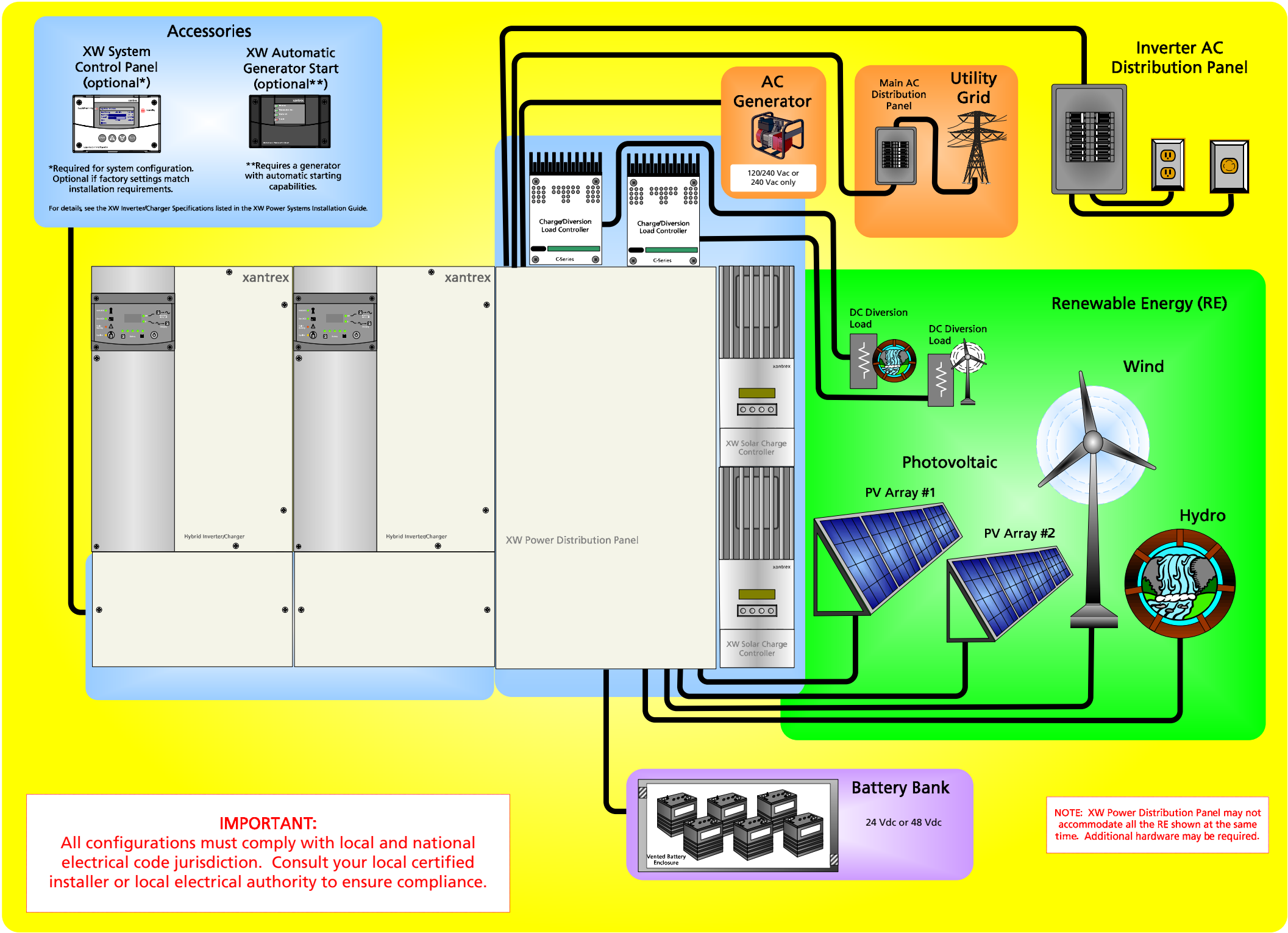


XW Power System - Installation Overview



Important: This overview is NOT intended to replace the XW Power System Installation Guide. *BE SURE TO READ THE INSTALLATION GUIDE FOR PROPER INSTALLATION INSTRUCTIONS.* Installation of this equipment should only be performed by skilled personnel such as qualified electricians and Certified Renewable Energy (RE) System Installers.



Installation Overview:

The following information is a list of basic steps required to install an XW Inverter/Charger. Actual installation procedures will vary depending upon the configuration of the intended system. *This Overview is provided for information only. Consult the XW Power System Installation Guide for specific installation instructions.*

1. Mount the inverter/charger and supporting components.

- ▶ Plan the safe location and wiring routes for all components involved.
- ▶ Be sure the mounting surface is strong enough to support the weight of all the equipment.
- ▶ Be sure all wiring will safely handle the desired loads/current.
- ▶ Install the XW Conduit Box and XW Power Distribution Panel (if required).

2. Prepare the Energy Storage (Battery) Bank.

- ▶ Select battery type, size, and battery bank configuration (Series, Parallel or Series-Parallel).
- ▶ Connect appropriate cabling, DC disconnects, and over-current protection.

See the Application Note *Battery Banks for Inverter Systems* on the Xantrex website (www.xantrex.com).

3. Install the renewable energy sources (if used).

- ▶ Photovoltaic sources (Solar) - Includes the PV panels, combiner boxes (if used), DC Disconnects with ground fault protection (PVGFP) if needed and DC Controller.
- ▶ Wind/hydro sources - Includes the hydro/wind generator, DC Disconnects, Load Controller, and Diversion Load.

4. Install the AC or DC generator (if used).

- ▶ Install an AC generator for AC load backup or battery charging.
- ▶ Install a DC generator for DC loads or battery charging.

5. Prepare the system grounds.

- ▶ Ensure there is only one (1) neutral-to-ground bond.
- ▶ Ensure the system is properly grounded and has all appropriate system protection.
- ▶ Ensure multiple ground rods (if used) are bonded together.

6. Install any accessories needed.

- | | |
|--------------------------------|--|
| ▶ XW System Control Panel | ▶ Xanbus Network Cables |
| ▶ XW Solar Charge Controller | ▶ Auxiliary Power Supply or RPO Switch |
| ▶ XW Automatic Generator Start | ▶ AC Sync Cables |

7. Connect the Energy Storage bank to the inverter/charger.

- ▶ Connect the Negative Cable from the DC Disconnect to the DC Negative (-) terminal on the Inverter.
- ▶ Connect the Positive Cable from the DC Disconnect to the DC Positive (+) terminal on the inverter.

