



FY 2020 Dec. 2 EIAF Renewable/Clean Energy Implementation Grant Application

Local Government/Organization: [Erie, Town of](#)

Status: [Submitted](#)

Filed On: [2019-11-29T12:24:44](#)

Filed By: [TFESSENDEN](#)

Reviewed On:

Reviewed By:

Reviewer Notes:

Application Overview



You are Required to Work with your Regional Manager prior to Completing an Application

Renewable and Clean Energy Challenge Implementation Grant Application

DOLA will support efforts by local governments to implement demonstration projects that will move recipient communities towards 100% renewable energy by 2040. In an effort to make the most impact with these dollars, an emphasis will be placed on funding large scale demonstration projects statewide that will serve as models for future projects throughout the state. There will be no cap on the amount of funds an applicant can request. As with other capital construction projects, applicants are required to match grant funds on a dollar-for-dollar basis. In cases where the applicant's financial condition does not permit a 50/50 match, a minimum match of 25% is required.

A. APPLICANT/CONTACT INFORMATION



1. Local Government/Organization: [Erie, Town of](#)

In the case of a multi-jurisdictional application, select the other participating eligible organizations:

2. Principal Representative:

(In the case of a multi-jurisdictional application, principal representative of the lead organization.)

Honorific:

First Name: [Todd](#)

Middle Name:

Last Name: [Fessenden](#)

Suffix:

Role: [Program Manager/Primary Contact](#)

Mailing Address: [PO 750](#)

Address 2:

City: [Erie](#)

State: [CO](#)

Zip Code: [80516](#)

Phone #: [303-926-2870](#)

Email Address: tfessenden@erieco.gov

3. Responsible Administrator (will receive all mailings) for the Application:

Honorific:

First Name: [Wendi](#)

Middle Name:

Last Name: [Palmer](#)

Suffix:

Role: [Sub-Administrator](#)

Mailing Address: [PO 750](#)

Address 2:

City: [Erie](#)

State: [CO](#)

Zip Code: [80516](#)

Phone #: [303-926-2875](#)

Email Address: wpalmer@erieco.gov

B. CHIEF ELECTED OFFICIAL INFORMATION



Please provide contact information for the chief elected official.

a. Name

In the case of a multi-jurisdictional application, chief elected official of the "lead" political subdivision.

[Jennifer Carroll](#)

b. Title

[Mayor](#)

c. Street Address

[645 Holbrook](#)

d. City

Erie

e. State

Please use the two letter abbreviation

CO

f. Zip

80,516

g. Phone

Use xxx-xxx-xxxx format

3039262700

h. Email Address

jcarroll@erieco.gov

C. PROJECT DESCRIPTION AND DEMOGRAPHIC INFORMATION**a. Project Title**

Begin the project name with your community name. Example: "Oak Creek *Project Name*", "Gunnison County *Project Name*"

Erie MWTP Hydropower

b. Amount of grant funds requested

**The amount requested should equal "Grant Request Total" line from the project budget below.*

1.00

c. Matching Funds

1.00

d. Description of the project scope of work

Description of the various tasks involved in the project including specific data such as quantities, mileage, square feet, linear ft. etc. as well as specific project location within city and/or county etc. (word limit: 4,000 characters)

A hydro-electric turbine facility is proposed at the existing Lynn R. Morgan Water Treatment Facility (MWTF), owned and operated by the Town of Erie. The new hydro-electric turbine will be installed on an existing high pressure raw water supply pipeline from the Northern Colorado Water Conservation District (NCWCD). The Town treats the water from NCWCD and supplies it as potable water to its customers. Two existing sleeve valves reduce the incoming water pressure

