EnergyPlus Track Roadmap

# 📘 Executive Summary

The EnergyPlus Track in the EM Tools suite supports the translation, export, and automation of energy modeling workflows using EnergyPlus as the primary simulation engine. It includes bidirectional translation between normalized EM JSON models and IDF files, batch run capabilities, LEED modeling support, and GUI integration for scenario control.

# 🚧 Development Phases

## Phase 1: Core Export Modules

- `export\_to\_idf.py` – Translate normalized EM JSON → IDF.  
- `run\_translation\_pipeline.py` – Automate CBECC → EM JSON → IDF export flow.  
- `module\_interactions.txt` – Track dependencies between core modules.

## Phase 2: Bidirectional Translation + LEED Support

- `export\_to\_iesve.py`, `export\_to\_cbecc\_ief.py` – IESVE and CBECC XML export from EM JSON.  
- `leed\_modeling\_assistant.py` – Add LEED-specific baseline and unmet load checks.  
- `generate\_econ1\_pdf.py` – Create ECON-1 compliant PDF reports from EnergyPlus runs.

## Phase 3: GUI Integration + Batch Processing

- `streamlit\_app\_v0.4.py` – Streamlit-based visual model navigator with export triggers.  
- `batch\_runner.py` – Support batch IDF generation and EnergyPlus runs across scenarios.  
- `esg\_report\_formatter.py` – Future export of ESG-ready summaries using EnergyPlus results.

# ✅ Status Summary (as of July 16, 2025)

- Phase 1: Complete  
- Phase 2: Under Development  
- Phase 3: Queued for Post-MVP