8. Connect the inverter/charger to the Inverter AC Distribution Panel and house loads.

- ▶ Connect the AC OUT of the inverter/charger to the Inverter AC Distribution Panel supporting the house loads.

9. If power is available from a local utility grid:

- ▶ Connect the input from the local utility grid.

10. Configure specific system parameters.

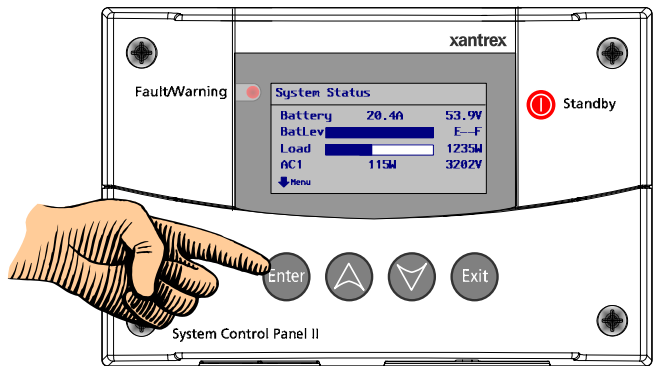
- ▶ Use the XW System Control Panel or the Xantrex computer-based XW Configuration Tool.
- ▶ See the XW Operation Guide for detailed instructions on configuring system parameters.

XW Inverter/Charger – Basic Menu Map



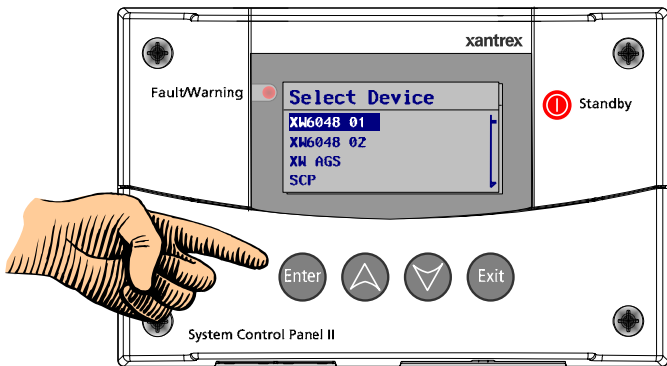
Use the XW System Control Panel to select basic features and functions.

1 System Home Screen



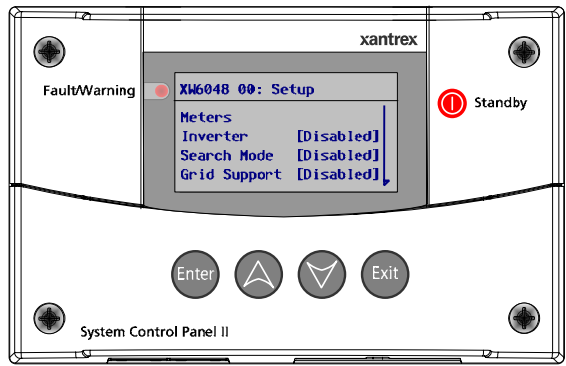
From the System Home Screen, press ENTER to access the Device List.

2 Select Device Screen

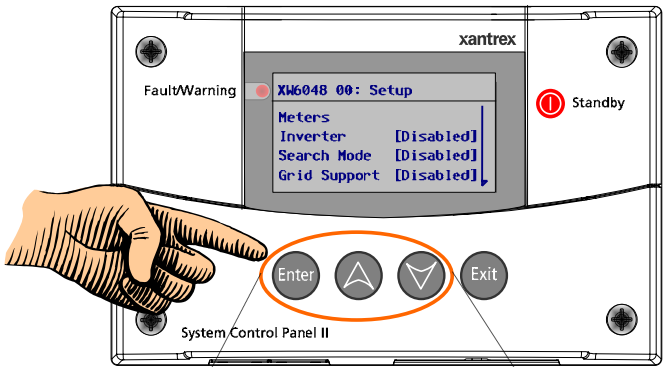


From the Device List, press ENTER to select the device.

3 Basic Setup Menu



4 To Switch between Basic and Advanced* Setup Menus

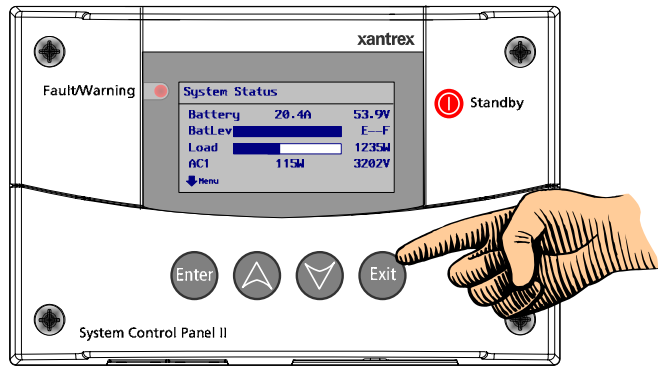


Press all 3 buttons at the same time.



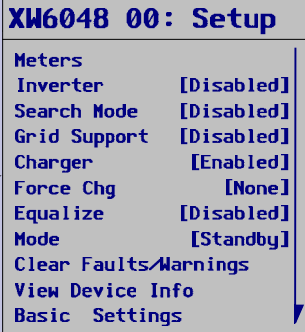
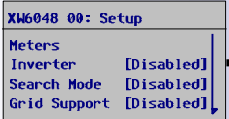
*Advanced Settings are shown on the Advanced Menu Map. Details for using the Basic and Advanced Settings are available in the XW Operation Guide.

5 Return to the System Home Screen



Press EXIT twice (2x) to return to System Home Screen.

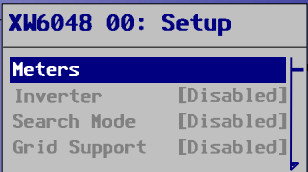
Basic Settings....



To Navigate within the menus or change settings....

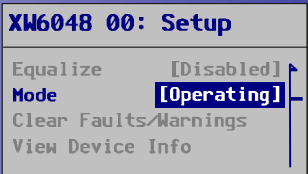
- Enter** Displays the next screen or confirms selection of a menu item.
- Up** Scrolls up one line of text or increases a selected value.
- Down** Scrolls down one line of text or decreases a selected value.
- Exit** Cancels selection of a menu item or displays the previous screen.

