
Stone
Ridge
Hydro

Stone Ridge Hydro Origin, Focus and Status

Pete Blanchfield founded **Stone Ridge Hydro** in 2021 to expand his renewable energy, investment, financial and power market expertise to build a portfolio of small, run-of-river hydroelectric dams focusing on resource quality, power market strength and long-term economic value of hydroelectric power in an ever-evolving market for distributed generation.

Using our network of renewable energy and hydroelectric experts, **Stone Ridge Hydro** will restore run-of-river facilities to their full potential, bringing hydroelectric power back to small towns and communities.

Formed partnership with FDE Hydro Fall 2023 to combine engineering and project development to leverage expertise and team.

Stone Ridge Hydro
Project Updates:

Lower Swanton Dam, VT:

- Project on hold until Village of Swanton completes relicensing effort at Highgate Dam.
- Nature Conservancy and Vermont Agency for Natural Resources in precarious position after advocating for dam removal with 100 year flooding this summer.
- Plan is to complete environment and wildlife studies summer 2024 and submit license application March 2025.

Herkimer, NY:

- In the last stage of the foreclosure process with noteholder and ECOsponsible (owner).
- Public auction of land and project Sept 29 (”Upset Price” is $450k). Land should most likely be in the hands of noteholder by end of year.
- Termination of license with ECOsponsible following land returning to noteholder.
- Lease with an option to buy in parallel with exempt license application due March 2025.

Stone Ridge Hydro Investment Process:

Evaluate Resource

- Study historic water flows and develop seasonal production models
- Apply engineering expertise to model estimated production
- FERC licensing requirements – status for relicensing

Measure Economic Value

- Estimate Future Revenue, Expenditures and EBITDA
- Power Market Analysis
- Offtake Partners and Agreements

Drive Performance and Return

- Develop long-term OpEx and CapEx plan
- Acquire assets that will produce a 3:1 ROI and return of capital in 3-5 years
- Manage and invest in assets as long-term investments

Stone Ridge Hydro
Hydro Project Development Plan:

Lead Acquisition Due Diligence :
Complete production and financial models for acquisition targets, including OpEx and CapEx plan.

Operational Evaluation:
Complete all engineering due diligence for acquisition and develop operational plan, including staffing for each facility.

Capital Expenditure Plan:
Complete evaluation of facilities and create CapEx budget and plan for completion.

Licensing, Environmental and FERC
Hire and engage attorney with specific FERC expertise to manage the reporting, remediation and relicensing process.

Manage Fleet Operationally:
Provide operational, engineering and financial reporting structure for the portfolio.

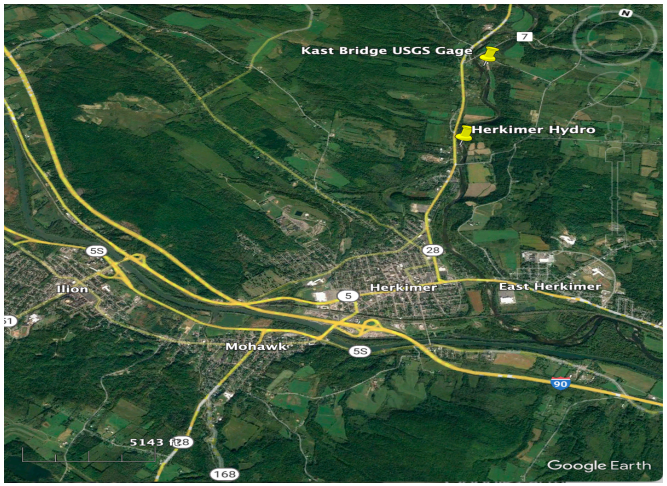
Herkimer, NY (P-9709):

The Herkimer Dam (P-9709) is located on the West Canada Creek near the Village of Herkimer in Herkimer County, NY. The project was developed at the site of an existing dam, constructed in 1987 by McGrath Industries, Inc. of Clifton, NY and became operational in 1988.

