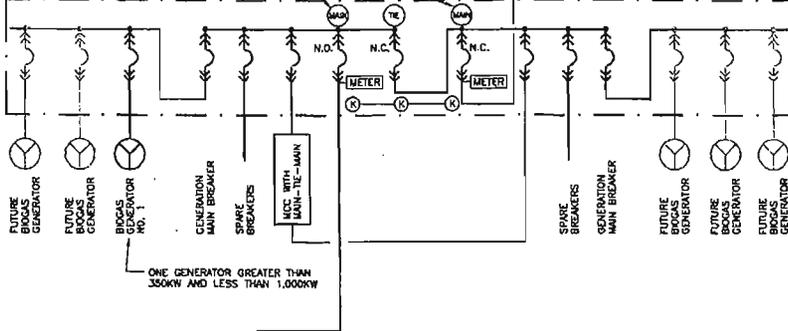


GENERAL NOTES:

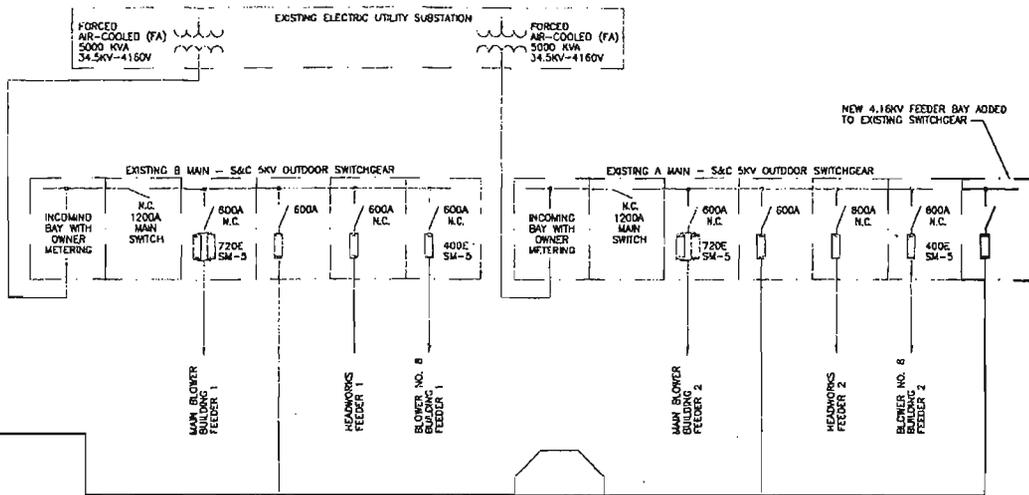
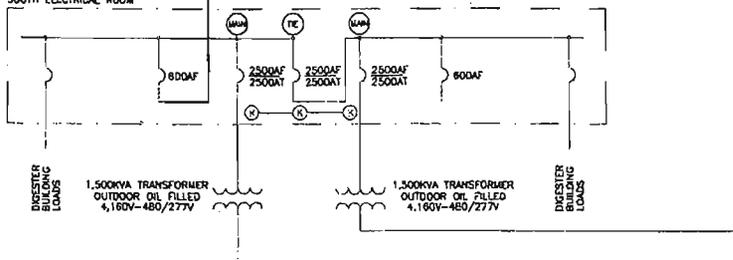
1. PROJECT FOR GENERATOR(S) LARGER THAN 350KW IF THE EXISTING MAIN 4.16KV SWITCHGEAR IS NOT REPLACED.
2. THE OIL FILLED PADMOUNT TRANSFORMER AND 4.16KV FEEDER TO THE EXISTING MAIN 4.16KV SWITCHGEAR WILL BE SIZED FOR THE FUTURE 2,200KW GENERATION SO IT CAN BE REUSED FOR THE NEXT PROJECT. ONLY THE 4.16KV FEEDER BAY ADDED TO THE EXISTING 4.16KV SWITCHGEAR WOULD NOT BE REVISED ON FUTURE PROJECTS.
3. THIS APPROACH ALLOWS THE GENERATORS TO PARALLEL WITH THE SITE DISTRIBUTION SYSTEM (ELECTRIC UTILITY) AND GENERATE POWER TO OFFSET THE POWER USED BY THE SITE.
4. THE GENERATORS CAN'T FUNCTION AS STANDBY GENERATORS BECAUSE THERE ARE NO POWER OPERATED DEVICES (CIRCUIT BREAKER OR SWITCH) THAT CAN BE USED TO AUTOMATICALLY DISCONNECT FROM THE ELECTRIC UTILITY. THE TOTAL GENERATION BEING INSTALLED IS NOT LARGE ENOUGH TO PROVIDE STANDBY POWER TO THE SITE.
5. THE 4.16KV FEEDER/480 VOLT TRANSFORMER AND THE 480 VOLT FEEDER FROM MCC-11 PROVIDE THE REDUNDANT POWER SOURCE NEEDED FOR THE NEW SLUDGE PUMPS POWERED FROM THE NORTH ELECTRICAL ROOM. THE 480 VOLT FEEDER FROM MCC-11 IS THE BACK UP FEEDER NORMALLY NOT USED BECAUSE IT CAN ONLY SUPPORT A MAXIMUM GENERATOR OF 350KW.

BOTH MAIN BREAKERS SIZED FOR FUTURE EXPANSION TO 2,200KW. POWER MONITOR ON EACH MAIN BREAKER USED TO MONITOR POWER FEO TO MCC-11 TO PREVENT OVERLOADING 800 AMP BREAKERS AT MCC-11

480 VOLT SWITCHGEAR NEW DIGESTER BUILDING NORTH ELECTRICAL ROOM



EXISTING MCC-11 480 VOLT MCC DIGESTER BUILDING SOUTH ELECTRICAL ROOM



EXISTING 4.16KV MANHOLE. THE 4.16KV FEEDERS LEAVING THE EXISTING 4.16KV SWITCHGEAR PASS THROUGH THIS MANHOLE

CURRENT PROJECT FOR BIOGAS GENERATOR LARGER THAN 350KW - PARALLEL WITH UTILITY BUT NO STANDBY CAPABILITY OVERALL ONE-LINE DIAGRAM

M/S

FIGURE 1B
METHANE UTILIZATION - ENGINE GENERATORS

CITY OF FORT WAYNE
WPCP IMPROVEMENTS
FORT WAYNE, INDIANA



MAY, 2013

1247



CITY OF FORT WAYNE

THOMAS C. HENRY, MAYOR

Kim Reeder
Manager EE & Consumer Programs
Indiana Michigan Power
P.O. Box 60
Fort Wayne, IN 46801-0060

September 5, 2013

Dear Kim,

The City of Fort Wayne is currently evaluating the economic and sustainability benefits of a Combined Heat and Power Renewable Energy Project at our wastewater facility. This evaluation is looking at our anaerobic digestion process and utilizing the methane from this process to fuel between 700 – 800 kW of generation that will be used to supplement our power needs as well as provide hot water from the heat recovery system.