To Monitor...

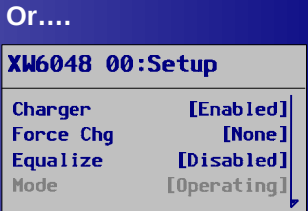
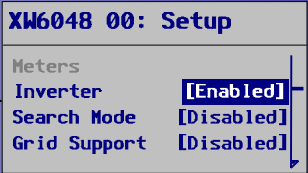


XW6048 00: Meters			
AC1	2500W	3200VA	
AC1 in L1	20.8A	120V	
AC1 in L2	20.8A	120V	
AC2	0W	0VA	
AC2 in L1	0.0A	0.0V	
AC2 in L2	0.0A	0.0V	
Load	1200W	2000VA	
Load L1	5.0A	120V	
Load L2	5.0A	120V	
State	Absorb		
DC	31.7A	57.4V	
Bat Temp		20C	

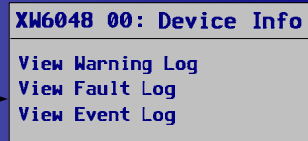
To Select Operating Mode...



To Enable/Disable Features...



To View Device Info...



To Configure Basic Settings....



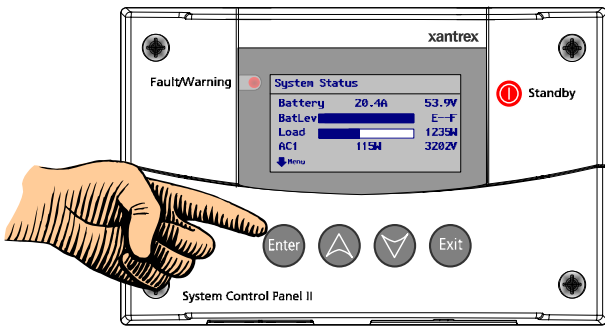
XW6048 00: Basic	
Batt Type	[Flooded]
Batt Capacity	[200Ah]
Max Chg Rate	[100%]
Charge Cycle	[3-Stage]
ReCharge Volts	[47.5V]
AC Priority	[AC1]
AC1 Breaker	[60A]
AC2 Breaker	[30A]
Grid Supp Volts	[53.0V]
Low Batt Cut Out	[44.0V]

XW Inverter/Charger – Advanced Menu Map



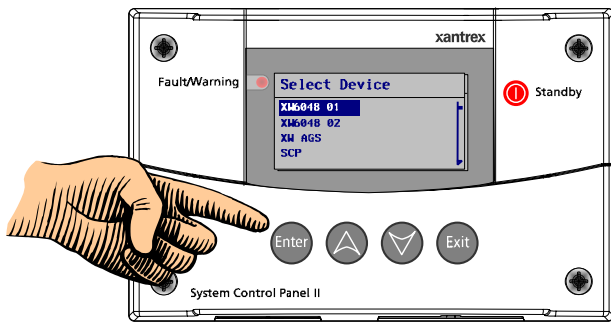
Use the XW System Control Panel to change factory-programmed features and functions.

1 System Home Screen



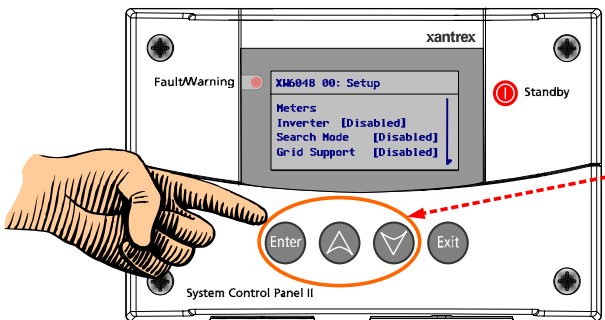
From the System Home Screen, press ENTER to access the Device List.

2 Select Device Screen



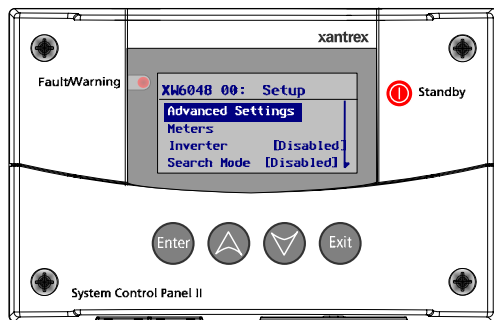
From the Device List, press ENTER to select the device.

3 To switch between Basic and Advanced Setup Menus

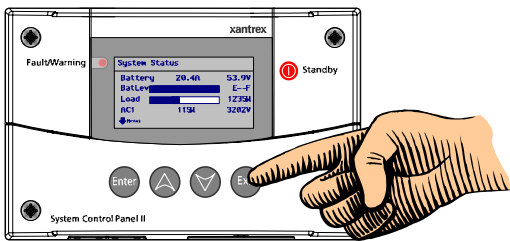


Press all 3 buttons at the same time.

4 Advanced Setup Menu



5 Return to the System Home Screen



Press EXIT twice (2x) to return to System Home Screen.

Advanced Settings....