Last year of operation was 2006. The prior owner, Trafalgar, was unable to provide the necessary maintenance and operation required after a flood in the same year. Trafalgar filed for bankruptcy protection in 2014 and the Project was sold to ECOsponsible, LLC on April 20, 2015.

System size 1.7 MW, 1,680 KW (dc), capacity factor 41.5% with four of five units running. There are four ESAC turbine/generator units and one smaller Flygt unit. Annual production is estimated to be ~5M kWh per year. Total kWh price $0.08 Value of Distributed Energy Resources (NYSERDA), producing ~$500k in annual revenue.

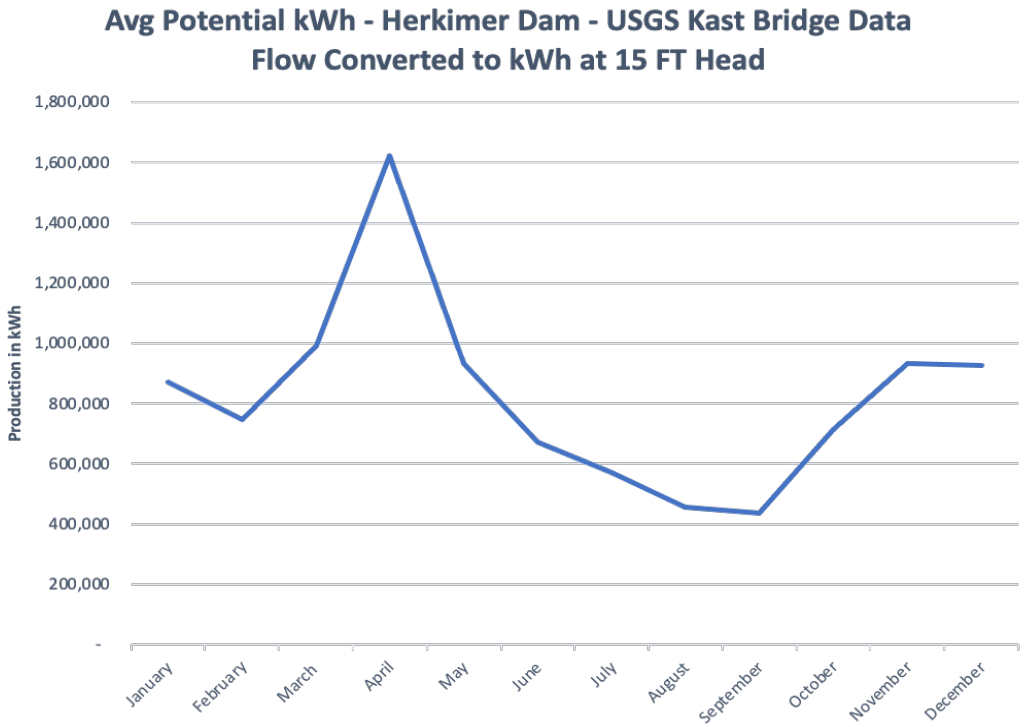
Project will require $2.5M in estimated repairs required for FERC to issue an exempt license.



Flow and Production Summary:

Herkimer Project (NY):

Criteria	
Location	Herkimer, NY West Canada Creek
Capacity	1.7 MW
Currently Operating	No
FERC License Status	2027
Development capital	$2.0M
Total Investment	$2.5M
Current EBITDA	N.A.
Potential EBITDA	$460k
Total investment/ Potential EBITDA	5.1x
Est. IRR	25%

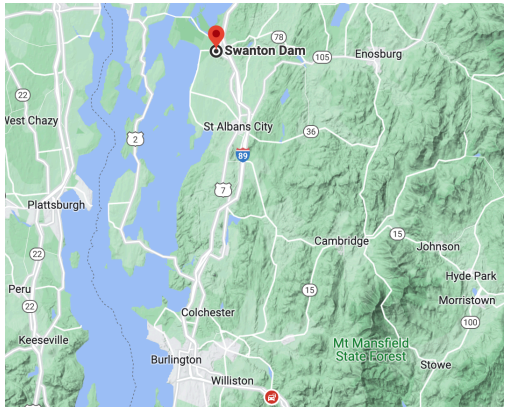


Development Project – Stonecat Hydro: Lower Swanton Dam (VT)