In our initial conversation with Marc Lewis regarding this endeavor, City Utilities inquired about a possible financial and technology partnership with Indiana Michigan Power and the City of Fort Wayne that helps I&M meet its renewable energy portfolio and meet Mayor Henry's Sustainable City initiative. From this conversation, Mr. Lewis recommended that I get in contact with you and discuss this possible partnership.

I understand that I&M has an incentive program titled Renewable and Demonstrations Pilot Program for renewable projects such as what is being described above. Attached is a completed application form for your review. Currently, we are at 30% design and still working on the optimal design for our current methane production calculations while also considering our financial constraints.

We look forward to the opportunity for the City of Fort Wayne and Indiana Michigan Power to partner on a renewable energy project that benefits both the electric utility and the citizens of Fort Wayne. In the meantime, if you have any questions, please feel free to give me a call at 260-427-5235.

Sincerely,

A handwritten signature in black ink, appearing to read "Douglas J. Fasick".

Douglas J Fasick, C.E.M.
Sr. Program Manager City Utilities Engineering

c: Kumar Menon, Director of City Utilities, City of Fort Wayne
Matthew Wirtz, P.E., Deputy Director of Utilities City Utilities Engineering, City of Fort Wayne
Zach Schortgen, P.E., Program Manager, City Utilities Engineering, City of Fort Wayne
Marc E. Lewis, VP Regulatory and External Affairs, Indiana Michigan Power

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Indiana Michigan Power
Renewables and Demonstrations Pilot Program
Application Form

A. Customer Information

Applicant Name: City of Fort Wayne Utility Acct# 041-138-757-0-4

Company Name (if applicable) City of Fort Wayne

Address: 200 E. Berry Street

City: Fort Wayne State: IN Zip: 46802

Contact Person: Douglas J Fasick Title: Sr. Program Manager

Telephone: 260-427-5235 E-mail: doug.fasick@cityoffortwayne.org

Applicant Type: Residential Non-Residential

New Construction Existing Property

Existing Heating System N/A Steam Boiler

B. Project Information

Project Type: Solar Photovoltaic Ground Source Heat Pump Solar Hot Water LED Street Lights and type of existing lights

Other

Describe Methane fueled Combined Heat & Power (CHP) System

Project Location (if different from above): 2601 Dwenger Ave
Fort Wayne, IN 46803

Summary: (Provide a brief summary of project including capacity. Include a copy of itemized project cost estimate and attach schematic/diagram where available.)

Combined Heat & Power System utilizing methane gas produced from the anaerobic digesters at our wastewater treatment facility to generate between 700-800 kW and provide supplemental heat from heat recovery system.

The undersigned warrants, certifies and represents that 1) the Installer/Contractor has explained and provided manuals related to the system operation and maintenance to the customer (Applicant); 2) the installation will meet all requirements;

Installer Signature Printed Name Title Date

F. Program Rules and Initial Eligibility Requirements:

1. Final eligibility is based on unique questions designed to gather specific information regarding technology and custom project details.
2. Depending on technology, alternate system price quotes may be required.
3. Customer is obligated to obtain all permits and approvals for the project.
4. Provide equipment specifications, diagrams or sketches of the proposed installation.
5. For Grid connected Net-metering projects a separate application will need to be completed along with an Interconnection Agreement.
6. Customer must have an active account in the State of Indiana with Indiana Michigan Power; the location where project will be installed must be in the company's service territory.
7. Program funding is limited and available on a first-come first-served basis once project is approved.
8. Only one Renewable and Demonstrations Program application per account will be approved.
9. All projects are subject to pre and post on-site inspection.
10. Pre and post-metering of existing equipment and new equipment may be required.
11. The amount of the incentive will be determined by project type, size, and scope.
12. The recipient of program incentives assumes all responsibilities for any tax consequences resulting from payment.
13. Incentive may not exceed the total cost of the project.
14. Leased equipment is not eligible.
15. All receipts of purchased equipment will be required.
16. Previously installed projects will not be considered.
17. Applicant cannot receive multiple Utility rebates/incentives for the same project.

Name: Douglas J Fasick

Signature: _____

Title: Sr. Program Manager

Date: 9/5/13

Estimated Project Completion Date: December 2014

No equipment may be purchased prior to approval of the incentive. Has the applicant purchased any equipment for which the incentive is requested? Yes _____ No X

C. Contractor / Installer

Company Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Contact person: _____ Fax: _____

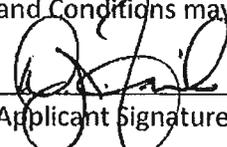
E. Terms & Conditions

As an authorized agent of the Applicant, I hereby submit this Application to Indiana Michigan Power (I&M). I understand that any false statement in this record may subject the Applicant and Signer to forfeit any rebates and or incentives. I understand that additional information may be requested. I also understand that this document in no way constitutes a commitment of an incentive by Indiana Michigan Power for this program.

I hereby represent and certify that the foregoing and attached information, to the best of my knowledge and belief, is true, complete and accurately describes the proposed project for which the financial incentive is being sought. I further agree to inform Indiana Michigan Power of any changes in the foregoing information, which may occur prior to the time the Applicant, and Indiana Michigan Power executes a Renewables and Demonstrations Pilot Program Agreement.

The source of funding for the incentive you may receive might be a factor in the determination of its tax liability. It is the responsibility of the applicant to determine the income tax consequences of accepting incentives through this program. Please consult your tax professional or the Internal Revenue Service (IRS).