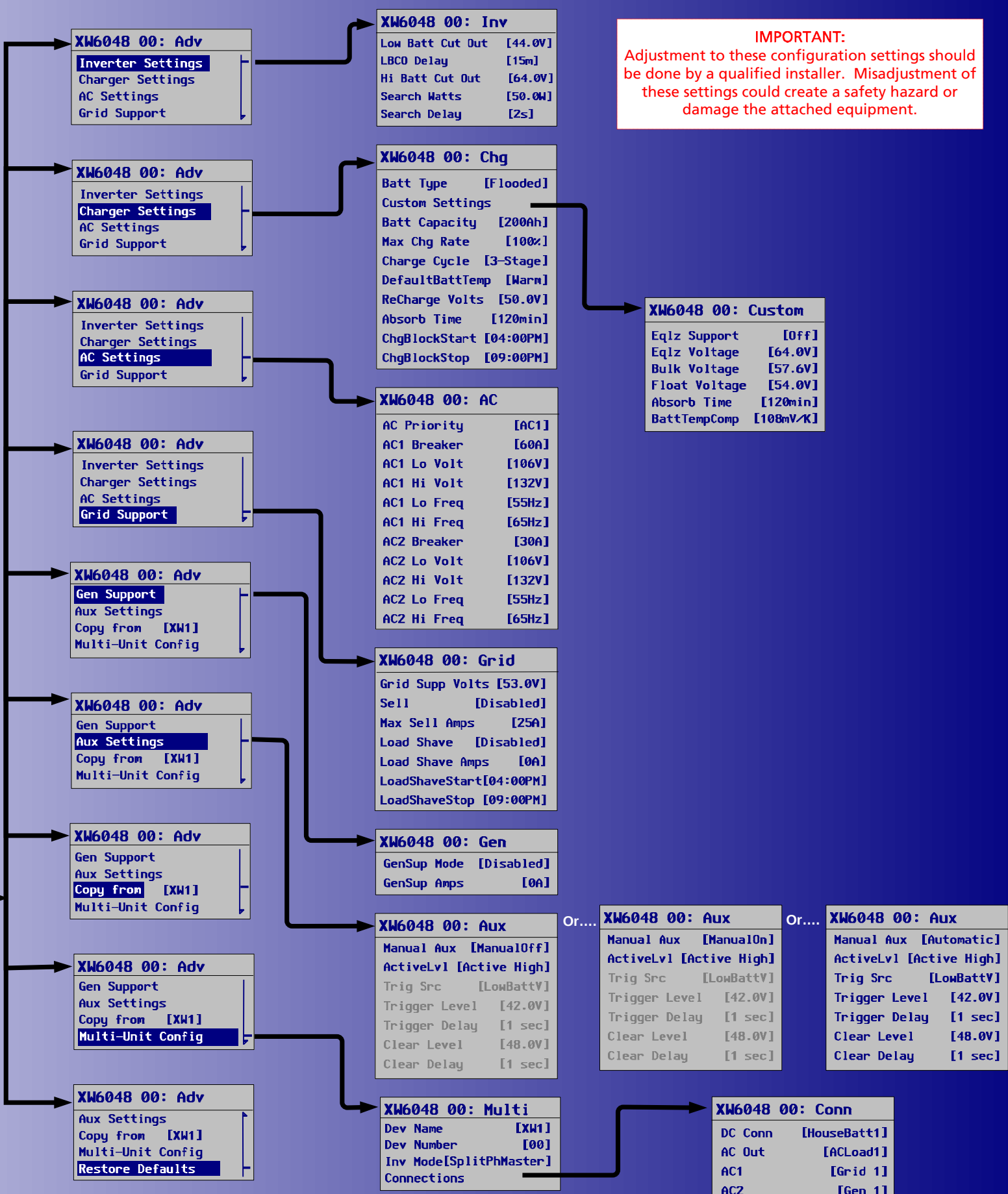
XW6048 00: Setup
Advanced Settings
Meters
Inverter [Disabled]
Search Mode [Disabled]

XW6048 00: Adv

Inverter Settings
Charger Settings
AC Settings
Grid Support
Gen Support
Aux Settings
Copy from [XW1]
Multi-Unit Stacking
Reset to Defaults

To Navigate within the menus or change settings....

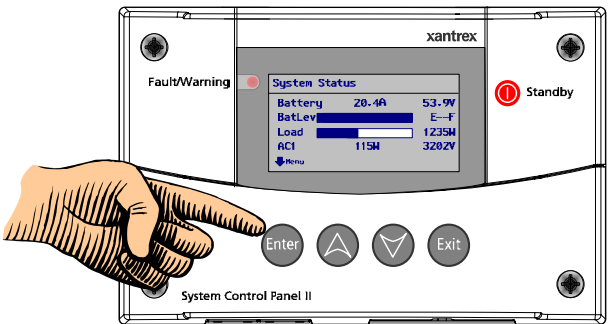
- Enter** Displays the next screen or confirms selection of a menu item.
- Up** Scrolls up one line of text or increases a selected value.
- Down** Scrolls down one line of text or decreases a selected value.
- Exit** Cancels selection of a menu item or displays the previous screen.



Menu Map for XW Automatic Generator Start

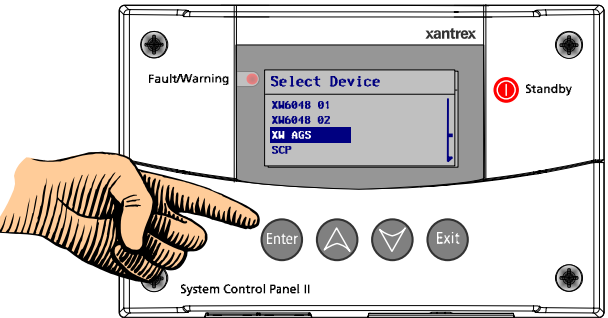
Use the XW System Control Panel to configure generator functions and options.

1 System Home Screen



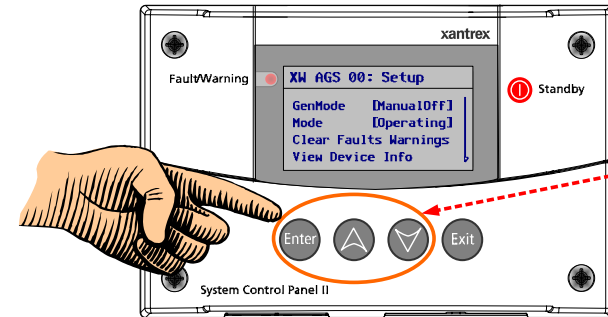
From the System Home Screen, press ENTER to access the Device List.

2 Select Device Screen



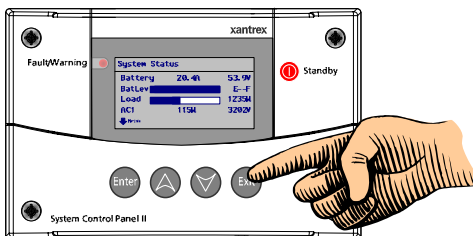
From the Device List, press ENTER to select the device.

3 To switch between Basic and Advanced Setup Menus



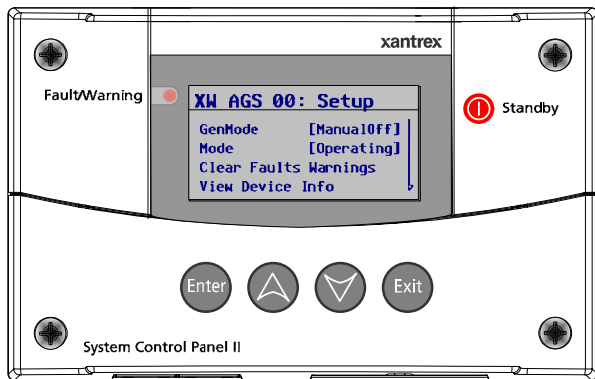
Press all 3 buttons at the same time.