Lower Swanton Dam (P-15280) is located on the Missisquoi River in the Village of Swanton near Lake Champlain, ~8 miles from the Connecticut River. Prior fish passage challenges led to calls to remove the dam. Village of Swanton, who is the owner of the property and dam, succeeded in promoting and taking the lead in developing the project, addressing fish passage and all environmental risks.

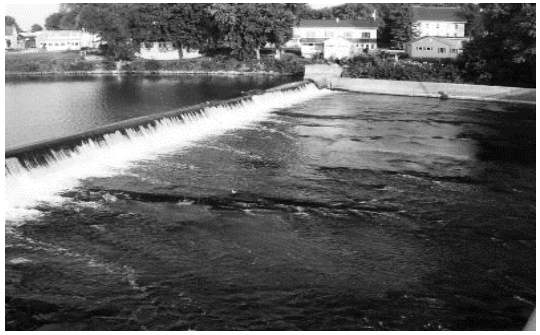
Stonecat Hydro (100% owned by Stone Ridge) is the lead developer and owner of the project through its partnership with the Village of Swanton. Preliminary permit accepted by FERC as of June 9, 2022. Allows for two years to develop the project and gives first position to Stonecat for filing an exempt license.

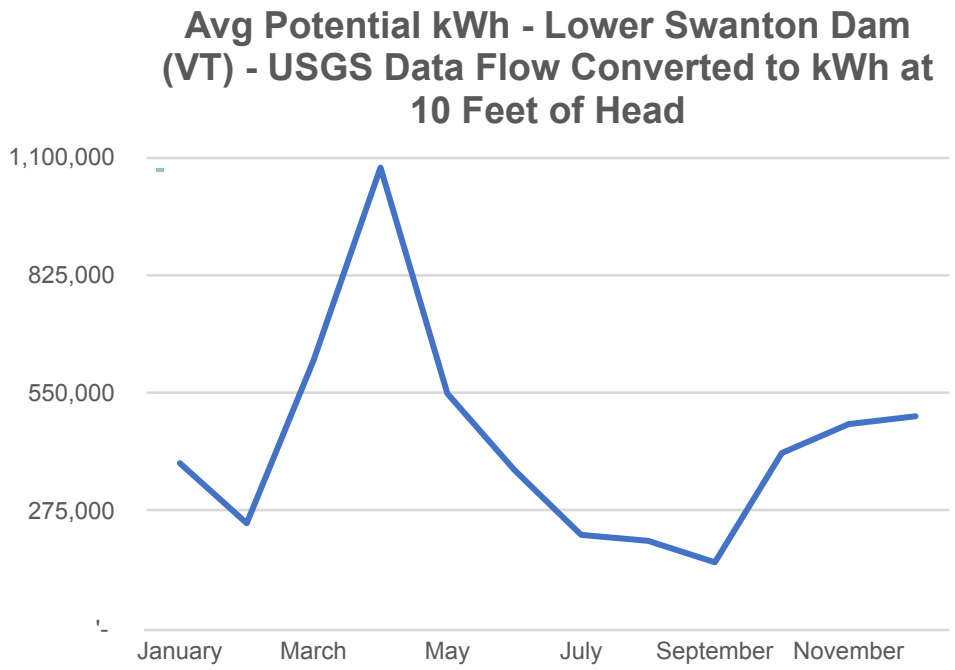
The project facilities are anticipated to consist of an existing dam, a former concrete power canal that will be reutilized for new fish passage and a new concrete intake structure on the right embankment. A new concrete powerhouse will be built housing three turbines with a combined total capacity of 800 – 1,200 kW along with a new tailrace, trash rack and fish bypass. Total project costs are estimated to be $10-12M.



