Below is the diagram explaining these three system applications:

**Grid-Connected Renewable Energy System**
- Tracks and regulates battery charging to ensure batteries are ready to supply backup power when the grid fails.
- Grid failure and instantly switch to backup power stored in the battery bank. When the grid is active, the XW System will
- Allows excess energy that is generated to be exported to the grid, and allows the grid to act as an additional energy
- The XW System is the ideal solution for homes that are connected to the utility grid, where owners want to incorporate

**Off-Grid Power**
- Made from wind or hydro generators.
- Used for both residential and commercial stand-alone, grid-backup, and grid-tie applications with battery energy storage.
- The SCC can be used to manage the charge current to the battery bank, and to protect and maximize battery energy storage.
- Battery Temperature Sensor (BTS) to provide temperature-compensated battery charging.

**Backup Power**
- Uses a combination of embedded electronics: a Base Station, an inverter, a charge controller, a Battery Management System (BMS), and four XW Solar Charge Controllers.
- Battery Energy Storage System (BESS) to power critical loads during grid failure.
- Solar-Max Inverter/Charger
- Battery Charge Controller (BCC)
- Battery Management System (BMS)
- Automatic Generator Start (AGS)
- MPPT-60-150 Solar Charge Controller (XW SCC)
- The XW Power Distribution Panel (XW PDP) includes a Battery Status Indicator and breakers to support a code-compliant
- Solar Charge Controller (XW SCC)
- Automatic Equalization (AE) for auto-dialing and equalizing
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- Two-stage charging process, with manual equalization to maintain battery performance and extend battery life.
- Maximum Power Point Tracking (MPPT) to deliver the maximum available power from a PV array to the battery bank.

Key Features:
- 100% solar-borne, fully-functional system with no need for a separate inverter.
- Battery charge controller connects to the system through an Xanbus connection.
- Provides the ability to manage the charge current to the battery bank, and to protect and maximize battery energy storage.
- Battery Status Indicator and breakers to support a code-compliant, autonomous operation.

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XW System Overview

The XW System consists of several devices, components, and optional accessories that, when installed together, create a renewable energy power system that can be customized to suit nearly any application—off grid, grid–tie, or backup.

Field-serviceable, with out-of–the-box network capability, the complete Xantrex XW System consists of a high-efficiency XW Inverter/Charger, XW Power Distribution Panel, including both AC & DC breakers, and the XW Solar Charge Controller.

The XW System consists of:

- **XW System Control Panel (XW SCP)**
  - The XW SCP gives a single point of control to setup and monitor an entire system, which may consist of multiple XW Inverters/Chargers, XW Solar Charge Controllers, etc.
  - Interfaces with: XW Hybrid Inverter/Chargers, XW Solar Charge Controllers, XW Automatic Generator Start

- **XW Automatic Generator Start (XW AGS)**
  - The XW AGS adds intelligence to power management and eliminates time spent monitoring batteries and inverter loads.
  - The XW AGS can be customized to suit each user’s preferences. A user can define whether the generator should be activated by low-battery voltage, thermostat operation, or load size on the inverter(s). A quiet-time setting prevents the generator from starting at inconvenient times. LED lights display the status of the XW AGS, while all user-defined settings are programmed through the system control panel (SCP).
  - Interfaces with: XW Solar Charge Controllers, and XW SCP

- **XW Connection Kit (for additional XW Hybrid Inverters/Chargers)**
  - The XW Connection Kit is a wiring kit and conduit box used to connect additional inverters into an XW Power Distribution Panel and is pre-cut and labeled to facilitate easy installation.
  - Interfaces with: XW Hybrid Inverter/Chargers

**XW System Control Panel (XW SCP)**

The XW SCP features a graphical, backlit LCD screen that displays system configuration and diagnostic information.

Large keypad buttons, an intuitive onscreen menu system, and plain text status messages make it easy to configure and operate all devices connected to the Xanbus™ Network. The XW SCP gives a single point of control to setup and monitor an entire system, which may consist of multiple XW Inverters/Chargers, XW Solar Charge Controllers, etc.

Interfaces with: XW Hybrid Inverter/Chargers, XW Solar Charge Controllers, XW Automatic Generator Start

**XW Automatic Generator Start (XW AGS)**

The XW AGS is a Xanbus™-enabled device that can automatically activate a generator to provide an XW Inverter/Charger with power to recharge depleted batteries or assist with heavy loads. Compatible with popular generators, the XW AGS adds intelligence to power management and eliminates time spent monitoring batteries and inverter loads.

The XW AGS can be customized to suit each user’s preferences. A user can define whether the generator should be activated by low-battery voltage, thermostat operation, or load size on the inverter(s). A quiet-time setting prevents the generator from starting at inconvenient times. LED lights display the status of the XW AGS, while all user-defined settings are programmed through the system control panel (SCP).

Interfaces with: XW Solar Charge Controllers, and XW SCP

**XW Connection Kit (for additional XW Hybrid Inverters/Chargers)**

The XW Connection Kit is a pre-cut and labeled wiring kit and conduit box used to connect additional inverters into an XW Power Distribution Panel. All wires are pre-cut and labeled to facilitate easy installation.

Interfaces with: XW Hybrid Inverters/Chargers

**XW Hybrid Inverter/Charger**

- True sine wave
- Split-phase (120/240 Vac) technology
- Local display panel
- High current, multistage battery charger
- Field-serviceable Xanbus™ Network ready
- Multiple units can be paralleled

**XW Solar Charge Controller**

- Dynamic Maximum Power Point Tracking algorithm (MPPT)
- Xanbus™ Network ready
- Convection cooled
- User-friendly interface
- Integrated ground-fault protection

**XW Power Distribution Panel**

- Accommodates both AC & DC breakers & wiring
- Uses innovative Arctic Ultraflex Blue™ wiring
- Wiring is labeled and ready to connect to inverter
- Room to add additional breakers and wiring to build onto your system

**XW Automatic Generator Start**

- Compatible with popular generators
- Configurable start settings
- Quiet-time setting
- LED display status

**XW System Control Panel (XW SCP)**

- Interfaces for system configuration and diagnostic information.
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