



The Ultimate Off-Grid Cabin Planning Checklist

Phase 1: Location & Legal

- ☐ **Research Zoning Laws:** Confirm that local regulations permit off-grid living and small structures.
- ☐ **Check Land Covenants:** Ensure there are no property restrictions (HOA rules, etc.).
- ☐ **Analyze Sun Exposure:** Use a sun path app to map the sun's movement across the property for optimal solar panel placement.
- ☐ **Assess Water Access:** Evaluate potential for rainwater collection, well drilling, or proximity to a natural water source.
- ☐ **Verify Site Access:** Ensure the road to your site is accessible for material delivery and construction.

Phase 2: Cabin Design & Build

- ☐ **Finalize Square Footage:** Design a layout that meets your needs without excess space.
- ☐ **Orient for Passive Solar:** Position the largest windows facing south (in the northern hemisphere) to maximize winter sun.
- ☐ **Choose Insulation Type:** Select high R-value insulation (Spray Foam, Rigid Foam, etc.) for the floor, walls, and ceiling.
- ☐ **Select Windows:** Opt for double-pane or triple-pane windows for better thermal performance.
- ☐ **Plan a Sustainable Wood Source:** Source pine and other materials from local, certified sustainable suppliers.

Phase 3: Power System - Solar

- ☐ **Calculate Your Daily Watt-Hour Needs:** Complete the 5-step energy audit from the article.
- ☐ **Select Solar Panel Type:** Choose between Monocrystalline or Polycrystalline panels based on your budget and efficiency needs.
- ☐ **Size Your Battery Bank:** Determine your required "days of autonomy" and choose between Lithium or Lead-Acid batteries.



- [] **Choose an Inverter:** Select a pure sine wave inverter that can handle your peak power load.
- [] **Select a Charge Controller:** Choose an MPPT controller for maximum efficiency.

Phase 4: Water & Waste Systems

- [] **Design Rainwater Harvesting System:** Plan roof, gutters, pre-filter, and cistern size.
- [] **Select Water Filtration System:** Choose a multi-stage filter (sediment, carbon, UV) for potable water.
- [] **Choose a Toilet System:** Select a composting toilet model that fits your space and capacity needs.
- [] **Plan Greywater Disposal System:** Design a simple leach field or bio-filter for water from sinks and showers.

Phase 5: Interior & Appliances

- [] **Select High-Efficiency Refrigerator:** Choose a 12V DC model for the lowest energy consumption.
- [] **Install 100% LED Lighting:** Ensure every light fixture uses low-wattage LED bulbs.
- [] **Choose Heating Source:** Select a primary heat source (wood stove, propane heater) that does not rely on electricity.
- [] **Plan for Connectivity:** Research satellite or cellular internet options and include their power draw in your calculations.