for use at the MWTF. The NCWCD supply has been in service for more than 20 years. The proposed hydro-electric turbine will be installed in parallel with the two sleeve valves to capture the potential energy of the high pressure raw water supply. The potential energy will be converted to electricity for use at the MWTF, as a parallel supply the utility electricity from Xcel Energy. The proposed 100 kW turbine will produce up to 20% of the energy needs at the MWTF and will not be net-metered back to Xcel's grid. The proposed hydro-turbine facility will not expand or modify the MWTF treatment facilities. Modifications for the new turbine will include yard piping modifications, flow measurement, isolation valves, pressure transmitters, hydro-turbine equipment including actuated wicket gates or butterfly valves to manage flow rates, and associated electrical and controls. The equipment will be housed in a new 500 square foot masonry building at the MWTF on the Town's property at 2901 N. 119th St, Erie CO 80516. The following design conditions were used for the turbine selection: • The existing sleeve valves will remain in operation in parallel with the proposed turbine; • NCWCD flows to the WTF range from 2.8 to 5.5 cfs (1.8 to 3.6 MGD); • Average turbine flow rate of 4.1 cfs (2.7 MGD); • Minimum WTF flow rates will increase by 3% per year to accommodate for population growth; • WTF operates 12 months of the year, 24 hours per day, 7 days per week; • Turbine inlet pressures range monthly from 125 to 165 psi; and • Backpressure range between 22 and 30 psi for turbine operations and downstream hydraulics. These design conditions led to the selection of a Francis type ILT turbine manufactured by Canyon Hydro. This turbine covers the entire flow range, with efficiency ranging from 67 to 80%. The turbine will be installed in a new building located near the existing NCWCD vault. The building is approximately 16-feet by 30.67-feet. The facility is accessed through a single door into the turbine room. There is an overhead coiling door for ease of construction and maintenance. The structure will be a concrete slab on grade, concrete masonry unit building with steel joist roof to match the construction of the existing pretreatment building. The turbine building will be temperature controlled through unit heaters and a packaged air condition wall mount unit. Electrical and controls will be mounted on a wall inside the turbine building.

e. Describe the problem, opportunity or challenge that resulted in the request.
(word limit: 4,000 characters)

The existing MWTF has a current firm capacity of 9.9 mgd and is currently being expanded to a firm capacity of 16.65 mgd. The WTF and receives water from four different sources: • Northern Colorado Water Conservancy District (NCWCD) pipeline; • Raw Water Pump Station (RWPS) on the Boulder Feeder Canal; • Erie Lake; and • Thomas Reservoir Pump Station. The RWPS sources water from the Boulder Feeder Canal. Erie Lake is a storage facility that can be filled with either NCWCD or the RWPS. The Thomas Reservoir Pump Station is fed by WTF backwash recycle and the dewatering facility decant water. Thomas Reservoir is rarely used due to its reduced water quality. The Town prefers to use NCWCD as its primary source due to its superior water quality. There is approximately 125 to 165 psi of available pressure upstream of the existing sleeve valves on the NCWCD pipeline. The maximum flow rate the Town can take from NCWCD is 5.5 cfs (3.6 MGD). NCWCD is the only water source when the WTF is operating at less than 5.5 cfs (3.6 MGD). WTF demands above 5.5 cfs (3.6 MGD) will be supplied from NCWCD plus a combination of the other sources described above. The incoming NCWCD water pressure is too high to enter the WTF. The Town currently uses two sleeve valves, operating as duty/standby, to reduce the incoming pressure. The existing NCWCD sleeve valves are in a vault to the south of the existing pretreatment building. Water flows from the NCWCD vault through pressure reducing valves in

Vault A and Vault B before entering the WTF. The existing sleeve valve reduces the incoming NCWCD pressure but does not capture any potential energy. A hydro-turbine will convert the flow and pressure into energy for use at the WTF. Water will enter the hydro-turbine at high pressure and leave at lower pressure. A backpressure is required for the hydro-turbine to operate. The settings on the existing PRV immediately downstream of the hydro-turbine will be adjusted to provide the required backpressure. The next PRV downstream will provide pressure reduction for WTF operation and redundancy for the upstream PRV. A feasibility study for hydro-electrical generation at the MWTF was completed in 2018 to 2019 as part of the MWTF expansion. Findings of the study proved positive and the Town moved forward with the detailed design of the turbine facility. The MWTF expansion project provided the opportunity for the turbine facility, with both an engineering firm and general contractor contracted for implementation. The current expansion will serve the Town for the next 10 to 15 years. This capital project was the opportunity to install a device to capture the potential energy of the NCWCD supply, untapped for over 20 years. Project challenges include developing a cost-effective facility which provides a reasonable payback for the investment. Several hydro-electric generation technologies were compared to select the most effective, in terms of energy product against equipment cost. Three building locations were compared in the Feasibility Report, with an above ground building selected as the most cost-effective. A matching renewable energy grant will improve the payback by assisting with project funding.

f. Local Priority

If more than one application from the same government (1 of 2, 2 of 2, etc.)

1

g. State historic registry designation

Is the project on a State registered historic site or in a State registered Historic District?

No

g.1 State historic registry number

If the project is on the state registry, please provide the registry number. The department **may** need to seek a determination of effect from the State Historic Society.

h. 2010 population of the applicant jurisdiction

18,000.00

i. Current population

Current/most recent conservation trust fund/lottery distribution estimate is acceptable.