5 Return to the System Home Screen

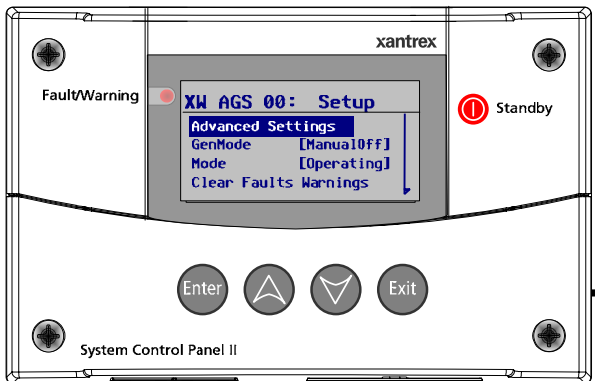


Press EXIT twice (2x) to return to System Home Screen.

4a Basic Setup Menu

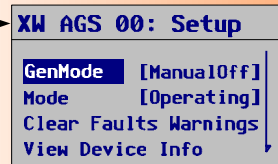


4b Advanced Setup Menu

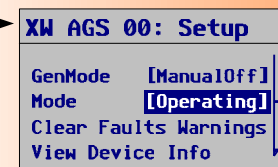


Basic Settings...

To Select the Generator Mode...



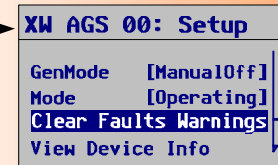
To Change the System Mode...



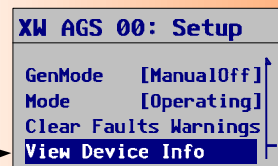
Or....



To Clear Faults Warnings...

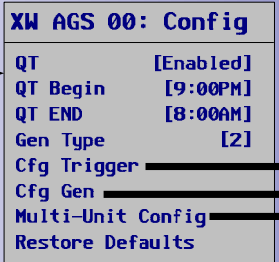
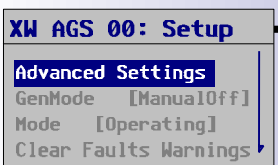


To View Device Information...



Advanced Settings...

To Configure....



To Navigate within the menus or change settings....



Displays the next screen or confirms selection of a menu item.



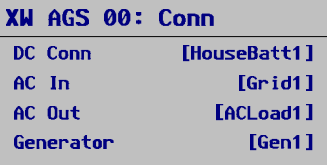
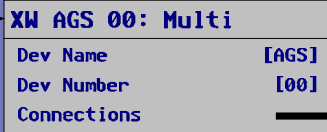
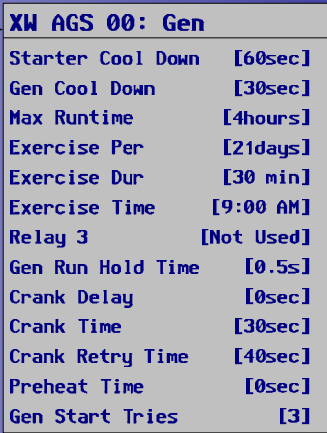
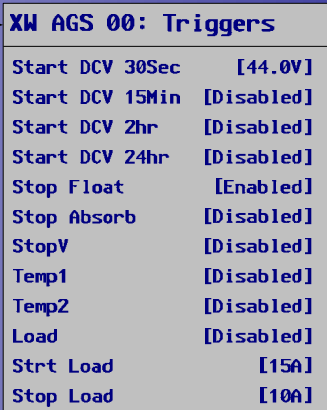
Scrolls up one line of text or increases a selected value.



Scrolls down one line of text or decreases a selected value.



Cancels selection of a menu item or displays the previous screen.

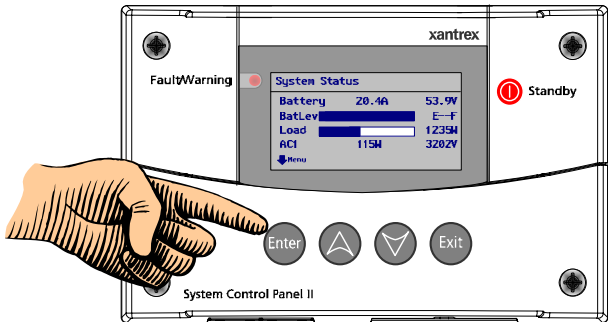


Menu Map for XW Solar Charge Controller



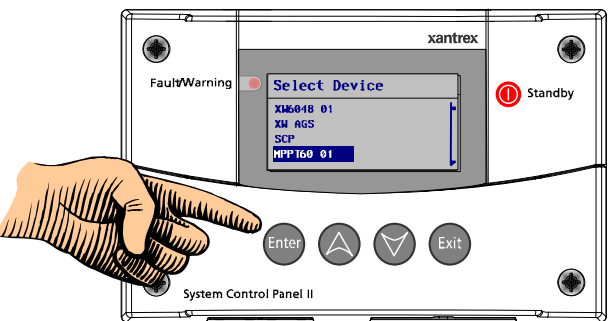
Use the XW System Control Panel to configure Charge Controller functions and options.

1 System Home Screen



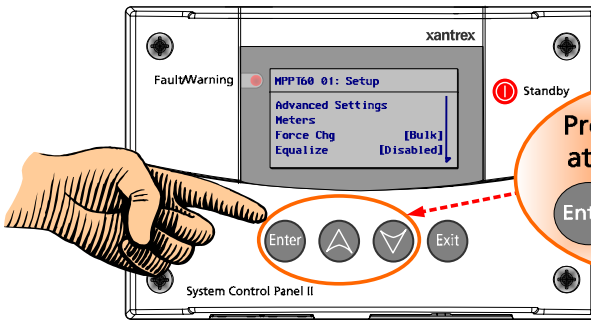
From the System Home Screen, press ENTER to access the Device List.

2 Select Device Screen



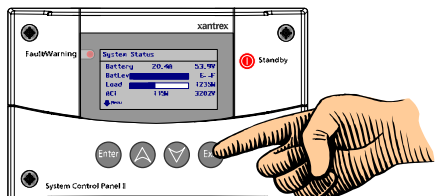
From the Device List, press ENTER to select the device.