The undersigned warrants, certifies and represents that: 1) the Applicant is the Customer of Record for the Indiana Michigan Power Account; and 2) the Applicant realizes that certain information in their application may be subject to the Open Public Records Act. These Terms and Conditions may be subject to change.

 Douglas J. Fasick, Sr. Program Manager 9/5/13
Applicant Signature Printed Name Title Date



CITY OF FORT WAYNE

THOMAS O'HEARN, MAYOR

Kim Reeder
Manager EE & Consumer Programs
Indiana Michigan Power
P.O. Box 60
Fort Wayne, IN 46801-0060

March 19, 2014

REF: Combined Heat & Power Project at City of Fort Wayne's Water Pollution Control Plant

Dear Kim,

The City of Fort Wayne is currently conducting a financial evaluation on a Combined Heat & Power (CHP) project at our Water Pollution Control Plant. This project will look at utilizing our methane gas produced from the anaerobic digestion process to produce supplemental power for the plant as well as provide heat recovery. Based upon existing methane gas production, the design calculations demonstrate the plant's ability to generate between 700 kW and 800 kW of electricity and 1.4 MMBtu/hr of recoverable heat. Therefore, we are evaluating the initial implementation of two dual fueled (methane gas/natural gas) 400 kW generators that will be operational between 90% and 95% of the available hours per year. Upon request, we can provide supporting documentation associated with gas production, efficiencies, and gas quality.

Per the Renewables and Demonstrations Pilot Program requirements, I have enclosed the following items for your review:

1. Indiana Michigan Power Renewables and Demonstrations Pilot Program Application Form
2. Summary Construction Cost Estimate
3. Construction Cost Estimate
 - a. Methane Compression System Improvements
 - b. Methane Utilization – Phase 1
4. Project Location Plan Aerial
5. Request for Proposal (RFP-008) – Dual Gas-Fueled Engine Generators

The Methane Utilization – Phase 1 is the CHP element of this project. For this element, we solicited several bio-gas/natural gas – dual fuel generator manufacturers using the request for proposal (RFP) process. The RFP is being evaluated on the basis of performance, qualifications and cost of ownership that also includes the following considerations:

1. Operationally reliable;
2. Easy to operate;
3. Easy to isolate for maintenance;
4. Durable within the specific gas quality parameters; and
5. Expandable

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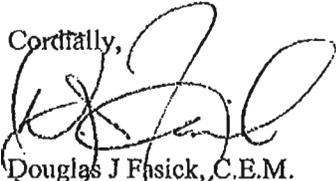
CITIZENS SQUARE

200 E. Berry St. • Fort Wayne, Indiana • 46802 • www.cityoffortwayne.org
An Equal Opportunity Employer

This solicitation process is currently underway and therefore quotes remain confidential and are not included in this packet due to the sensitivity to the competing vendors. If additional information is needed, please let me know.

A key financial component to our evaluation will also include any financial incentives or energy credits available to off-set the capital costs for this project. I believe the City of Fort Wayne and I&M has an excellent opportunity to collaborate and showcase a renewable and sustainable technology for the community. I look forward to the opportunity to discuss this project with you further. If you have any questions, please give me a call.

Cordially,



Douglas J Fhsick, C.E.M.

Sr. Program Manager WPC Plant Engineering and Filtration Plant Engineering
City of Fort Wayne
200 E. Berry Street, Suite 250
Fort Wayne, IN 46802
260-427-5235 office

c: Matthew Wirtz, P.E., Deputy Director of City Utilities
Zachary Schortgen, P.E., Program Manager City Utilities Engineering

**Indiana Michigan Power
Renewables and Demonstrations Pilot Program
Application Form**

A. Customer Information

Applicant Name: Douglas J Fasick Utility Acct# 041-138-757-0-4

Company Name (if applicable) City of Fort Wayne - City Utilities

Address: 200 E. Berry Street, Suite 250

City: Fort Wayne State: IN Zip: 46802

Contact Person: Doug Fasick Title: Sr. Program Manager

Telephone: 260-427-5235 E-mail: doug.fasick@cityoffortwayne.org

Applicant Type: Residential Non-Residential

New Construction Existing Property

Existing Heating System Natural Gas Boiler - Steam

B. Project Information

Project Type: Solar Photovoltaic Ground Source Heat Pump Solar Hot
Water LED Street Lights and type of existing lights
Other

Describe Renewable - 800 kW of Methane Gas Driven Generators with Heat Recovery

Project Location (if different from above): 2601 Dwenger Ave., Fort Wayne, IN 46803

Summary: (Provide a brief summary of project including capacity. Include a copy of itemized project cost estimate and attach schematic/diagram where available.)

Installation of two (2) - 400 kW Methane Gas Driven Generators and Heat Recovery System at the Water Pollution Control Plant (Wastewater). See attached for details.

Estimated Project Completion Date: December 2015

No equipment may be purchased prior to approval of the incentive. Has the applicant purchased any equipment for which the incentive is requested? Yes _____ No X

C. Contractor / Installer

Company Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Contact person: _____ Fax: _____

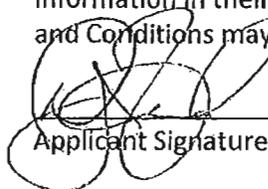
E. Terms & Conditions

As an authorized agent of the Applicant, I hereby submit this Application to Indiana Michigan Power (I&M). I understand that any false statement in this record may subject the Applicant and Signer to forfeit any rebates and or incentives. I understand that additional information may be requested. I also understand that this document in no way constitutes a commitment of an incentive by Indiana Michigan Power for this program.

I hereby represent and certify that the foregoing and attached information, to the best of my knowledge and belief, is true, complete and accurately describes the proposed project for which the financial incentive is being sought. I further agree to inform Indiana Michigan Power of any changes in the foregoing information, which may occur prior to the time the Applicant, and Indiana Michigan Power executes a Renewables and Demonstrations Pilot Program Agreement.

The source of funding for the incentive you may receive might be a factor in the determination of its tax liability. It is the responsibility of the applicant to determine the income tax consequences of accepting incentives through this program. Please consult your tax professional or the Internal Revenue Service (IRS).

