



# Hydroelectric Licensing Workshop

December 9, 2014

# River Falls Hydroelectric Project



## Junction Falls, Upper Hydro

- Concrete Gravity Dam
- 140' Long, 40' High
- Uncontrolled Overflow Spillway
- Generator rated at 250kW
- Lake George is its reservoir
  - 16 acres
  - Normal pool elevation is 865.3 feet mean sea level
- Produced 925,000 kWh in 2013

# River Falls Hydroelectric Project

## Powell Falls, Lower Hydro

- Concrete Gravity Dam
- 110' Long, 22' high
- Uncontrolled Overflow Spillway
- Generator rated at 125 kW
  
- Lake Louise is its reservoir
  - 15.4 acres
  - Normal pool elevation is 821.8 feet mean sea level
  
- Produced 467,000 kWh in 2013



# Where are we?

- Federal Energy Regulatory Commission (FERC) P-10489
- 30-year license expires August 31, 2018
- Relicensing using the “Traditional Licensing Process”
  - Would complete necessary studies in 2015
  - Draft License Application due January 2016
  - Comments and Study Requests received by May 23, 2014
  - Stakeholder meeting on March 24, 2014



# Current Steps

- Following preliminary financial analysis, staff hired TRC to provide an analysis of licensing options and the costs associated with each option.
- Options studied:
  1. FERC License Extension
  2. FERC License Application (Full Relicense)
  3. FERC License Application with Settlement Agreement
  4. FERC License Surrender with Facilities in Place
  5. FERC License Surrender with Dam Removal
- Options *not* studied:
  1. Project expansion (e.g. Badger Hydro, Kaukauna Utilities)
  2. Project transfer (e.g. to North American Hydro)

# Assumptions 1

- Council is considering 2015 Strategic Plan establishing “Enhancing the Kinni River Corridor” as an initiative
- River is tremendous resource to the region
- There is value in locally-produced renewable energy
- There is historical value to the facilities
- “While the hydroelectric facilities did not lose money during the license term, they did not produce as high of revenue for the electric utility had the City purchased the equivalent amount of non-green power generated.”
- Continued success will result from low maintenance costs, consistent output, and rising electric rates.
- Cost estimates are external only and do not consider staff resources

# Assumptions 2

- No significant funds are budgeted for 2015-2016 for extensive studies (CIP @ \$100,000)
  - Translated: Any significant expenses to address project needs will be considered for 2017-2018 and beyond
- Hydro licensing and “the dams” are not a priority for staff resources in the short-term
  - Translated: Any significant staff resources to address project needs and Council goals will be considered for the 2015-2017 or 2017-2019 work plans.
- Primary Considerations for Hydro Licensing are:
  - \* Finances
  - \* Flexibility

# Option 1: Extension

- Objective: To extend the current license providing time for the City to initiate and complete its public review and input process about the future of the hydroelectric projects, dams, and potential redevelopment of the river.
- If granted, no studies would be necessary during the community planning process. However, many studies could assist in planning and reduce future costs.
- Stakeholder and resource agency support would improve the chances of approval.

# Option 1: Extension impacts

- Financial Considerations:
  - Low Cost = \$2,000                      High Cost = \$223,000
  - Extension would lead to the City pursuing Option 2 – 5 at the end of the license period. Costs associated with this option are added to the selected option.
  - Studies completed as part of the planning process could reduce the future study obligations of the selection option.
- Flexibility Considerations:
  - Retains all options for continued operation of the hydros at one or both facilities, surrender, and dam removal and one or both facilities.

# Option 2: Relicense

- Objective: To provide sufficient information in the relicensing to allow FERC to prepare an Environmental Assessment and issue a new license.
- This is the City's current path in the Traditional Licensing Process with the objective of another 30 year license.
- Studies would need to be completed in 2015 to maintain current timeline.

