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To: Dr. Whitney G. Colella
President
Gaia Energy Research Institute, LLC
Alexandria, VA 22304
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Re: Letter of Funding Commitment from Vesta Systems to Gaia Energy Research Institute (Gaia), regarding U.S. Department of Energy (DOE) Solicitation Number DOE-FOA-0003504 DOE FY2025 Phase I Release 2 proposal, Technical Topic and Subtopic: C60-32a, Office of Electricity: Novel Microgrid Database Development with Artificial Intelligence

Dear Dr. Whitney G. Colella,

Vesta Systems is pleased to offer its financial support for Gaia Energy Research Institute (Gaia), in its work researching topic C60-32a, Novel Microgrid Database Development with Artificial Intelligence. Vesta is a developer of combined heat and power (CHP) microgrids with deep ties to the domestic food service industry. We are currently in construction of three such plants here in our home state of Texas.

It is our assessment that the best and highest use of artificial intelligence technologies is in highly streamlined applications rather than the more general kinds too often touted by investors and futurists: AlphaGo or GitHub Copilot, rather than GPT or DeepSeek. Gaia's proposal lives directly into this orientation by focusing its efforts on building intelligent algorithms that glean actionable, precision insights from free-form data about the inherently multifarious operations being scrutinized.

Vesta has erected its business model on the realization that, for "mezzanine"-scale 500 kW to 5 MW microgrids, lead time is a critical enabler. By far the most sensitive aspect of a project's overall lead time are the requisite "white glove" sales and pre-sales processes. Immediate, highly detailed, and informed responses during these ultra-sensitive periods is tantamount to retained interest of the prospect, and hence growth of the entire market. As such, Vesta sees Gaia's proposed microgrid database as a key tool in being able to prospect with efficacy as measured by the achievement of a high conversion-rate batting average.

Through our work, we have accumulated a wealth of project-related data as well as granular plant operational data. This involves data from several megawatt-scale food-processing and warehousing plants in Texas and New Mexico. Project data includes engineering designs, financial arguments, procurement deliberations, construction timelines, and more. Operational plant data includes electrical interval data, grid pricing information, outage information, and detailed generator telematics, as well as detailed refrigeration system data including temperatures and humidities as well as refrigerant pressures and flow rates. We will share the entirety of this set of proprietary and sensitive information with Gaia.

This information sharing arrangement will be conducted in a secure manner, and will also remain subject to the non-disclosure agreement that our two respective organizations already have in place. In service to furtherance of the endeavor's future commercial prospects, however, Vesta will, at its expense, retain its legal team to investigate legal structures whereby anonymized and / or obfuscated insights gained from the data vis-a-vis its harvesting by the proposed artificial intelligence bot, can be published without either removing NDA protection or threatening the loss of any significant competitive advantage accruing to Vesta.

As this usefulness versus confidentiality balance is a tricky and subjective one, Vesta will give Gaia extensive feedback about algorithmic outputs, attending to both its own needs, as well as to the needs of Gaia as they attempt to solicit database input from future participants beyond an initial tranche of users.

Based on labor time and the value of the data being shared, we anticipate cumulative in-kind contribution being in the value of $30,000.

Vesta has actively collaborated with Gaia on microgrid projects for the past five years and is extremely confident in Gaia's ability to execute on the proposed DOE SBIR project. Gaia has played a major role in helping Vesta develop its microgrid deployment strategy. For example, Gaia has helped identify key technologies for Vesta to couple together within microgrids and has helped build thermodynamic-economic-environmental analyses to evaluate the efficacy of different microgrid deployment approaches. We are very impressed with Gaia's depth of expertise in microgrid design and data science, both of which are essential to the proposed DOE SBIR topic. We plan to work in partnership with Gaia indefinitely, for as long as our respective skill sets and strategic perspectives continue to align.

Sincerely,

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