The undersigned warrants, certifies and represents that: 1) the Applicant is the Customer of Record for the Indiana Michigan Power Account; and 2) the Applicant realizes that certain information in their application may be subject to the Open Public Records Act. These Terms and Conditions may be subject to change.

 Douglas J. Fasick, Sr. Program Mgr. 3/19/14
Applicant Signature Printed Name Title Date

The undersigned warrants, certifies and represents that 1) the Installer/Contractor has explained and provided manuals related to the system operation and maintenance to the customer (Applicant); 2) the installation will meet all requirements;

Installer Signature Printed Name Title Date

F. Program Rules and Initial Eligibility Requirements:

1. Final eligibility is based on unique questions designed to gather specific information regarding technology and custom project details.
2. Depending on technology, alternate system price quotes may be required.
3. Customer is obligated to obtain all permits and approvals for the project.
4. Provide equipment specifications, diagrams or sketches of the proposed installation.
5. For Grid connected Net-metering projects a separate application will need to be completed along with an Interconnection Agreement.
6. Customer must have an active account in the State of Indiana with Indiana Michigan Power; the location where project will be installed must be in the company's service territory.
7. Program funding is limited and available on a first-come first-served basis once project is approved.
8. Only one Renewable and Demonstrations Program application per account will be approved.
9. All projects are subject to pre and post on-site inspection.
10. Pre and post-metering of existing equipment and new equipment may be required.
11. The amount of the incentive will be determined by project type, size, and scope.
12. The recipient of program Incentives assumes all responsibilities for any tax consequences resulting from payment.
13. Incentive may not exceed the total cost of the project.
14. Leased equipment is not eligible.
15. All receipts of purchased equipment will be required.
16. Previously installed projects will not be considered.
17. Applicant cannot receive multiple Utility rebates/Incentives for the same project.

Name: Douglas J. Fasick

Signature: _____

Title: Sr. Program Mgr.

Date: _____

3/19/14

CITY OF FORT WAYNE
WPCP IMPROVEMENTS
Fort Wayne, IN

SUMMARY

CONSTRUCTION COST ESTIMATE

ITEM	w/o Subcontractor Markup (\$)	Construction Price (\$)	Construction Contingency (\$)	Const Price + Const Contingency (\$)	Owner's Allowance (\$)	Incentive Allowance (\$)	Provider's Fees (\$)	Maximum Price (\$)
CEPT	239,500	275,425	82,628	358,053	17,903	1	53,708	429,664
WPCP FLOODWALL	1,259,000	1,447,850	434,355	1,882,205	94,110	2	282,331	2,258,648
SECONDARY CLARIFIER HYDRAULIC IMPROVEMENTS	1,176,390	1,352,849	270,570	1,623,418	81,171	3	243,513	1,948,105
DIGESTER #5 IMPROVEMENTS	2,082,503	2,394,878	359,232	2,754,110	137,706	4	413,117	3,304,936
AERATION BASIN CONCRETE REPAIR	1,200,000	1,380,000	138,000	1,518,000	75,900	5	227,700	1,821,605
WEST DIGESTER COMPLEX IMPROVEMENTS	3,947,796	4,539,965	1,134,991	5,674,956	283,748	6	851,243	6,809,953
DIGESTED SLUDGE PUMPING STATION AND FORCE MAIN	8,790,220	10,108,752	2,144,872	12,253,624	612,681	7	1,838,044	14,704,356
WAS THICKENING IMPROVEMENTS	2,013,680	2,315,732	694,720	3,010,452	150,523	8	451,568	3,612,550
METHANE COMPRESSION SYSTEM IMPROVEMENTS	267,000	307,050	122,820	429,870	21,494	9	64,461	515,853
METHANE UTILIZATION PHASE 1	3,421,000	3,934,150	1,180,245	5,114,395	255,720	10	767,159	6,137,284
TOTAL	24,397,088	28,056,651	6,562,432	34,619,083	1,730,954	55	5,192,862	41,542,954

(EXHIBIT 5, Page 6)

CITY OF FORT WAYNE
WPCP IMPROVEMENTS
Fort Wayne, IN

METHANE COMPRESSION SYSTEM IMPROVEMENTS

CONSTRUCTION COST ESTIMATE

General Description

ITEM	Units	Quantity	Unit Cost (\$)	Cost (\$)
Architectural/Structural				
Earthwork	See Worksheet for Detailed Cost Breakdown			0
Concrete	See Worksheet for Detailed Cost Breakdown			0
Metals	See Worksheet for Detailed Cost Breakdown			0
Buildings	See Worksheet for Detailed Cost Breakdown			0
Demolition	See Worksheet for Detailed Cost Breakdown			0
Sitework				
Process-Mechanical				
Gas Compressors	Each	2	100,000	200,000
Miscellaneous Gas Piping	Lump Sum	2	3,500	7,000
Removals	Lump Sum	1	3,000	3,000
HVAC/Plumbing				
Electrical				
	Lump Sum	1	30,000	30,000
Instrumentation & Control				
	Lump Sum	1	27,000	27,000
Subtotal w/o Subcontractor O&P				267,000
Subcontractor O&P				15% 40,050
Construction Price				307,050
Construction Contingency				40% 122,820
Subtotal Const Price + Const Contingency				429,870
Owner's Allowance				5% 21,494
Schedule Incentive Allowance				9
Total of Provider's Fees				15% 64,481
Guaranteed Maximum Price				515,853

CITY OF FORT WAYNE
WPCP IMPROVEMENTS
Fort Wayne, IN

METHANE COMPRESSION SYSTEM IMPROVEMENTS

ARCHITECTURAL/STRUCTURAL WORKSHEET

ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum			
Earthwork: Excavation	cu yds			
Earthwork: Underdrain System	sq yds			
Earthwork: Pile Foundation	ft			
Earthwork: Flood Protection Levee	cu yds			
Earthwork: Flood Protection Gravel Road	sq yds			
<u>Earthwork:</u>				
Earthwork				0
Concrete: Footings	cu yds			
Concrete: Base Slab	cu yds			
Concrete: Walls	cu yds			
Concrete: Floor Slabs	cu yds			
Concrete: Structural Slabs	cu yds			
Concrete: Columns	cu yds			
Concrete: Channels	cu yds			
Concrete: Precast Roof	ft			
<u>Concrete</u>				
Concrete				0
Metals: Aluminum Grating	sq ft			
Metals: Aluminum Handrail	ft			
Metals: Aluminum Stairway	risers			
Metals: Baffles and Weirs	sq ft			
<u>Metals:</u>				
Metals				0
Building:	sq ft			
Building:	sq ft			
Building:	sq ft			
Building:	sq ft			
Building:	sq ft			
Building:	sq ft			
<u>Buildings</u>				
Buildings				0
Demolition:	cu ft			
Demolition:	cu ft			
Demolition:	lump sum			
Demolition:	lump sum			
<u>Demolition</u>				
Demolition				0

