

## Benefits of Traditional Hydro to MHK and the Regulatory Process

**Aaron Levine, Esq.**  
**Senior Legal and Regulatory Analyst**  
**National Renewable Energy Laboratory**

Hydrovision International  
Denver, Colorado  
June 27, 2017

NREL/PR-6A20-68738

Owned & Produced by:



Official Publications:



Media Partners:



#HYDROVISION

# Hydropower Regulatory Efficiency Act of 2013 (HREA) (16 USC § 823a): Qualifying Conduit Hydropower Facility

Section 4 of HREA established a *qualifying conduit hydropower facility* that is not subject to FERC licensing, but instead a Notice of Intent process that FERC can process within 60 days.

Qualifying Conduit\* Hydropower Facility Criteria:

1. Facility is constructed, operated, or maintained for the generation of electric power and uses only hydroelectric potential of a non-federally owned conduit.
2. Installed capacity does not exceed 5 MW
3. The facility was not licensed or exempted prior to enactment of HREA.

\* Conduit means “any tunnel, canal, pipeline, aqueduct, flume, ditch, or similar manmade water conveyance that is operated for the distribution of water for agricultural, municipal, or industrial consumption and not primarily for the generation of electricity.”

# Can hydrokinetic technology leverage the Qualifying Conduit Process?

## Terminology: Hydropower vs. Hydrokinetic

- 16 USC 823a (Qualifying Conduit) is silent on defining the term “hydroelectric potential”, and only defines eligibility criteria.
- Defining hydrokinetic:
  - FERC Website: Projects that generate electricity from waves or directly from the flow of water in ocean currents, tides, or inland waterways.
  - Energy Independence and Security Act of 2007 (PL 110-140): Defined for purposes of the MHK Renewable Energy Research and Development Act as:
    1. Waves, tides, and currents in ocean, estuaries, and tidal areas
    2. Free flowing water in rivers, lakes, and streams
    3. **Free flowing water in man-made channels**
    4. Differentials in ocean temperature (ocean thermal energy conversion)

## Practical Implications

- May not matter what you call it if you are harnessing free flowing water in a man-made channel, this may qualify (FERC would need to determine).
- How widespread could the qualifying conduit path be utilized by the hydrokinetic industry?
- Will the flow of water in conduit facilities match the technology requirements for hydrokinetics?

# Other mechanisms to develop and/or expedite the hydrokinetic FERC licensing process

**Preliminary Permits:** Section 5 of HREA 2013 provided the possibility to extend a preliminary permit from three years to five years (i.e., two year extension). This applies **equally** to traditional hydropower and hydrokinetics.

**ILP Process (including 18 CFR § 5.29(f)(2) waivers):** At this point, based on the state of technology, for hydrokinetic projects that are (1) small, (2) short-term pilot projects, (3) not located in sensitive areas, (4) removable and able to be shut down on short notice, and (5) removed and restored before license term ends.

\* Allows applicant to grid connect and generate revenue stream during testing

# Mechanisms to avoid the FERC licensing process

## Verdant Power LLC 111 FERC ¶ 61, 024



**Established Verdant Exception:** Under limited circumstances a hydrokinetic test project may not require a FERC license if:

1. Technology is experimental (e.g. early stage MHK)
2. Facility is for a short duration for the purpose of conducting studies necessary to prepare a license application (e.g. Verdant sought an 18 month test period)
3. Power generated from the test project would not be transmitted into or displace power from the national grid (e.g. cannot use this as a work-around for direct corporate procurement).

\* This did not remove Verdant's responsibility to comply with other Federal and state law.

# Mechanisms to avoid the FERC licensing process

## Maine Maritime Academy 130 FERC ¶ 62,234

Applied the Verdant exception:

- Prong 1: Technology was experimental
- Prong 2: Facility would be operated for a duration of up to five weeks. Commission further stated that the intention to deploy the hydrokinetic devices for educational purposes for students and a testing laboratory for technology developers satisfied purpose of facility being to conduct studies to prepare a license application.
  - Theorized that the advancement in technology which the academy's proposal could achieve will aid future applicants in preparation of license applications using the same technology.
- Prong 3: Not grid connected, electric power generated would be used to heat water or charge batteries to power non-grid connected research vessels or small barges.

Thanks!

Aaron Levine, Esq.  
Senior Legal and Regulatory Analyst  
National Renewable Energy Laboratory

Owned & Produced by:



Official Publications:



Media Partners:

