



COASTAL HYDROPOWER CORPORATION

**City of Quincy Presentation
July, 2013**

Agenda

1. Introduction
2. Technology Background
3. Lock and Dam 24 & 25
4. FERC Process
5. Development Strategy

The Company

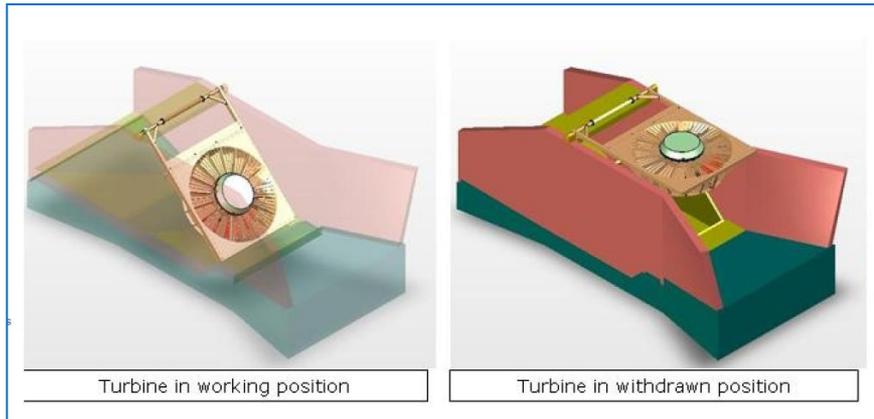
- Coastal Hydropower Corporation (“Coastal”) is a privately held Independent Small Hydro Producer .
- Coastal is focusing on developing, Small Hydro Generation using fish friendly low impact, low head water turbine technologies using the VLH turbine from France.
- Coastal has taken the lead into adapting the VLH turbine for North America with support from Canadian government.
- The VLH turbine is ideally suited for deployment into communities that have pre-existing infrastructure in the form of dams or weirs.

Very Low Head (“VLH”) Turbine

- VLH design is based upon a traditional Kaplan design for low head facilities less than 15 feet previously uneconomical – new hydro market opportunity.
- Reduces the impact of building conventional civil works and time for permitting/construction.
- Installed into existing piers on water level control weirs and bypass structures as we have at Lock and Dam 24 & 25.



Very Low Head Turbine – cont'd



- Application - existing dam sites with less than 15 feet of head.
- Power output 300 kW – 550 kW per turbine with flow volumes of 350 – 1,000 cfs.
- Very high efficiency - 85%.
- Removable for flood control and maintenance.
- Ties into low voltage distribution lines.

Very Low Head Turbine – con't

- VLH utilizes a direct-drive PMG synchronous generator.
- Design incorporates a trash clearing mechanism.
- Slow (35 rpm) speed is fish friendly – independent tests in France.
- Silent operation and virtually no visual impact.
- Significant advantages over other conventional hydro, wind and solar.



Lock and Dam 24/25 Projects



- Huge potential VLH projects for the City of Quincy at these two sites on the Mississippi River owned by the Corps of Engineers.
- FERC Permits issued to City of Quincy in January, 2013 for Lock & Dam 24 (30 MW's) and Lock & Dam 25 (20 MW's).
- Potential capital cost of approximately \$250 – 300 Million.

Lock and Dam 24/25 Projects

- City of Quincy previously undertook feasibility assessment of these two sites but the primary focus at that time was on Lock and Dam 21.
- Past work included hydrological analysis, energy analysis, cost analysis, identifying environmental concerns and comparisons for turbine selections.
- Some of this past work will be useful in the path ahead.

FERC Process

- Coastal engaged Nixon Peabody of Washington, DC who specialize in municipal arrangement transactions to guide the path ahead, also met with FERC.
- Most important feature of municipal arrangement is that title to and control of all project properties and operational control remain with the municipality.
- Developers can receive a share of project revenues and development fees in return for services provided.
- Coastal is preparing a draft Development Agreement that will be reviewed and subject to approval by legal counsel, City Council and Board of Directors of Coastal.
- Once a draft Development Agreement has been finalized then the City of Quincy will file a petition for declaratory order seeking FERC approval for the arrangement.

Development Proposal

- City of Quincy will retain all rights of ownership and title to the Projects.
- Coastal will act as the Developer and agent on behalf of City including the Regulatory requirements, negotiation of Power Sales Agreements, approvals on a Municipal, State and Federal level, Environmental Assessments, Project Design and specifications, Interconnection requirements, identifying and Hiring of Consultants, Suppliers and Contractors, overall Project Management, providing for Operational and Maintenance requirements, and sourcing of Debt Financing.
- Coastal will be responsible to provide development costs and in return will receive a share of project revenues and a development fee for providing their services subject to FERC approval - to be determined.

Development Proposal – cont'd

- Suggest that the City and Coastal will form a Management Committee to oversee development of the project.
- Development of the project will be conducted according to a Stage Gate Process incorporating six development steps whereby the Management Committee will review and make decisions on the continuation of the Projects at each Gate.
- Coastal will not be obligated to incur expenses of more than the amount stipulated at the end of each Gate unless the parties agree that the Projects are technically and economically feasible.
- A copy of the Stage Gate process will be negotiated and appended to the Development Agreement.

Development Proposal – cont'd

The City at this point has the following options:

- 1) Do nothing--FERC requires updates every 6 months, so will lose permits and any chance of financial recovery.
- 2) Allow Coastal to take over development of the Projects at their own expense to allow the City to not only recover past expenses but also realize a long-term (40 year) source of revenue, economic benefits from supplies and services into the community and creation of operatorship jobs for long-term employment.
- Suggest that the City consider forming an interim Hydropower task team to discuss more details of the proposal and form a LOI for presentation to Council at a later date to move forward.

Contact Information

For further information:

Coastal Hydropower

Neil Anderson - President

Ph: (250) 245-8676

Cell: (403) 998-8884

Email:

neil@coastalhydropower.com