

Expanse Energy Corporation Introduces Modular 16 MW Dam-Free Hydropower System

EEC's new PDHT containerized units deliver 5–16 MW of dispatchable, dam-free baseload power at \$2,000/kW CAPEX, deployable in weeks for microgrids, mining sites, and island communities.

Washington, D.C, District of Columbia Nov 6, 2025 ([Issuewire.com](https://www.issuewire.com)) - Expanse Energy Corporation (EEC), a Delaware-registered clean energy company, today announced the launch of its **modular 16 MW dam-free hydropower system**. Using its **Piston Driven Hydropower Technology (PDHT)**, the system provides continuous, dispatchable baseload electricity without relying on rivers, dams, or elevation. This marks the company's first commercial-scale product offering, transitioning from early pilot installations to full deployment.

PDHT generates electricity by harnessing gravity and buoyancy. Water-filled pistons descend under gravity to drive Pelton turbines, while buoyancy-based resets recycle the system with minimal water input. The design is closed-loop, requiring less than 0.1% daily makeup water, and avoids environmental disruption associated with conventional hydropower. Efficiency before parasitic loads reaches 84%, supporting cost-effective, reliable energy production.

EEC's **Shipping Container (SC) Modularity Concept** transforms standard 20' and 40' ISO containers into stackable, scalable power modules. Installations range from 5.6 MW to 16 MW, with container stacks of 5–9 levels. Built to API and ISO standards with an 85-year lifespan, these units can be deployed within weeks, offering rapid deployment for microgrids, mining operations, island utilities, disaster relief, and defense infrastructure.

Economically, the platform is designed for cost efficiency. Projected **levelized cost of energy (LCOE) is \$0.045 per kilowatt-hour**, below solar or wind when dispatchability is included. The system's base configurations include an 8 MW net output unit at \$16 million CAPEX and a 16 MW net output unit at \$32 million CAPEX. Integration of **High Density Fluid (HDF)** technology can increase output by up to 50% or reduce footprint by one-third, improving return on investment while maintaining environmental compliance.

Global market potential is significant. According to the World Bank, **759 million people worldwide lack access to electricity**, while utilities require dispatchable renewable solutions to stabilize grids. EEC's modular hydropower platform addresses both challenges, providing zero-emission baseload electricity for underserved communities and supplementing energy supply for industrialized regions transitioning away from fossil fuels.

The company is led by CEO Ed Nichols and a 12-person team of engineers and cleantech specialists, combining experience in oil and gas with renewable energy innovation. EEC is actively seeking **\$40 million in seed investment** to advance technology from TRL 4 to pilot-scale deployments (TRL 5–9) and accelerate commercialization. With robust intellectual property and a global partner network, the company is positioned to play a significant role in the next generation of scalable, dispatchable renewable energy solutions.

Investors and strategic partners are invited to engage with EEC to support the deployment of modular, dam-free hydropower systems capable of delivering reliable, sustainable electricity worldwide.

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