3 To switch between Basic and Advanced Setup Menus



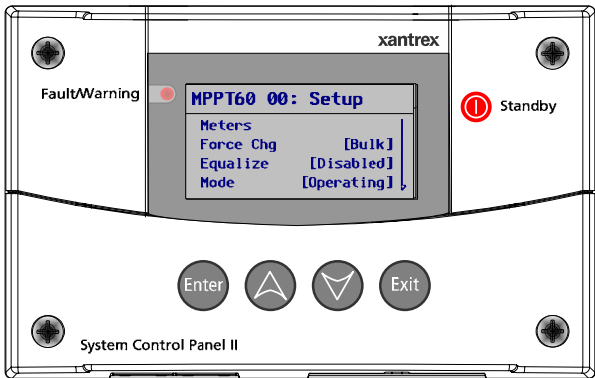
Press all 3 buttons at the same time.

5 Return to the System Home Screen

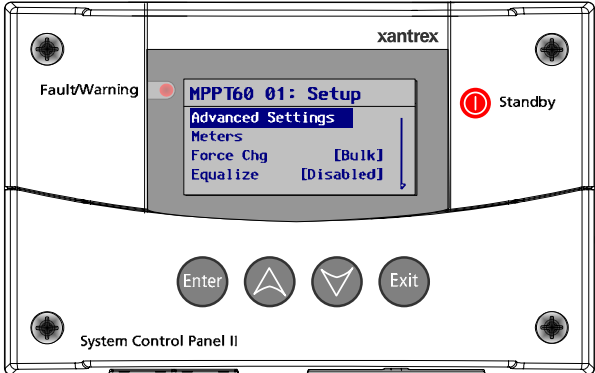


Press EXIT twice (2x) to return to System Home Screen.

4a Basic Setup Menu



4b Advanced Setup Menu



Basic Settings...

To Monitor...

MPPT60 00: Setup

Advanced Settings
Meters
Force Chg [Bulk]
Equalize [Enabled]

MPPT60 00: Meters
PV In Power 215W
PV In 2.1A 100.5V
DC Out Power 210W
DC Out 3.7A 57.4V
Today 3.5Ah 0.20kWh
Life 0.1K1h 5kWh
Batt Temp 20C
Charging Absorb
Aux Off

To Enable/Disable Features...

MPPT60 00: Setup

Advanced Settings
Meters
Force Chg [Bulk]
Equalize [Enabled]

MPPT60 00: Setup
Advanced Settings
Meters
Force Chg [Bulk]
Equalize [Enabled]

To Select Operating Mode...

MPPT60 00: Setup

Equalize [Enabled]
Mode [Operating]
Clear Faults Warnings
View Device Info

MPPT60 00: Setup
Equalize [Enabled]
Mode [Standby]
Clear Faults Warnings
View Device Info

To Clear Faults Warnings...

MPPT60 00: Setup

Equalize [Enabled]
Mode [Operating]
Clear Faults Warnings
View Device Info

To View Device Information...

MPPT60 00: Setup

Equalize [Enabled]
Mode [Operating]
Clear Faults Warnings
View Device Info

MPPT60 00: Dev Info
View Warning Log
View Fault Log

Advanced Settings...

To Configure...

MPPT60 00: Setup

Advanced Settings
Meters
Force Chg [Bulk]
Equalize [Enabled]

MPPT60 00: Adv
Charger Settings
Input Settings
Aux Settings
Copy from [MPPT 02]
Multi Unit Config
Restore Defaults

MPPT60 00: Chr
Batt Type [Flooded]
Custom Settings
Batt Capacity [200Ah]
Max Chg Rate [100%]
Charge Cycle [3-Stage]
ReCharge Volts [50V]
Absorb Time [120min]
Default Batt Temp [Warn]
Batt Voltage [48.0V]

MPPT60 00: Cust
EqLz Support [Enabled]
EqLz Voltage [64.0V]
Bulk Voltage [57.6V]
Absorb Voltage [57.5V]
Float Voltage [54.0V]
Batt Temp Comp [108mV/K]

MPPT60 00: Input
MPPT AutoTrack [Disabled]
MPPT Ref Volts [100.00V]

MPPT60 00: Aux
Manual Aux [ManualOff]
Active Lvl [Active High]
Output Level [12V]
Trig Src [LowBattV]
Trigger Level [42.0V]
Trigger Delay [1 Sec]
Clear Level [48.0V]
Clear Delay [1 Sec]

Or... MPPT60 00: Aux
Manual Aux [ManualOn]
Active Lvl [Active High]
Output Level [12V]
Trig Src [LowBattV]
Trigger Level [42.0V]
Trigger Delay [1 Sec]
Clear Level [48.0V]
Clear Delay [1 Sec]

Or... MPPT60 00: Aux
Manual Aux [Automatic]
Active Lvl [Active High]
Output Level [12V]
Trig Src [LowBattV]
Trigger Level [42.0V]
Trigger Delay [1 Sec]
Clear Level [48.0V]
Clear Delay [1 Sec]