CITY OF FORT WAYNE
WPCP IMPROVEMENTS
Fort Wayne, IN

METHANE UTILIZATION PHASE 1

CONSTRUCTION COST ESTIMATE

General Description

Installation of four 200-kW microturbines with heat recovery. Indoor installed gas conditioning system capable of treating 280-scfm of biogas, with two replaceable media H2S removal vessels, six replaceable media siloxane vessels, and two gas skids. Each skid designed for 140-cfm, complete with compressor for 90-psig discharge, filtration and moisture removal

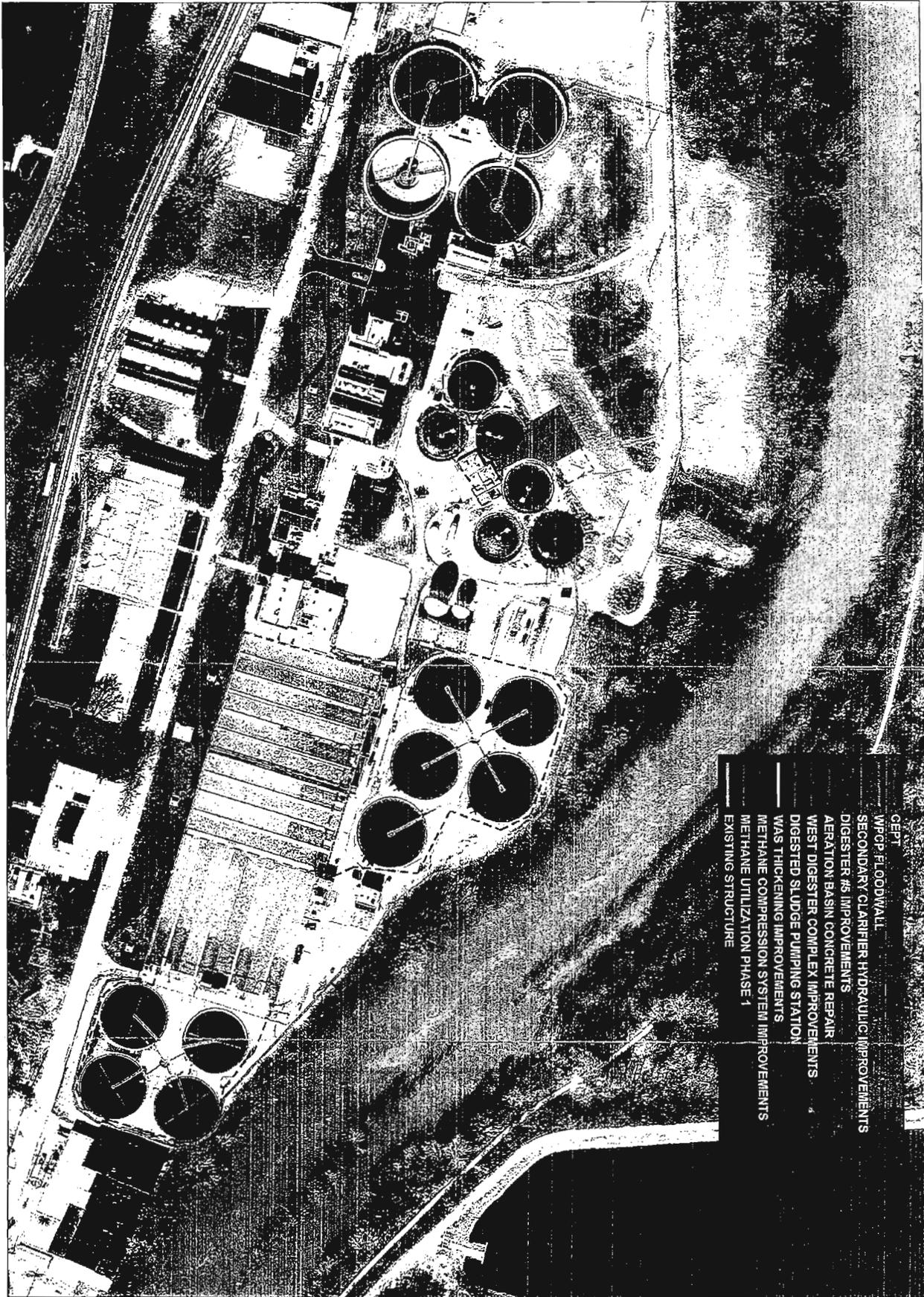
ITEM	Units	Quantity	Unit Cost (\$)	Cost (\$)
Architectural/Structural				
Earthwork	See Worksheet for Detailed Cost Breakdown			0
Concrete	See Worksheet for Detailed Cost Breakdown			0
Metals	See Worksheet for Detailed Cost Breakdown			0
Buildings	See Worksheet for Detailed Cost Breakdown			0
Demolition	See Worksheet for Detailed Cost Breakdown			0
Sitework				
Item	Each			
Process-Mechanical				
MicroTurbine W/ Heat Recovery	Each	4	395,000	1,580,000
H2S Removal	Lump Sum	1	320,000	320,000
Siloxane Removal	Each	6	32,000	192,000
Digester Gas Piping	Lump Sum	1	100,000	100,000
Gas Handling Skid	Each	2	320,000	640,000
Heat Recovery Piping	Each	4	32,000	128,000
Heat Recovery Pump	Each	8	6,000	48,000
Heat Exchanger	Each	4	7,000	28,000
Gas Handling Auto Drip Traps	Each	4	8,000	32,000
Gas Handling Auto Drip Trap Control Panel	Each	1	20,000	20,000
Electrical				
Distribution	Lump Sum	1	225,000	225,000
Instrumentation & Control				
	Lump Sum	1	108,000	108,000
Subtotal w/o Subcontractor O&P				3,421,000
Subcontractor O&P			15%	513,150
Construction Price				3,934,150
Construction Contingency			30%	1,180,245
Subtotal Const Price + Const Contingency				5,114,395
Owner's Allowance			5%	255,720
Schedule Incentive Allowance				10
Total of Provider's Fees			15%	767,159
Guaranteed Maximum Price				6,137,284