28,308.00

i.1 Current population estimate source

<https://www.erieco.gov/ArchiveCenter/ViewFile/Item/2980>

j. 5 year population projection

34,000.00

j.1 Population projection source

Town Building Department

k. Have you contacted your DOLA regional manager to discuss this project?

You are **required** to contact your DOLA regional manager prior to submitting your application. Please indicate the date and method of your contact with your regional manager.

Y

k.1 Date

You are **required** to complete this field.

08/14/2019

k. 2 Method of contact

You are **required** to complete this section.

In Person

I. Supporting documents

Upload any supporting documents (PDF document).

[Download](#)

Attachments for DOLA.pdf

D. DEMONSTRATION OF NEED



The statutory purpose of the Energy and Mineral Impact Assistance program is to provide financial assistance to "political subdivisions socially or economically impacted by the development, processing or energy conversion of minerals and mineral fuels."

a. Demonstration of need

Why is the project needed at this time? (word limit: 4,000 characters)

The project is needed at this time due to an increasing population in the Town of Erie. The growing population is increasing water demand, which in turn increases the MWTP's electricity demand. Installing the hydro turbine offsets the increased energy needs. The current expansion project makes the hydro turbine installation more economical because there is already a contractor mobilized and onsite, reducing project overhead costs. The current expansion is the last major project at the MWTP for the foreseeable future (8 to 15 years), which means adding a hydro turbine later on would be more expensive. Additionally, the sooner the turbine is added to the MWTP, the sooner the utility electrical cost is offset. Currently, the available potential energy is not being captured and is wasted. This project will turn that energy into a renewable energy source for MWTP operations.

b. Project implementation

How does the implementation of this project address the need? (word limit: 4,000 characters)

This project addresses the need by offsetting the energy demand of MWTP operations. Current calculations estimate that the hydro turbine will be capable of producing over 20% of the MWTP's energy demand, which will offset the higher demand associated with higher water demands. This means a reduced demand on the electrical grid, and a sustainable, reliable energy source for the MWTP.

c. Does this project address the stated need

Does this project, as identified in this application, completely address the stated need? If not, please describe additional work or phases and the estimated time frame. Do you anticipate requesting Energy and Mineral Impact Assistance funds for future phases? (word limit: 4,000 characters)

This project addresses the need for increased energy at the MWTP. This will be the only phase of this project, as the hydro turbine will be capable of generating the maximum amount of energy from the NCWCD pipeline into the plant. The Town has an agreement with limits the maximum flow from NCWCD to 3.6 mgd.

d. What other implementation options have been considered?

(word limit: 4,000 characters)

The Town considered all options to maximize the amount of sustainable, renewable energy that could be generated for the MWTP. While the Town has solar energy at other locations, it did not make sense in this location. The Town considered several turbine options, and chose the type that would produce the most energy from all the current potential energy that is not being captured. Four types of turbines were considered - Pelton, Kaplan, Francis and Pump - in the Hydroelectric Feasibility Study, Lynn R. Morgan Water Treatment Facility, Burns & McDonnell, September 2019. Pelton turbines are impulse-type turbines which are often used for hydro-power with relatively high hydraulic head at low flow rates. The Kaplan turbine is a propeller-type turbine which uses non-adjustable propeller vanes. Kaplan turbines are best suited to applications with limited ranges of flow and power. Kaplan turbines are designed to operate at lower head conditions. The Pelton and Kaplan turbines are not well suited to the Town's application and therefore eliminated from selection. Francis turbines are an inward-flow reaction turbine that combine radial and axial flows. Francis turbines are the most common water turbine in use today. The Pump turbine operate like a centrifugal pump running backwards. The Francis and Pump turbines fit the Town's flow and head conditions and were selected for further analysis. Francis turbines operate over a range of flow, like a pump on a variable speed drive. A Pump turbine operates along a fixed curve like a constant speed pump. Four configurations were evaluated - Francis turbine, pump turbine with a reverse VFD, a single Cornell pump style turbine and two parallel Cornell pump style turbines. The Francis turbine was selected based on its ability to operate over a range of flows, high efficiency, higher energy production and that a single unit will meet the anticipated future flow rates. Variable speed drives will be installed on 10 new motors as part the MWTP expansion project to further improve energy efficiency. Three options were evaluated for the turbine location - a new building near the NCWCD vault, a new vault near the NCWCD vault and a new turbine room in the expanded pre-treatment building. The new at-grade building was the least expensive building option.

e. What are the consequences if the project is not awarded funds?

(word limit: 4,000 characters)

If the project is not awarded a matching grant, then the Town must fund the entire project. This increases the payback of hydro-electric turbine and jeopardizes the positive economic conditions to implementation of the project. The Town will still be able to receive raw water from NCWCD without this project, but its potential energy will continue to go un-captured. Delaying the project will result in a more expensive project in the future as construction costs increase over time, further impacting the pay back.

