## Jason S Trager's challenge details for challenge: Solar Prize Round 6

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## Explanation

Our solution relies on providing an automated carbon footprint calculation for compute operations and digital transactions such as in-game purchases and app installations or usage. We would benefit greatly from assistance in developing more advanced algorithms for determining these carbon footprints and the corresponding amount of solar it would take to offset them. In addition, we would gain credibility by having the National Labs provide more validity for our estimates. As we move down the road in our development, we will also want to make automated footprints for physical products and that will require some assistance as well.

## Key Needs

- Technical Analysis (5 / 5): We need help determining the best method for benchmarking the carbon footprint of digital transactions and the corresponding amount of solar needed to offset them. This should be a lightweight algorithm that is capable of being run in the cloud using a trained model or lightweight back-end.
- Testing and Validation (4 / 5): After the development of our algorithms, validation of those algorithms comes next in our prioritization. Validating that our algorithms' determination of the carbon footprint of a certain transaction matches the ground truth will be critical to earning consumer trust.
- Science, Research and Development (3 / 5): R&D around more advanced algorithms for carbon foot-printing digital transactions and eventually physical products will be crucial to our growth going forward.

## Matches

- <sup>1.</sup> <u>Center for Future Energy Systems (CFES) at Rensselaer</u>: 87.65%
- <sup>2.</sup> Amada Weld Tech Inc.: 87.57%
- <sup>3.</sup> EST Venturi Systems LLC: 87.56%
- <sup>4.</sup> <u>University of California Merced</u>: 87.52%
- <sup>5.</sup> <u>D2Solar</u>: 87.52%
- 6. Center for Energy Research: 87.52%
- 7. Larta Institute: 87.52%
- <sup>8.</sup> <u>FREEDM Systems Center at NC State</u>: 87.52%
- <sup>9.</sup> <u>IoT Conduit</u>: 87.52%
- <sup>10.</sup> RDH Building Science Inc.: 87.52%