

Due Diligence Instructions

Subject: Due Diligence Materials for the Electrical Current Balancing System (ECBS) – US Patent 12,375,324 B2

On behalf of Synerex, we are pleased to provide you with the enclosed Due Diligence Pack relating to the Electrical Current Balancing System (ECBS), protected under US Patent 12,375,324 B2. This material is provided under the terms of our Non-Disclosure Agreement (NDA) and is intended solely for your internal due diligence review.

Purpose of this Information

These materials are designed to support your technical, legal, and commercial teams in verifying the scope of the ECBS technology, its patent protections, and its business case. The objective is to confirm alignment with your organization's needs and to facilitate licensing discussions.

Next Steps & Required Actions

We request that your team complete the following upon review of the materials:

1. Confirm Technical Alignment – Provide written confirmation of how ECBS aligns with your current or planned product lines.
2. Address Legal/IP Considerations – Share any legal or intellectual property questions that may arise during your review.
3. Propose Licensing Framework – Outline your preferred path forward (e.g., exclusive license, non-exclusive license, OEM arrangement, or pilot project structure).

Timeline

We respectfully request a written response within 2 weeks of receipt of this letter and the accompanying materials. Timely feedback will allow both parties to proceed efficiently in structuring a mutually beneficial licensing arrangement.

Confidentiality

As a reminder, all information provided is confidential and may not be disclosed or shared beyond your authorized due diligence team without Synerex's prior written consent.

Point of Contact

For questions, clarifications, or requests for supplemental materials, please direct all communications to:

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We appreciate your prompt attention to this process and look forward to your feedback. Together, we believe the ECBS platform can deliver significant value to your customers and strengthen your power quality offerings.

ECBS Due Diligence Pack

Electrical Current Balancing System (ECBS)
US Patent 12,375,324 B2
Inventor: Gregory A. Dockery
Licensor: Synerex Laboratories, LLC

1. Executive Overview

The Electrical Current Balancing System (ECBS) addresses widespread inefficiencies in three-phase electrical networks by improving power factor, reducing harmonic distortion, and stabilizing voltage. The system consistently improves power factor to ≥ 0.98 , reduces total harmonic distortion (THD) by up to 95%, and delivers current reductions of 10% or more in inductive networks, while also lowering CO₂ emissions.

2. Intellectual Property (IP)

US Patent No. 12,375,324 B2 covers the ECBS architecture, methods, and apparatus. The patent includes independent and dependent claims relating to harmonic filtering, current balancing, power factor correction, and network-wide monitoring. The IP strategy is reinforced by potential licensing frameworks, enforcement readiness, and strong precedence from royalty cases in the power electronics industry.

3. Technical Dossier

The ECBS integrates multiple devices—line/power filters, harmonic filters, switchgear booster, rack systems, load controllers, bi-directional metering, and servers—into a holistic network-wide system. The technology is IEEE-519 compliant and has been validated in industrial and commercial deployments. Measured benefits include improved power factor, THD reduction, reduced I²R and eddy-current losses, and enhanced equipment life.

4. Commercialization Plan

Target markets include manufacturing plants, hospitals, data centers, utilities, and large commercial facilities. Revenue will derive from hardware sales, SaaS monitoring subscriptions, and licensing agreements. Deployment strategy begins with three installation crews, scaling to ten crews, supported by OEM licensing partners.

5. Financials

Five-year projections show significant revenue growth across hardware, SaaS, and licensing streams. Cost savings are driven by reductions in demand charges, kVA billing, PF penalties, and avoided equipment failures. The capitalization structure includes investor positions, convertible notes, and strategic partnership frameworks.

6. Risk & Mitigation

Risks include technical risks (equipment compatibility, installation practices), market risks (utility adoption rates), legal risks (incumbent challenges), and execution risks (distribution bottlenecks). Mitigations include software-driven adaptability, pilot programs, a strong issued patent, and diversified OEM licensing.

7. Appendices

Appendices include the issued patent document, engineering briefs, system diagrams, comparative analyses, sample licensing agreements, and investor one-pagers.