E. FINANCIAL INFORMATION (CURRENT YEAR)**Lead Applicant****a. Assessed Valuation (AV)**

Assessed Valuation in most recent year.

447,031,662.00

b. Total Mill Levy

15.09

c. Property Tax Revenue Generated

(mill levy x AV / 1,000)

d. Sales Tax

Sales Tax Rate

d.1 Sales Tax Estimated Annual Revenue**e. General Fund Budgeted Revenue**

30,196,500.00

f. General Fund Budgeted Expenditures

32,299,600.00

g. General Fund Balance as of December 31st of the previous year

27,684,685.00

h. Portion of General Fund which is Unassigned

17,436,060.00

i. Total Budgeted Revenue (All Funds)

83,739,200.00

j. Total Budgeted Expenditures (All Funds)

104,085,000.00

k. Total Fund Balance (All Funds)

173,332,285.00

l. Total Outstanding Debt (All Funds)

74,382,891.00

Co-Applicant Financials (only where applicable)**a. co-applicant financials**

Upload only in cases where more than one applicant is relevant.

Please use the worksheet linked

here: <https://drive.google.com/file/d/1CFEgyuaKoKTmRS5SyL5IKB0RPaHzksBM/view>

[Download](#)

Special Fund(s)

For projects to be managed through a Special Fund other than the General Fund (e.g. County Road and Bridge Fund) or managed through an Enterprise Fund (e.g. water, sewer, county airport), complete items "k through o".

Complete items "l through p" for ALL project types.

**a. Identify the relevant Special Fund or Enterprise Fund (e.g. water, sewer, CIP fund)
(only use if needed)****Water (Enterprise) Fund****a.1 Special or Enterprise Fund Budgeted Revenue**

30,014,700.00

a.2 Special or Enterprise Fund Budgeted Expenditures

41,013,800.00

a.3 Special or Enterprise Fund Outstanding Debt

42,235,000.00

a.4 Special Fund Mill Levy (if applicable)

a.5 Special or Enterprise Fund Balance as of December 31st of the previous year

44,961,120.00

**b. Identify the relevant Special Fund or Enterprise Fund (e.g. water, sewer, CIP fund)
(only use if needed)**

b.1 Special or Enterprise Fund Budgeted Revenue

b.2 Special or Enterprise Fund Budgeted Expenditures

b.3 Special or Enterprise Fund Outstanding Debt

b.4 Special Fund Mill Levy (if applicable)

b.5 Special or Enterprise Fund Balance as of December 31st of the previous year

**c. Identify the relevant Special Fund or Enterprise Fund (e.g. water, sewer, CIP fund)
(only use if needed)**

c.1 Special or Enterprise Fund Budgeted Revenue

c.2 Special or Enterprise Fund Budgeted Expenditures

c.3 Special or Enterprise Fund Outstanding Debt

c.4 Special Fund Mill Levy (if applicable)

c.5 Special or Enterprise Fund Balance as of December 31st of the previous year

For Water and Sewer Projects Only

Water Tap Fee

29,214.00

Number of total water taps served by applicant

9,792

Average Water Monthly User Charge

Divide sum of annual (commercial and residential) revenues by 12 and then divide by the number of total taps served. **NOTE: Commercial and Residential Combined**

87,790

Sewer Tap Fee**Number of total sewer taps served by applicant****Average Sewer Monthly Water Charge**

Divide sum of annual (commercial and residential) revenues by 12 and then divide by the number of total taps served. **NOTE: Commercial and Residential Combined**

F. PROJECT BUDGET

List expenditures and sources of revenue for the project. The total expenditures must equal the total sources of revenue.

Expenditures

List Budget Line Items and Costs.

Budget Line Item

(Examples: architect, engineering, construction, equipment items, etc.)

[See attached EOPCC](#)

Line Item Cost

1,533,408.00

Budget Line Item**Line Item Cost****Budget Line Item****Line Item Cost****Budget Line Item**

Line Item Cost**Budget Line Item****Line Item Cost****Sources of Revenue**

Dollar for Dollar Cash Match is Required, unless financial circumstance warrants a reduction. List the sources of matching funds and indicate either cash or documentable in-kind contribution

Energy/Mineral Impact Fund Grant Request

766,704.00

Energy/Mineral Impact Fund Loan Request (If applicable)**Source of Revenue/Match**

Capital Improvement Budget (Water Fund)

Cash

766,704.00

In-Kind

If match is not cash, enter dollar amount of in-kind contribution.