CITY OF FORT WAYNE
WPCP IMPROVEMENTS
Fort Wayne, IN

METHANE UTILIZATION PHASE 1

ARCHITECTURAL/STRUCTURAL WORKSHEET

ITEM	Units	Quantity	Unit Cost (\$)	Initial Cost (\$)
Earthwork: Dewatering	lump sum			
Earthwork: Excavation	cu yds			
Earthwork: Underdrain System	sq yds			
Earthwork: Pile Foundation	ft			
Earthwork: Flood Protection Levee	cu yds			
Earthwork: Flood Protection Gravel Road	sq yds			
Earthwork:				
Earthwork				0
Concrete: Footings	cu yds			
Concrete: Base Slab	cu yds			
Concrete: Walls	cu yds			
Concrete: Floor Slabs	cu yds			
Concrete: Structural Slabs	cu yds			
Concrete: Columns	cu yds			
Concrete: Channels	cu yds			
Concrete: Precast Roof	ft			
Concrete				0
Metals: Aluminum Grating	sq ft			
Metals: Aluminum Handrail	ft			
Metals: Aluminum Stairway	risers			
Metals: Baffles and Weirs	sq ft			
Metals:				
Metals				0
Building:	sq ft			
Building:	sq ft			
Building:	sq ft			
Building:	sq ft			
Building:	sq ft			
Building:	sq ft			
Buildings				0
Demolition:	cu ft			
Demolition:	cu ft			
Demolition:	lump sum			
Demolition:	lump sum			
Demolition				0



- DEPT. FLOODWALL
- WPCP IMPROVEMENTS
- SECONDARY CLARIFIER HYDRAULICS IMPROVEMENTS
- DIGESTER #5 IMPROVEMENTS
- AERATION BASIN CONCRETE REPAIR
- WEST DIGESTER COMPLEX IMPROVEMENTS
- DIGESTED SLUDGE PUMPING STATION
- WAS THICKENING IMPROVEMENTS
- METHANE COMPRESSION SYSTEM IMPROVEMENTS
- METHANE UTILIZATION PHASE 1
- EXISTING STRUCTURE



PROJECT LOCATION PLAN

CITY OF FORT WAYNE
WPCP IMPROVEMENTS

FORT WAYNE, INDIANA

12321

NOVEMBER, 2012



CITY OF FORT WAYNE, IN
WPCP PRIMARY/SECONDARY TREATMENT
AND DIGESTER UPGRADES

REQUEST FOR PROPOSAL (RFP-008)

DUAL GAS-FUELED ENGINE GENERATORS

A. General Information

Fort Wayne City Utilities ("FWCU") has entered into a Guaranteed Savings Contract with Kokosing Construction Company ("KCC") in accordance with Indiana Code 36-1-12.5. Accordingly, Kokosing is the Provider and General Contractor of the Project and is soliciting proposals for the RFP-008.

Bidding Documents

Bidder is responsible for verifying the content of the ShareFile documentation located at the following address: <https://kokosing.sharefile.com/i/ida3187b6b3e43689>. Pertinent items associated with this bid package are located within the "Instruction to Bidders" folder.

Kokosing reserves the right to (a) cancel, postpone or extend the RFP without incurring any obligations or liabilities; (b) issue a revision or new RFP at any time prior submittal date; (c) reject or disqualify any submitted quotation; (d) accept, review and request qualification to any submitted qualification; (e) suspend or terminate the RFP process at any time for any reason.

B. Summary of Work

The RFP is for the furnishing of Dual Gas-Fueled Engine Generators, which generally includes the following:

- o Internal Combustion Engines
- o Outdoor Enclosures
- o Heat Exchangers
- o Heat Recovery and Jacket Water Piping and Pumps
- o Gas Piping/Gas Train
- o Radiators
- o Control System
- o Accessories

The selection of the Engine Generator supplier (Supplier) will be by the FWCU on the basis of performance, qualifications and cost of ownership as indicated through the response to this RFP. The goal of the work is to provide the first phase of a co-generation system that will convert digester and natural gas to electricity for use in



operation of Water Pollution Control Plant (WPCP) processes. A successful co-generation system will be:

- operationally reliable,
- easy to operate;
- easy to isolate for maintenance;
- durable within the specific gas quality parameters; and
- expandable.

C. Basis of Design

FWCU is committed to utilizing the energy resource that is produced through the anaerobic digestion process to offset natural gas and electricity usage and move to a more sustainable energy solution. Currently, digester gas is used for digester heating to offset natural gas usage. Gas in excess of that needed for digester heating is flared.

As part of this project, the digester feed and withdraw processes are being changed from a batch feed to a continuous feed process to improve the stability of the digestion process and provide for sustained, high quality gas production. Additionally, the Fort Wayne Water Pollution Control Plant accepts High Strength Wastes (HSW) that directly feeds into the anaerobic digestion process. The supply of the HSW is projected to increase in future years, increasing the quantity of digester gas produced.

The goal of this project is to optimize the conversion of digester gas to electricity for use in the operation of the Digester Complex initially with the flexibility for expansion as gas generation increases. The basis of design is nominal 700-kW, shown as installed as two 350-kW generator units. Systems that provide less than the design capacity may result in the continued wasting of digester gas while systems that provide more than design capacity may not be operated at full capacity. The Dual Gas-Fueled Engine Generators shall have the capability of running on either digester gas or natural gas. These units will be provided as packaged systems, residing within dedicated outdoor enclosures. Waste heat from the engine jacket and the exhaust flow stream will be recovered and added to the Plant primary heating water loop by means of a heat recovery heat exchanger and heat recovery pump for each unit. The Engine Generators shall be provided with radiators to reject any heat that is not usable by the Plant heating system.

