# **Ember Core (EC) – Project Master Document**

*Node: NODE-OC-01 • Project Code: EC • Rev A*

## **Project Overview**

**Summary:** Ember Core is the first operational project of the PSN, a modular solar charging station designed for durability, accessibility, and scalability. It serves as the core power system for NODE-OC-01, enabling off-grid operations and acting as a proof-of-concept for future PSN deployments.

**Primary Objectives:**

* Provide a reliable solar-based power supply.
* Use accessible, easily sourced parts for replicability.
* Document the build process to enable others to create their own.

## **Phase Index & Navigation**

### **Phase 1 – Foundation & Orientation**

**Summary:** Initial planning, design layout, and orientation of the solar charging station concept. Defined goals, gathered specifications, and identified key components for proof-of-concept build.

**Documents:**

* [[Phase 1 – Foundation & Orientation](https://docs.google.com/document/d/1rZGQIQzokb7t4NdjMP897RrR4QGEihzVwv2VNedEqFI/edit?usp=drive_link)]

### **Phase 2 – Build**

**Summary:** Main assembly of the Ember Core system, including component installation, wiring, and integration of environmental durability features. Includes skill-building resources to support technical steps.

**Documents:**

* [[Bill of Materials](https://docs.google.com/spreadsheets/d/1McVXnFCwlcahf6ANrHuZPBjaW1NSh8GgXwVhW83CJbc/edit?usp=drive_link)]
* [[Phase 2 Build Doc](https://docs.google.com/document/d/1-4cnPVqmFLMWaymTQghoNi7_oh9k1TA4-VjJfVAZVqM/edit?usp=drive_link)]
* [[Skills Corner](https://docs.google.com/document/d/1rQHd8wCtrUni3YYJDudp1Fj48SfJszPq9APB5RxWrDk/edit?usp=drive_link)]
* [[Phase 2 Start / Planning Notes](https://docs.google.com/document/d/1y9Eo41l2OYX5rRNxx5EPqtWUl3c0ONxWnJ273OAfBeA/edit?usp=drive_link)]

### **Phase 3 – Installation & Commissioning**

**Summary:** Relocation of Ember Core into its semi-permanent operational location, final system integration, and readiness verification. Phase focuses on real-world application and adaptability for different environments.

**Documents:**

* [[Phase 3 Start / Overview](https://docs.google.com/document/d/1STvX8NMV4O9BmsVwOrvRSmD37A_g2osDOoYjn32IY6c/edit?usp=drive_link)]
* [[Phase 3 Install Doc](https://docs.google.com/document/d/1EHwgPdenJoOpMsTwTJzH1oijWh1cgwW1WU_X6WqtcR4/edit?usp=drive_link)]
* [[Bill of Materials](https://docs.google.com/spreadsheets/d/1McVXnFCwlcahf6ANrHuZPBjaW1NSh8GgXwVhW83CJbc/edit?usp=drive_link)]
* [[Phase 3 wrap-up/ Overview](https://docs.google.com/document/d/1sJbw1g8A7Kha6VrEeXW2jr5zAOqZTMaNC6ZtZpqQryA/edit?usp=sharing)]

## **Supporting Information**

* **PSN Naming Conventions:** [[LINK](https://docs.google.com/document/d/1pmfCc_BmV6OiWrMwf25vu_t41RhP1O0a6gQsM8x27jY/edit?usp=drive_link)]
* **PSN Project Template:** [[LINK](https://docs.google.com/document/d/1mjuLPyBD9rC024QJZ_DZlWIwjhHvvSMWkPG7w94HJcI/edit?usp=drive_link)]

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