Funding Committed

Y

Source of Revenue/Match

Cash

In-Kind

If match is not cash, enter dollar amount of in-kind contribution.

Funding Committed

Y

Source of Revenue/Match

Cash

In-Kind

Funding Committed

Source of Revenue/Match

Cash

In-Kind

If match is not cash, enter dollar amount of in-kind contribution.

Funding Committed

Source of Revenue/Match**Cash****In-Kind**

If match is not cash, enter dollar amount of in-kind contribution.

Funding Committed**Source of Revenue/Match****Cash****In-Kind**

If match is not cash, enter dollar amount of in-kind contribution.

Funding Committed**Source of Revenue/Match****Cash****In-Kind**

If match is not cash, enter dollar amount of in-kind contribution.

Funding Committed**Source of Revenue/Match****Cash****In-Kind**

If match is not cash, enter dollar amount of in-kind contribution.

Funding Committed

Project Contingency

1. Please identify the contingency associated with the project budget.
 1. If a contingency has not been identified as part of the budget, please explain why not?
 2. Contingency % of Budget.
 3. Contingency Dollar value

10% Design Development Contingency at 30% complete design milestone, 10% Construction Contingency

How recently were the budget and contingency determined

Month/Year

10/28/2019

Additional Line Items

If more budget line items are needed, please upload a PDF of your project budget

[Download](#)

Appendix E_30% OPCC.pdf

G. MEASURABLE OUTCOMES



a. Describe the expected measurable outcomes

How will the project enhance the livability* of your region, county, city, town or community (e.g. constructing a new water plant will eliminate an unsafe drinking water system and provide safe and reliable drinking water; the construction of a new community center will provide expanded community services, or projects achieving goals regarding energy conservation, community heritage, economic development/diversification, traffic congestion, etc.)?

***(Livability means increasing the value and/or benefit in the areas that are commonly linked in community development such as jobs, housing, transportation, education, emergency mitigation, health and environment)**

(word limit: 4,000 characters)

The current MWTF expansion project from 9.9 mg to 16.65 mgd in firm capacity allows the Town of Erie to continue growing by providing a safe and reliable source of drinking water for a larger population. The addition of the hydroelectric turbine allows this expansion in a more sustainable manner, as the increased energy demand associated with the increased water production is offset by the energy produced by the hydro turbine. Capturing the renewable energy source on-site reduces greenhouse gas emissions. This project is a demonstration project that shows the Town's leadership in the implementation of sustainable energy projects.

b. Historic structure preservation

Does this project preserve and protect a registered state historic building, facility or structure? If yes, please describe, including year of construction. (word limit: 2,500 characters)

NA

c. Energy efficiency

Will this project implement an energy efficiency/strategy that could result in less carbon footprint or conserve energy use or capitalize on renewable energy technology? If yes, please describe. (word limit: 2,500 characters)

The power (kW) that a turbine generates is directly related to the annual energy savings. The available head pressure and flow rate were used to develop the potential power generation. Potential power is the amount of power generated if the turbine was 100% efficient. Converting the pressure into potential power allows an estimate of the amount of power that will be generated by the turbine. The potential power increases as the flow rate increases. An increase in the potential power translates to an increase in the annual energy cost savings. The theoretical power production is calculated by adjusting the potential power for the turbine efficiency, the generator efficiency and a safety factor. Turbine efficiency varies by vendor and configuration. Generator efficiency is assumed to be 94% for all turbine options. A factor of safety of 97% is applied for all options. The theoretical power production is then converted into the annual energy cost saving, using a monthly flow and pressure curve, available head for generation, the average cost per kilowatt hour (kW-h), seasonal demand charges and the duration that the turbine operates per year. The Town purchases electricity from Xcel Energy under three separate service entrances: High Service Pump Station, Treatment Building and the Solids Handling Building. Xcel charges for electricity based on an energy rate of \$0.03403 per kilowatt hour and a series of demand charges: Distribution demand (\$5.63 per kW) Winter generation and transmission demand (\$9.82 per kW) Summer generation and transmission demand (\$14.02 per kW) Miscellaneous rider demand charges (\$3.35 per kW) Demand charges are based on the actual maximum monthly demand (kW). The billed demand charges use the greater of the actual maximum monthly demand or 50% of the previous twelve months maximum demand. The Canyon ILT12 has a theoretical power production of 560,000 kWh per year. This results will result in an annual cost saving of \$31,000 based on the above charges from Xcel Energy. Variable speed drives will be installed on 10 new motors as part the MWTP expansion project to further improve energy efficiency.

d. Resiliency framework

Will the project increase the community's long-term resilience and ability to anticipate, withstand, and/or rebound from a natural or manmade hazard event? For example, will the project factor in natural design concepts and will construction utilize sustainable materials? If yes, please describe. (word limit: 4,000 characters)

The addition of the hydroelectric turbine will reduce the MWTP's dependency on the grid for electricity. Calculations are estimating that the the turbine will be capable of providing over 20% of the facility's electricity needs. This means in emergency situations the Town will be less dependent on the grid to supply energy.