To protect the Engine Generators from impurities found within digester gas, a gas conditioning system will serve the engines, and will be provided separate from this RFP. The anticipated gas conditioning system will remove hydrogen sulfide, siloxanes, and moisture. Digester gas pressure will be boosted to the required minimum pressure for the Engine Generators.

Due to the proposed engines capability to burn diesel fuel, these engines will be affected facilities under 40 CFR 60, Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines). In order to comply with this



subpart, engine manufacturers are required to provide engines that comply with Tier II air emission standards for non-road engines. Specific emission limits are dependent upon engine operating parameters and therefore, must be determined after engine design. Pollutants that may be regulated include, but are not limited to, NMOC + NOx, CO, and PM.

D. Engine Generator Minimum Requirements

1. Each Engine Generator shall have the capability to be operated in the range of 50% to 100% load based upon the availability of digester gas; each Engine Generator shall have full operational load (50% - 100%) on natural gas when availability of digester gas does not allow a 50% operational load. Two separate fuel trains shall be provided, meeting the requirements of NFPA 37.
 - a. If Proposer's Engine Generator cannot meet the 50% load minimum operating range listed above, Proposer shall indicate their proposed operating range in their Proposal.
2. Each Engine Generator shall be housed in a separate 8'x40' ISO container for sound attenuation and be furnished with dump radiators located on top of the enclosure to control the temperature of the return cooling water to the engine. The skid-mounted enclosure (non-classified rated area) shall include all access doors required to allow complete removal of the largest component, and also include all required internal lighting, heating, cooling, actuated louver ventilation required for outdoor operation of the Engine Generators at ambient temperatures between -4 and +95 degrees Fahrenheit.
3. The Engine Generators shall be configured to generate power in parallel with the Owner's existing wastewater treatment plant electrical grid system.
4. Each system shall include starting components including 24V battery system within the enclosure.
5. Each system shall include auto lube oil replenishing system.
6. Fully piped jacket water and intercooler piping systems, pump, expansion tanks and controls. If radiators are shipped loose for field installation, prefabricated piping spools shall be provided to allow for field installation of the radiators on top of enclosures.
7. Jacket water system shall recover heat from the engine jacket, first stage intercooler and engine exhaust stream. Heat will be transferred to Owners heating systems through a remote mounted heat exchanger, furnished with the Engine Generator. Supplier shall provide pump and expansion tank sized to account for the additional system head loss and volume.
8. Exhaust system shall include a minimum residential grade silencer. All exhaust piping internal to the enclosure shall be insulated by the Supplier.
9. Provide flexible connectors for each unit piping connection.
10. Provide any specialty tools required for maintenance of unit.



11. Enclosure electrical systems shall include the following minimum components:

- a. Stored energy, fix mount type generator paralleling breaker, sized to match generator capacity.
- b. Engine electronic ignition system.
- c. Starters and means of power disconnect for every enclosure system load powered from enclosure, including: radiators, controls, pumps, fans and heaters.
- d. Grid monitoring device capable of immediate disconnection of generator from grid in case of grid failure.
- e. Inter-tie Utility Protective Relay, suitable to meet IEEE 1547 with settings required by local Utility company, mounted and wired on panel face.

12. Controls:

- a. Dedicated Engine Generator control panel with color touch screen LCD.
- b. PLC based with following minimum functions:
 - i. Engine protection devices and controls.
 - ii. Engine monitoring.
 - iii. Generator monitoring.
 - iv. Synchronizer monitoring.
 - v. Process variable monitoring.
- c. Manual-Off-Automatic mode switch where Manual allows local start-stop and percent output adjustment and Automatic allows for remote unit control.
- d. Minimum hard-wired interface:
 - i. Normally open "Ready for Automatic Start"
 - ii. Nonnally open "Engine Running".
 - iii. Nonnally closed "Engine Shutdown".
 - iv. Normally closed "Engine Warning".
 - v. Relay input "Engine Required".
 - vi. Relay input "Fuel Type", closed contact indicates natural gas.
 - vii. Analog iuput "Percent Output" command.
- e. Controller shall be capable of transmitting all data points to the Plant PLC through Ethernet IP communication protocol.

13. Tests:

- a. Engine shall be factory bench tested by engine Manufacturer on natural gas and test certificate submitted after completion of test.



- b. Generator shall be factory tested by generator Manufacturer.
 - c. Engine Generator System shall be tested at Supplier's facilities on natural gas prior to shipment. Testing shall be at 50%, 75% and 100% load. Owner retains right to observe testing.
14. Supplier shall include the following minimum onsite workdays by an authorized service individual, excluding travel time:
- a. 5 workdays for Installation and Startup Services. (1 trip)
 - b. 3 workdays for Instructional Services. (1 trip)
 - c. 2 workdays for Post-Startup Services. (2 trips)
15. The performance ratings for each Engine Generator shall be as follows:

Parameter	Units	Value
Continuous rating	kW	350 nominal. No greater than 400-kW
Voltage	--	480V/3-phase/60-Hz
Thermal Power	%	Minimum 40% of energy input (HHV)
Speed	RPM	1800
Electrical Efficiency Generator	%	95.0
Flow and Return Temperatures	°F	185/170

EXHIBIT 5, Page 16

E. Gas Quality

The Engine Generator proposal and operation and maintenance information submitted shall be based on "Base Gas Conditions" identified below:

1. SITE INFORMATION
 - a. Minimum Ambient Temperature -4°F
 - b. Maximum Ambient Temperature 95°F
 - c. Site Elevation 850' AMSL
2. BASE GAS CONDITIONS TO ENGINE GENERATORS
 - a. Low Heating Value 585 BTU/ft³
 - 1) Engine shall be capable of operation down to 540 BTU/ft³
 - b. Discharge Gas Pressure 1-5 psig
 - c. Discharge Gas Temperature 80°F
 - d. Dew Point Temperature 40°F
 - e. Maximum Hydrogen Sulfide <50 ppmv
 - f. Maximum Siloxane <100 ppbv
 - g. Particulate Removal 99% removal of >3 micron



F. Proposal Content

Proposals shall be formatted and include the following information as shown below.