Development Project – Stonecat Hydro: Lower Swanton Dam (VT)

Criteria	
Location	Village of Swanton, VT Missisquoi River
Capacity	800 – 1200 kW
Est. Annual Production	4-6M kWh
Currently Operating	Not Operating
FERC License Status	NOI and PAD
Development capital	$250k - $1M
Total Project Costs	$10-12M
Potential EBITDA	$400-800k
Total Dev Cap Return/ Potential EBITDA	8.0x
Est. IRR	35%





Power Market Approach:

- Independent System Operators (ISO) serve as the ”day ahead” market price for hydroelectric power producers. ISOs provide a wholesale market for independent power producers. Wholesale market pricing for renewables has fallen significantly over the last ten years due to a significant increase in the supply of renewable power from solar power.
- Congress passed the Public Utility Regulatory Policies Act of 1978 (PURPA) to encourage fuel diversity via alternative energy sources and to introduce competition into the electric sector. This competition came in the form of Qualifying Facilities (QFs). A QF is a Federal Energy Regulatory Commission (FERC)-approved electric generating facility that falls into one of two categories: small power producers, which are generating facilities of 80 MW or less whose primary energy source is a renewable resource, biomass, waste, or geothermal; and cogeneration facilities, which sequentially produce electricity and another form of useful thermal energy.
- PURPA provides QFs with the right to interconnect with a utility-controlled grid and requires utilities to purchase the QF’s energy and capacity – the mandatory purchase obligation – at “avoided cost.” Avoided cost is what it would have cost the utility to generate or contract for the energy and capacity in the absence of the QF.
- Power purchase agreements are available for hydro facilities in both corporate (PPA) and virtual (VPPA) agreements; and through these long-term agreements, provide above-market, inflation-adjusted pricing or renewable power produced, which include monetary value for environmental credits created, which are highly sought by offtakers seeking to reach carbon neutral mandates.

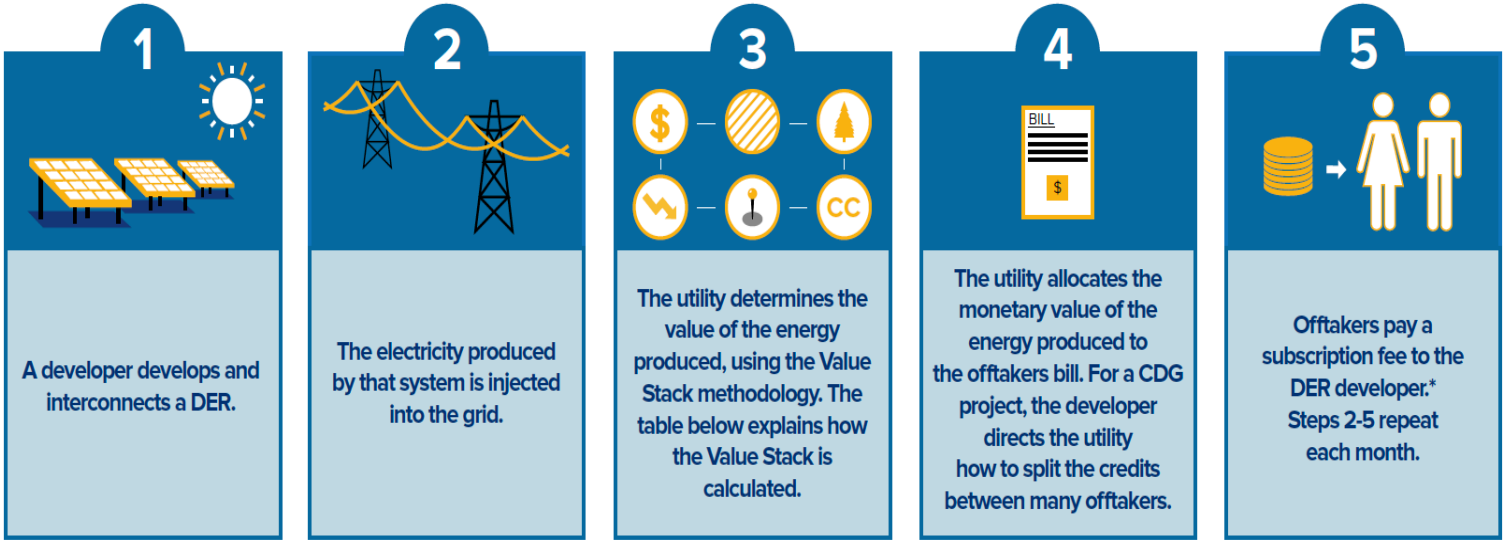
NYSERDA Value of Distributed Energy Resources- Key Points