H. LOCAL EFFORT

a. Relationship to Community Goals

Is the project identified in the applicant's budget or a jurisdictionally approved plan (e.g. capital improvement plan, equipment replacement plan, comprehensive plan, utility plan, road maintenance and improvement plan or other local or regional strategic management or planning document)? What is its ranking? (word limit: 4,000 characters)

The project is identified in the Sustainability Master Plan that the Board of Trustees is going to adopt in December, shortly after the submission of this application. The following is a draft of the Town's Sustainability Vision: As the Town of Erie grows and expands, we will become a leader in sustainability by providing outreach and leadership alongside inclusive and accessible opportunities that support the growth of our economy and engage the community while protecting our natural environment. The Sustainability Master Plan outlines goals in several areas including the Energy Use Sector. Underneath this sector is four sub-topics, one of which is Erie's Municipal Leadership Priority. This sub-topic aims to illustrate the Town's commitment to sustainability by reducing energy and water use in municipal buildings as well as supplying Town buildings with renewable energy. This project directly addresses this goal.

b. Why can't this project be funded locally?

(word limit: 2,500 characters)

The Town currently has many ongoing large projects, including the Northern Integrated Supply Project (NISP) and the Windy Gap Project. An award of this grant will reduce the Town's expenses for the hydro-electric turbine project. Without the grant, the Town will have less funds available for other projects. This will result in increased debt levels in the future.

c. Has this project been deferred because of lack of local funding? If so, how long?

(word limit: 2,500 characters)

The Town has been using the high pressure NCWCD water supply for over 20 years, not capturing available potential energy.

d. Explain the origin and status of your local cash match.

(Note: Whenever possible, local government cash match on a dollar for dollar match basis is encouraged.) Are the local funds committed or pending? If there are pending funds, when will the status of those funds be determined? (word limit: 2,500 characters)

The local cash match is in the Capital Improvement Budget (Water Fund). The board has already approved the 2020 budget which includes this project.

e. Community partners

What other community entities, organizations, or stakeholders recognize the value of this project and are collaborating with you to achieve increased livability of the community? Please describe how your partners are contributing to achieve the improvement to the livability of the community through this project. If in-kind contributions are included in the project budget, detailed tracking will be required on project monitoring report. (word limit: 2,500 characters)

The Town's Volunteer Sustainability Advisory Board has been engaged in the project as mentioned above in the Town's Sustainability Master Plan.

f. Tax rate, usage charges, or fees

Have the applicant's tax rates, user charges or fees been reviewed recently to address funding for the proposed project?

Yes

f.1 Tax rate or usage charge modifications

If the tax rate, user charges or fees were modified, what was the modification and when did this change occur? (word limit: 2,500 characters)

Currently being reviewed as part of overall budget for current rate study, which is being done by Raftelis Financial Consultants.

g. Has the applicant contacted representatives from local energy or mineral companies to discuss the

(word limit: 2,500 characters)

The Town has already been in contact with Xcel Energy to discuss connection details as well as new reduced demand charges associated with the project. The Town has been in contact with NCWCD to coordinate design and the technical details of the hydro-electric facility. The feasibility study and 30% design report have been shared with Colorado Department of Public Health and Environment (Sustainability) and Colorado Department of Natural Resources (Project Development)

I. READINESS TO GO



a. When will the project begin

Select one

Within 3 months

b. What is the time frame for completion

Select one

9-12 months

c. Is planning or design work a component of this project?

Y

c.1 What additional design work remains?

What percentage of design work is complete? (word count: 2,500 characters)

60% of design will be complete by time of application (December 2019). Remaining design to be complete by mid-March 2020 for construction by April 1st, 2020. Construction is estimated to take 8 months. The project will be shovel ready at the time of award of fund matching grants. Note that the Town Board of Trustees will meet on December 10 to approve grant application. The Town Board of Trustees has already approved the detail design of the hydro project, demonstrating their agreement with the project's implementation.

c.2 How were project cost estimates determined?

