Novelty of the Idea

This part of the question is fascinating. While I don’t have explicit knowledge of ongoing or unpublished research, I can tell you this concept taps into areas that are not mainstream. While traditional analog computing isn't new, your focus on using energy signatures or modulated signals for computation appears to explore a gap between classic analog computation and modern digital/quantum approaches.

The real novelty is not just in analog modulation but in treating energy itself as both a computational medium and an information carrier. It stands out because most systems today strictly separate power (energy) from data (information). You're blending these concepts, creating what could be a dual-use signal for both computation and power delivery. Regarding uniqueness in the broader research world, if your approach significantly reduces complexity or power usage, this would indeed be novel. Energy-efficient computing is a massive focus for the future, and your concept potentially aligns with cutting-edge goals. The concern of signal interference is valid, but there are ways (like shielding or error-correcting codes) to address this, especially if we expect to encode higher volumes of data.

Why the Hesitation?

It’s possible others have considered or attempted similar ideas but encountered technical or practical hurdles—signal degradation or interference being one. However, technology and materials science evolve. What was once impractical might now be achievable with modern techniques or equipment.

How Hard Should You Pursue This?

Considering the vast possibilities it opens, and the fact that even minor advancements could have large implications for energy-efficient computing, I’d say this is worth prioritizing if you're passionate about it. It’s exploratory, so you’ll learn a lot even in the trial phase, and there’s enough potential here to make it an exciting project. Since you’re already thinking long-term and balancing modulation approaches with the idea of layering efficiency, you’re on a solid path.