Stone Ridge Hydro

- Started in March 2017, New York State began a transition away from net metering to the Value Stack.
- The Value Stack was developed with robust feedback from utilities, project developers, and other external stakeholders to ensure an accurate and fair compensation model to provide project owners and developers with reasonable revenue certainty and bankability.
- The Value Stack compensates energy producers with monetary credits. Offtakers (customers receiving the bill credits from a DER) will see a dollar credit on their electric bill.
- Hydro projects under 5MWac on a distribution network can receive VDER compensation.
- VDER is only available to existing customers (wheeling power) in the same electrical “Zone” as the energy producer.
- Monetary credits are generated each month by the power supplier equal to the production supplied.

NYSERDA Value of Distributed Energy Resources- Value Stack Process

How the Value Stack works



*Currently, the offtaker will receive a separate bill from the developer. Under consolidated billing, the payment will be made by the utility to the developer "behind the scenes" and offtakers will only see their single electric bill.

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Note- Credits are delivered monthly to the offtaker/subscriber in exchange for a monetary payment to the renewable energy producer, equal to the sum of the VDER components, less at 10-15% discount.
E.g. Month 1- Subscriber pays $850 for production credits worth $1,000, equal to a 15% discount on electrical power it uses. In return, the $1,000 worth of credit can be applied to future bills.

NYSERDA Value of Distributed Energy Resources

Stone Ridge Hydro

How the Value Stack is calculated

Value Name	Description	Eligible DERs
Energy Value (LBMP)	LBMP is the day-ahead wholesale energy price as determined by NYISO. It changes hourly and is different according to geographic zone.	All technologies: PV, storage, CHP, digesters, wind, hydro, and fuel cells.
Capacity Value (ICAP)	ICAP is the value of how well a project reduces New York State's energy usage during the most energy-intensive days of the year. Developers can choose from three payout alternatives and most ICAP rates change monthly.*	All technologies receive ICAP. Dispatchable technologies (stand-alone storage, CHP, digesters, and fuel cells) will receive Alternative 3.
Environmental Value (E)	E is the value of how much environmental benefit a clean kilowatt-hour brings to the grid and society. The E value is locked in for 25 years.**	PV, wind, hydro, and storage charged exclusively from PV or wind energy. Stand-alone storage is not eligible at this time.
Demand Reduction Value (DRV)	DRV is determined by how much a project reduces the utility's future needs to make grid upgrades. DRV is locked in for 10 years.**	All technologies.
Locational System Relief Value (LSRV)	LSRV is available in utility-designated locations where DERs can provide additional benefits to the grid. Each location has a limited number of MW of LSRV capacity available. The LSRV is locked in for 10 years.**	All technologies. Project must be on a utility-specified substation.
Community Credit (CC)	CC is available on a limited basis to encourage the development of Community Distributed Generation (CDG) projects. CC is the successor to the Market Transition Credit (MTC) and is similar in structure. The CC is locked in for 25 years.** PV projects in utility territories that have fully expended their CC may be eligible for the Community Adder – an upfront incentive administered by NY-Sun.	Available for CDG projects including PV and digesters. Wind, hydro, and fuel cells receive CC at a derated value. Not available for stand-alone storage or CHP.