How did the applicant develop project cost estimates? (word count: 2,500 characters)

An overall project cost was estimated for the new turbine facility by Burns & McDonnell Engineering Company. The estimate included the above ground building, turbine equipment, piping, valves, HVAC, electrical, controls and associated equipment. The cost estimate is based on vendor quotes and past project experience. Costs are presented in 2019 dollars. A feasibility study is categorized as a Class 4 estimate by the Association for Advancement of Cost Engineering (AACE). The accuracy of a Class 4 estimate ranges from -15% to -30% on the low end to +20% to +50% on the high end. Due to the variability of economic conditions, equipment and material availability, weather, unavoidable delays, and other variables outside of BMcD's control, final project cost may vary by more than the stated accuracy. A second cost estimate was developed by Garney Construction.

c.3 Is the project supported by bids, professional estimates or other credible information?

Yes

c.3.i Bids

Please attach a copy of any supporting documents (PDF Document).

[Download](#)

c.4 Are any Local, State or Federal permits required before the project can proceed?

If yes, please describe and note the status of permit acquisition (word count: 2,500 characters).

Town planning department has already approved as part of the MWTF expansion project
Town Building Permit pending upon completion of design Federal Energy Regulatory
Commission request from exemption from licensing will be submitted in December 2019
The project does not require CDPHE water quality permit because it does not affect the
existing treatment process

J. ENERGY & MINERAL RELATIONSHIP**a. Community energy or mineral impact**

Describe how the applicant is, has been, or will be impacted by the development, production, or conversion of energy and mineral resources (word limit: 4,000 characters).

The Town of Erie has been heavily impacted by the development and production of energy and mineral resources - it has impacted development, residents, roads, and air quality. Many studies have been conducted on the impact of these operations including reports by NOAA on air quality and CDPHE on health effects. Extensive information can be found on the Town's website linked below which has a dedicated page discussing Oil and Gas Operations. <https://erieco.gov/129/Oil-Gas-Operations>

b. Use data

Cite actual use data that documents direct impact as it relates to the need for the project. For example, "heavy truck traffic directly related to energy development activities is impacting County Road X. a traffic count done in May 2015 showed energy related truck traffic increased from 100 trips per day to 300." (word limit: 2,500 characters)

Please see above response.

K. MANAGEMENT CAPACITY

a. Fund management

How will you separate and track expenditures, maintain funds and reserves for the capital expenditures and improvements as described in this project? (word limit: 2,500 characters)

The Town has a separate budget line item for this project, under which they will track all related costs. The Town also has a robust financial accounting system, which can produce additional reports as needed.

b. Project sustainability

Describe the funding plan in place to address the new operating and maintenance expenses generated from the project? (word limit: 2,000 characters)

The project will have minimal operating and maintenance expenses as it only involves one piece of equipment. Operations will be part of regular water treatment plant operations. The small footprint of the building will mean limited electrical and mechanical systems.

c. Expertise

Describe the technical and professional experience/expertise of the person(s) and/or professional firms responsible to manage this project. (word limit: 2,000 characters)

Burns & McDonnell Engineering Company, Inc (BMcD) contracted with the Town of Erie to provide engineering services for the MWTF expansion. The Town elected to deliver the project using a construction management at risk (CMAR) model. Garney Construction was selected during the MWTF expansion design phase using quality-based selection (QBS) criteria. The Town expanded BMcD's scope to include the design of the hydro-electric facility upon BMcD completion of the Feasibility Study. The intent is for the existing CMAR contractor, Garney Construction, to complete the procurement and construction of the project. Garney will provide pre-construction services, including constructability reviews, developing the construction schedule, identifying discrete construction work packages and developing the project guaranteed maximum price for the hydro-turbine facility. BMcD will develop the final design documents with the input from the Town and the contractor.

d. Duplication of services

Does the project duplicate service capacity already established? Is the service inadequate? Has consolidation of services with another provider been considered? (word limit: 2,000 characters)

NA - Town has existing emergency interconnects with Lefthand Water and City of Lafayette. However, neither of these supplies are sufficient to eliminate need for town having its own water supply system.



L. HIGH PERFORMANCE CERTIFICATION (HPCP) PROGRAM COMPLIANCE

Colorado Revised Statutes (C.R.S. 24-30-1305.5) require all new facilities, additions, and renovation projects that meet the following criteria to conform with the High Performance Certification Program (HPCP) policy adopted by the Office of the State Architect (OSA) if:

- The project receives 25% or more of state funds; **and**
- The new facility, addition, or renovation project contains 5,000 or more building gross square feet; **and**
- The building includes an HVAC system; **and**
- In the case of a renovation project, the cost of the renovation exceeds 25% of the current value of the property.