# Option 2: Relicensing impacts

- Financial Considerations
  - Study scope and costs are often negotiable.
  - City staff could work with UWRF, agencies, and stakeholders to conduct some studies.
  - Low Cost = \$218,000      High Cost = \$444,000
- Flexibility Considerations:
  - Operates independently from Kinni Corridor Planning
  - Leaves all future options on the table, but commits the City to generate power until some future date

# Option 3: Relicense w/ Agreement

- Objective: To provide sufficient information in the relicensing to allow FERC to prepare an Environmental Assessment.
- The settlement agreement will hopefully allow the City to eliminate or decrease the scope of many of the studies in favor of using currently available data or easily developable data to determine necessary license requirements.

# Option 3: Relicense w/ Agreement impacts

- Financial Considerations
  - City staff could work with UWRF, agencies, and stakeholders to conduct some studies.
  - Settlement agreement aims to lower cost of studies from Option 2
  - Low Cost = \$191,000      High Cost = \$397,000
- Flexibility Considerations:
  - Attempts to support Kinni River Corridor Planning efforts
  - Leaves all future options on the table, but commits the City to generate power until some future date determined through the agreement negotiations.

# Option 4: Surrender w/ Facilities

- Objective: To provide sufficient information in a surrender application to allow FERC to prepare an Environmental Assessment, issue an order and transfer dam safety requirements to the State of Wisconsin.
- We cannot be sure how FERC will rule on conditions for surrender.
- A surrender application for a minor project would be in the form of a letter outlining the proposed project disposition.

# Option 4: Surrender w/ Facilities impacts

- Financial Considerations
  - Cannot be certain of FERC conditions on surrender
  - Does not factor in future costs of dam removal
  - Low Cost = \$24,000                      High Cost = \$236,000
- Flexibility Considerations:
  - Pre-determines some aspects of Kinni Corridor Planning
  - Leaves open timeline and options for dam removal
  - Eliminates option of future power generation

# Option 5: Surrender w/ Removal

- Objective: To provide sufficient information in the surrender-removal application to allow FERC to prepare an Environmental Assessment and issue an order
- Commits the City to an extensive study, surrender, and dam removal process in the short-term
  - Annual licenses not to be applied for
- Unknown site conditions lead to a larger range of costs

# Option 5: Surrender w/ Removal impacts

- Financial Considerations
  - Low Cost = \$660,600      High Cost = \$4,450,000
  - Note: Lake George Area Stormwater Treatment Plan (2005) not included in these estimates.
- Flexibility Considerations:
  - Pre-determines many aspects of Kinni Corridor Planning
  - Eliminates option of future power generation
  - Commits the City to significant expenses in short-term (partnerships available for possible partial grant funding)

# Financial Considerations

OPTIONS	LOW	PAYBACK	HIGH	PAYBACK
Extension	\$2,000	Immediate	\$223,000	2019
Relicense	\$218,000	2019	\$444,000	2021
Relicense (w/ Agreement)	\$191,000	2018	\$397,000	2021
Surrender (w/ Facilities)	\$24,000	Immediate	\$236,000	2019
Surrender (w/ Removal)	\$660,600	2023	\$4,450,000	None

\*RJF revised 01/13/2015

# Flexibility Considerations

- FERC License Extension
  - Provides greatest flexibility in future options
- FERC License Application (Full Relicense)
- FERC License Application with Settlement Agreement
  - Continuing with licensing commits City to generate power for an undetermined period of time.
- FERC License Surrender with Facilities in Place
  - Eliminates future hydro generation, opens City to unknown conditions from FERC, commits City towards specific vision of Kinni River Corridor.
- FERC License Surrender with Dam Removal
  - Eliminates future hydro generation, commits City towards specific vision of Kinni River Corridor, and commits City towards significant expenses in short term.

# Next Steps

- License extension and surrender with the facilities in place are most consistent with priority of keeping short-term costs low.
- License extension keeps most options open for the future.
- What do we know we don't want to do?
  - Are we in the long-term hydro generation business?
    - Short-term?
  - How do we want to incorporate community planning process, if at all?
  - Do we want to abandon all operations and immediately move into removal at all costs?
- What more information do you need?