Proposal Section	Description	Remarks
1	<p>Submit general details for layout, operation and performance of the Engine Generators and all enclosure system components.</p> <p>Provide general product information, weights, field installation requirements and amounts (for example welding, equipment pads), system flow sheets indicating all operating flows, pressures and temperatures, PIDs depicting all control components, shop and field painting requirements, and other information.</p> <p>Provide maximum air emission rates for all Tier II pollutants.</p> <p>Provide applicable assembly information.</p>	<p>Quality and continuity of overall system will be evaluated.</p> <p>Performance of the engine generator versus the optimal engine generator performance will be evaluated.</p> <p>Air emission rates will be evaluated for the requirement of an air permit.</p>
2	<p>Submit general details for the O&M for the Engine Generators. For all components for the Engine Generators provide:</p> <ul style="list-style-type: none"> • Recommended Maintenance schedule • First scheduled minor rebuild, rebuild costs, typical time required for rebuild, typical location for rebuild • First scheduled major rebuild, rebuild costs, typical time required for rebuild, typical location for rebuild <p>Provide general information on how many times the Engine should be rebuilt before being replaced.</p>	<p>Quality and level of effort of overall Engine Generator system will be evaluated.</p> <p>Life expectancy versus optimal life expectancy at</p>

(EXHIBIT 5, Page 17)



(EXHIBIT 5, Page 18)

Proposal Section	Description	Remarks
	<p>Provide an estimate of the life expectancy in terms of hours at 1,800 RPM. Provide information on the change in expected life at higher / lower RPM.</p> <p>Provide information on parts and service including:</p> <ul style="list-style-type: none"> • Guaranteed response times • Hands-on parts • Parts agreements • Location of service staff <p>Provide recommendation of minimum spare parts and a cost proposal for the recommended minimum</p>	<p>ideal and project RPM will be evaluated.</p> <p>Accessibility to manufacturer service staff and parts, lead times on parts will be evaluated.</p>
3	<p>Submit general details and recommendations for the daily operation of the Engine Generators. At a minimum, the following shall be addressed:</p> <ul style="list-style-type: none"> • Approach to switching between gas sources • Consequences of variation in gas quality 	Operability will be evaluated
4	<p>Price Proposal (Quotation) including breakdown (estimated payments) for shop drawings approval, delivery, on-site inspection and training, and O&M Manuals.</p> <p>Price Proposal (Quotation) for maintenance service agreement through the first major rebuild. Include the preventative maintenance and provide a maintenance schedule.</p>	<p>Include lump sum price with breakdown as shown; FOB delivered to site.</p> <p>List any price increase or decrease for any suggested options, exceptions, or clarifications to the specifications.</p> <p>KCC will estimate the cost to assemble and install systems to assess final completed and installed cost to project.</p>
5	List and describe any exceptions and/or clarifications to the preliminary	FWCU will collaborate with the KCC determine if any



(EXHIBIT 5, Page 19)

Proposal Section	Description	Remarks
	specifications, schedule, or other terms and conditions.	exceptions and/or clarifications are acceptable.
6	Provide a schedule showing the submittal of shop drawings, delivery of equipment and delivery of training and O&M. Provide a commitment statement relative to the schedule. Will the manufacturer be willing to proceed with Shop Drawing development based on having a letter of intent/notice of award issued prior to a formal purchase order being executed?	KCC has the right to negotiate incentives and/or liquidated damages for manufacturer meeting schedule.
7	Addendum Acknowledgement	Statement noting receipt of any issued addendum
8	Provide qualifications, listing installations using the proposed products on comparable size systems. Provide a detailed project description for at least three projects of similar scope and scale that have been in service for one (1) year or longer. Include reference contact information.	
9	Provide specifications complete with data necessary to specify the proposed Engine Generators.	

Proposals must reference any addenda if applicable.

G. Proposal Schedule

The following schedule shall govern the proposal, procurement, and delivery by the end of business each day, unless noted otherwise.

Item	Description	Date
1	RFP sent to qualified manufactures	12/20/13
2	Prebid meeting	NA
3	Final questions due date	1/10/14
3	Quotations due by 2:00 pm	1/17/14



H. Documents referenced to the RFP

1. Request for Proposal
2. Process & Instrumentation Diagrams (P&IDs) version/dated Dec 9, 2013-
reference Drawings:
 - a. 0008-I-1
 - b. 0009-N-8
 - c. 0009-N-12
 - d. 0009-N-13
 - e. 0009-N-16
 - f. 0009-N-18
3. Volume 4 Drawings (60% Submittal) – reference Drawings:
 - a. 0007-E-1
 - b. 0007-E-2
 - c. 1050-S-7.1
 - d. 1050-S-26
 - e. 1050-M-2
 - f. 1050-M-5
 - g. 1050-M-7
 - h. 1050-M-12
4. WPCP Primary / Secondary Treatment and Digester Process Upgrades 30%
Design Basis Report (Sept, 2013)

J. Contact Information

Bidding firms are encouraged to contact Austin Demberger, Project Engineer, Kokosing Construction Co. at Tel. (260) 420-8001 or Email: asd@kokosing.biz to discuss the proposal. In addition, site visits are encouraged.

Bidding firms shall submit electronic copies of quotation to Jeff Hollback, Lead Estimator, Kokosing Construction Co. jrh@kokosing.biz by the date and time as noted in the schedule above.



RFQ – INTENTION TO BID ACKNOWLEDGEMENT

**RETURN THIS DOCUMENT COMPLETED BY E-MAIL NO LATER THAN
1/6/14 OR EARLIER IF POSSIBLE.**

**SUBJECT PROJECT: FORT WAYNE WPCP, PRIMARY/SECONDARY TREATMENT
AND DIGESTER UPGRADES**

BID PACKAGE:

Company: _____

Authorized Signature: _____

Print Name: _____

Print Title: _____

Date: _____

**Please indicate below if your firm intends to submit a bid for the above named
RFQ.**

- Yes, we intend to submit a bid for the above named RFQ.
 No, we DO NOT intend to submit a bid for the above named RFQ.

**Please return a completed copy of this acknowledgement receipt by 1/6/14 to the
attention of:**

**Kokosing Construction Company, Inc.
Attn: Joanne R. Bradtmueller
Subject: Ft. Wayne RFP-008 Acknowledgement
Fax: 260-420-8001 or Email: jrb3@kokosing.biz**

(EXHIBIT 5, Page 21)