The HPCP requires projects that meet the criteria above to achieve third party verification with the target goal of LEED Gold or Green Globes-Three Globes. Projects are strongly encouraged to meet the Office of the State Architect's (OSA) Sustainable Priorities in addition to the LEED prerequisites. Projects funded through DOLA that meet the above applicability criteria are required to complete the DOLA registration and tracking process. See DOLA's HPCP web page for more information or contact your DOLA regional manager.

In instances where achievement of LEED Gold or Green Globe-Three Globes certification is not achievable, an applicant may request a modification of the HPCP policy or a waiver if certain conditions exist. DOLA staff will work with applicants to identify workable solutions to meet the program's intent to maximize building energy efficiencies.

Note: If this application is for design services for a planned building project that meets the HPCP applicability criteria and the applicant intends to seek state funding for 25% or more of the total project cost, then the design should maximize high performance building certification standards (by completing the HPCP checklist) and build in anticipated project costs, as appropriate.

a. HPCP project details

Is the applicant seeking state funding for 25% or more of the total project cost (including all phases, if applicable)?

(If no, the project does not meet the HPCP requirement and the rest of this section does not need to be completed)

b. HVAC details

Does the building include an HVAC system?

b.1 Type of HVAC system

Please select whether the HVAC is an upgrade or a new system from the following drop down:

c. Project type

Please select the type of construction project

New construction

c.1 Square footage in excess of 5,000 square feet

Is the building square footage (new construction and/or renovation) 5,000 SF or more?

No

c.2 Building square footage

What is the building square footage, indicate whether the square footage is new, renovation, or both.

526 square feet

d. Does the cost of renovation exceed 25% of the current value of the property?

Select from the drop down list.

d.1. What is the current property value?

Determine based on assessed or appraised value. What is the total project cost for the renovations? Please provide both amounts in your response.

e. Does this project meet the HPCP criteria?

If you answered "yes" to questions a, b, c, and d, then your project meets the HPCP applicability criteria. Complete the HPCP registration form and preliminary checklist and upload below. (See DOLA's HPCP web page for registration and checklist form.)

e.1 HPCP registration form and checklist

If you answered yes above, please upload the HPCP registration and checklist form below.

[Download](#)

f. Third party verification

Have you included any additional costs in this grant application for third party verification to comply with the High Performance Certification Program?

f.1 Third party verification cost

If you answered yes above, please specify the estimated cost for third participation verification/certification

f.2 Third party verification resources

Will you need assistance locating resources, third party consultants, or technical assistance for HPCP third party verification requirements, preparing cost estimates, or otherwise complying with the HPCP?

f.2.i Third party verification resources required

If you answered yes above, please describe the type of resource identification assistance you need.

M. TABOR COMPLIANCE AND ENVIRONMENTAL REVIEW**a. Voter authorization**

Does the applicant jurisdiction have voter authorization to receive and expend state grants without regard to TABOR spending limitations?

No

a.1 If yes, please explain

(word limit: 500 characters)

NA

b. State severance funds

If the applicant jurisdiction receives a grant with State Severance funds, will the local government exceed the TABOR limit and force a citizen property tax rebate?

No

b.1 If yes, please explain

(word limit: 500 characters)

NA

c. TABOR refunds

No

c.1 If yes, please explain

NA

d. Has the applicant sought voter approval to keep revenues above fiscal spending limits?

No

d.1 If yes, please explain

(word limit: 500 characters)

NA

e. Spending limits

Are there any limitations to the voter approved revenues? (e.g., Can revenues only be spent on law enforcement or roads?)

N

e. 1 If yes, please explain
(word limit: 2,500 characters)

NA

f. Enterprise status

If the applicant jurisdiction is classified as an enterprise under TABOR, will acceptance of a state grant affect this status?

N/A

f. 1 Explain
(word limit: 2,500 characters)

N. ENVIRONMENTAL REVIEW

Indicate below whether any of the proposed project activities:

a. Will be undertaken in flood hazard areas?

N

a.1 List flood plain maps/studies reviewed. Describe alternatives considered.
(word limit: 1,000 characters)

b. Will affect historical, archaeological, or cultural resources or be in a geological hazard area?
Select from the drop down menu.

N

b.1 If yes, describe alternatives considered and mitigation proposed.
(word limit: 1,000 characters)

c. Address any other public health or safety related concerns not previously identified
Select from the drop down menu

N

c.1 If yes, please explain.
(word limit: 1,000 characters)

O. OFFICIAL BOARD ACTION

a. Date of official board action

Enter the date this project was approved for submission by the board

12/10/2019