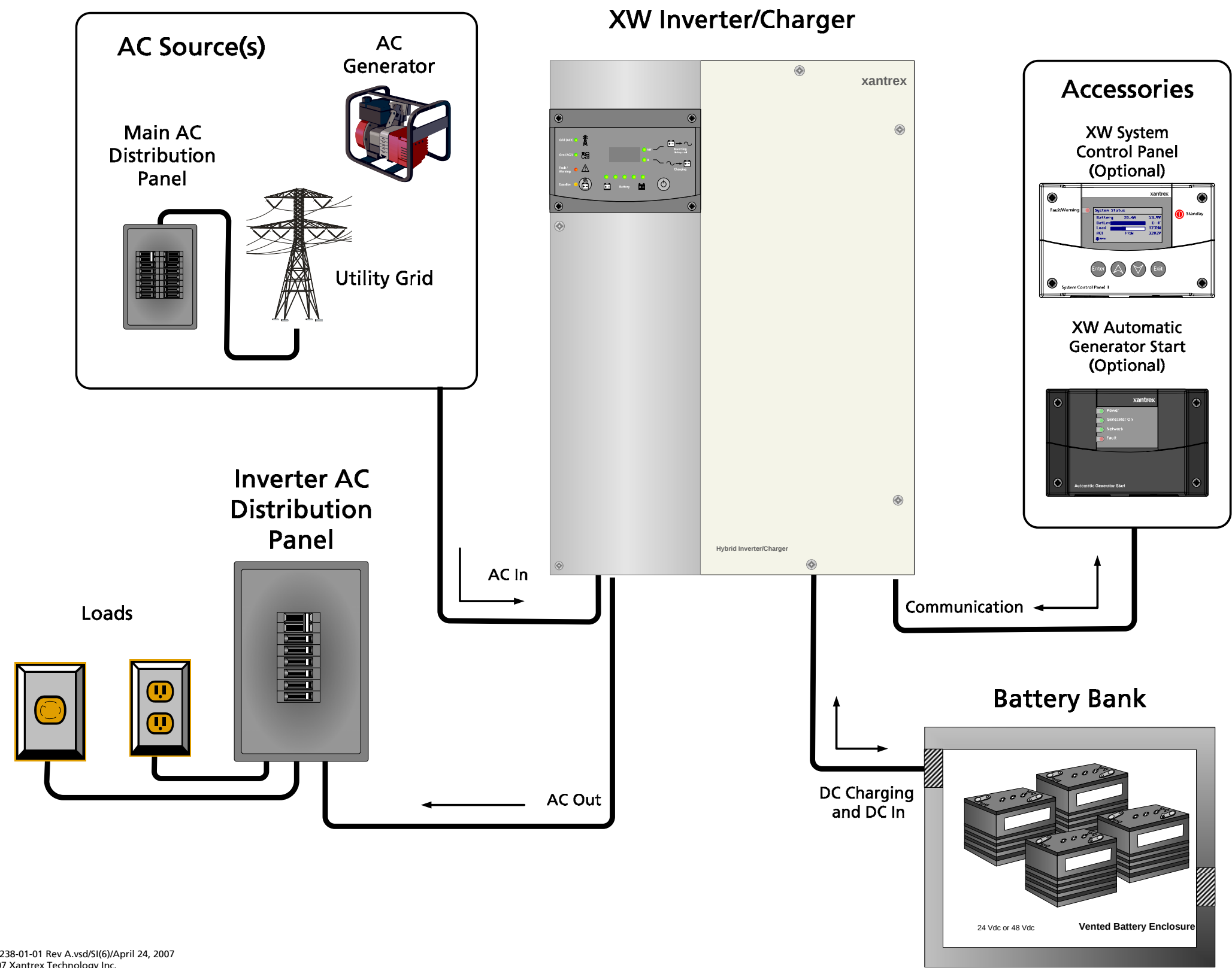
MPPT60 00: Multi
Dev Name [MPPT]
Dev Number [01]
Connections

MPPT60 00: Conn
PV In [SolarArray1]
AC Out [HouseBatt1]

To Navigate within the menus or change settings....

- Enter Displays the next screen or confirms selection of a menu item.
- Up Scrolls up one line of text or increases a selected value.
- Down Scrolls down one line of text or decreases a selected value.
- Exit Cancels selection of a menu item or displays the previous screen.

Single-Inverter System



Xantrex Supplied Components:

- XW Inverter/Charger includes
 - Mounting Plate
 - Battery Temperature Sensor
 - Xanbus Network Terminator
- XW System Control Panel (optional)
 - Communication Cable (Category 5) (7ft) (2.1m)
- XW Conduit Box (optional) (not shown)
- XW Automatic Generator Start (optional)

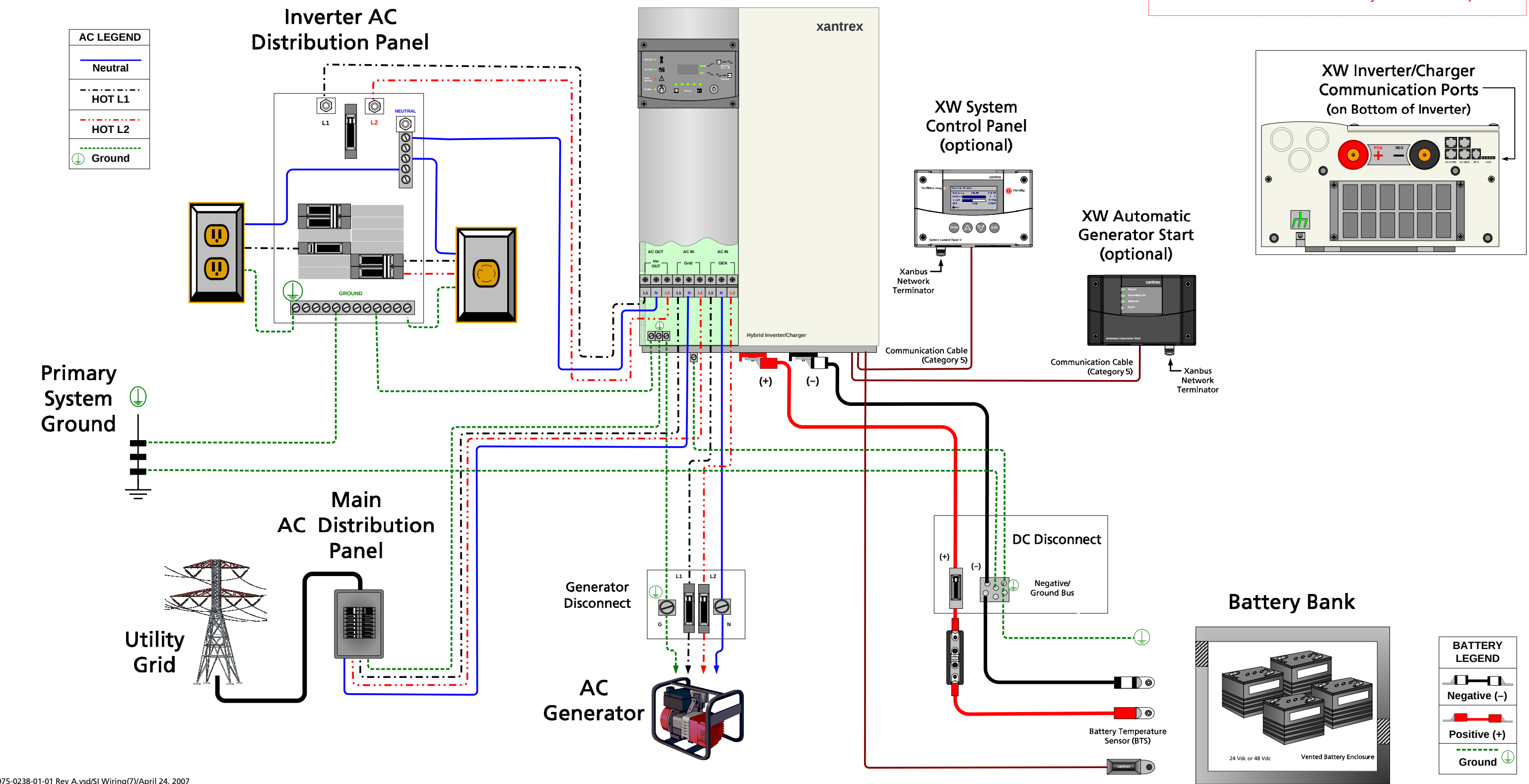
Customer Supplied Components:

- Battery Bank (24 Vdc or 48 Vdc)
- Generator and/or Grid Connection
- Inverter AC Distribution Panel to Loads
- All wiring and cabling
- Communication Cable (Category 5) for XW System Control Panel and/or XW Automatic Generator Start (If used)
- All breakers for loads and peripheral disconnects (e.g., generator disconnect)

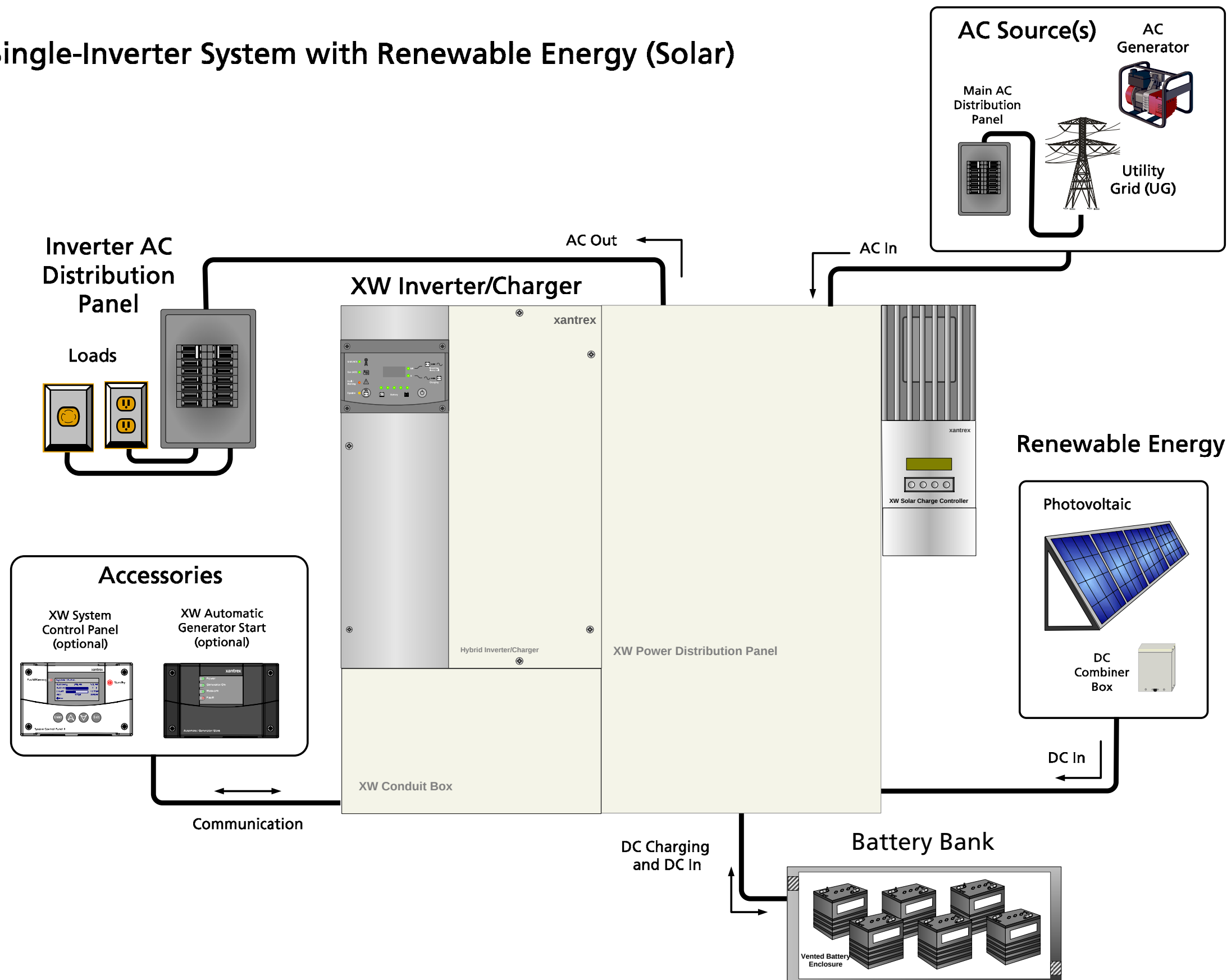
IMPORTANT:
All configurations must comply with local and national electrical code jurisdiction. Consult your local certified installer or local electrical authority to ensure compliance.

Single-Inverter System Wiring

IMPORTANT:
All configurations must comply with local and national electrical code jurisdiction. Consult your local certified installer or local electrical authority to ensure compliance.



Single-Inverter System with Renewable Energy (Solar)



Xantrex Supplied Components:

- XW Inverter/Charger includes
 - Mounting Plate
 - Battery Temperature Sensor
 - Xanbus Network Terminator
- XW Power Distribution Panel includes
 - Mounting Plate
 - XW Conduit Box
 - three 60A, 120/240 Vac, 2-pole, Square-D type QOU, Din-Rail mounted, AC breakers for Inverter Input, Output, and Bypass
 - AC Distribution Bars for simplified panel wiring
 - Bypass Interlock
 - one Ground Terminal Bus Bar
 - one AC Neutral Bus Bar
 - #6 AWG AC wiring for inverter connection to breakers
 - DC Negative bus bar
 - GJ250A DC Breaker with copper bus bar
 - one pair #4/0 AWG Battery Cables
- XW System Control Panel (optional) includes
 - Mounting Plate
 - Communication Cable (Category 5) (7ft) (2.1m)
 - Xanbus Network Terminator
- XW Solar Charge Controller includes
 - Battery Temperature Sensor
 - Xanbus Network Terminator
- XW Automatic Gen Start (optional) includes
 - Wiring Harness
 - Xanbus Network Terminator

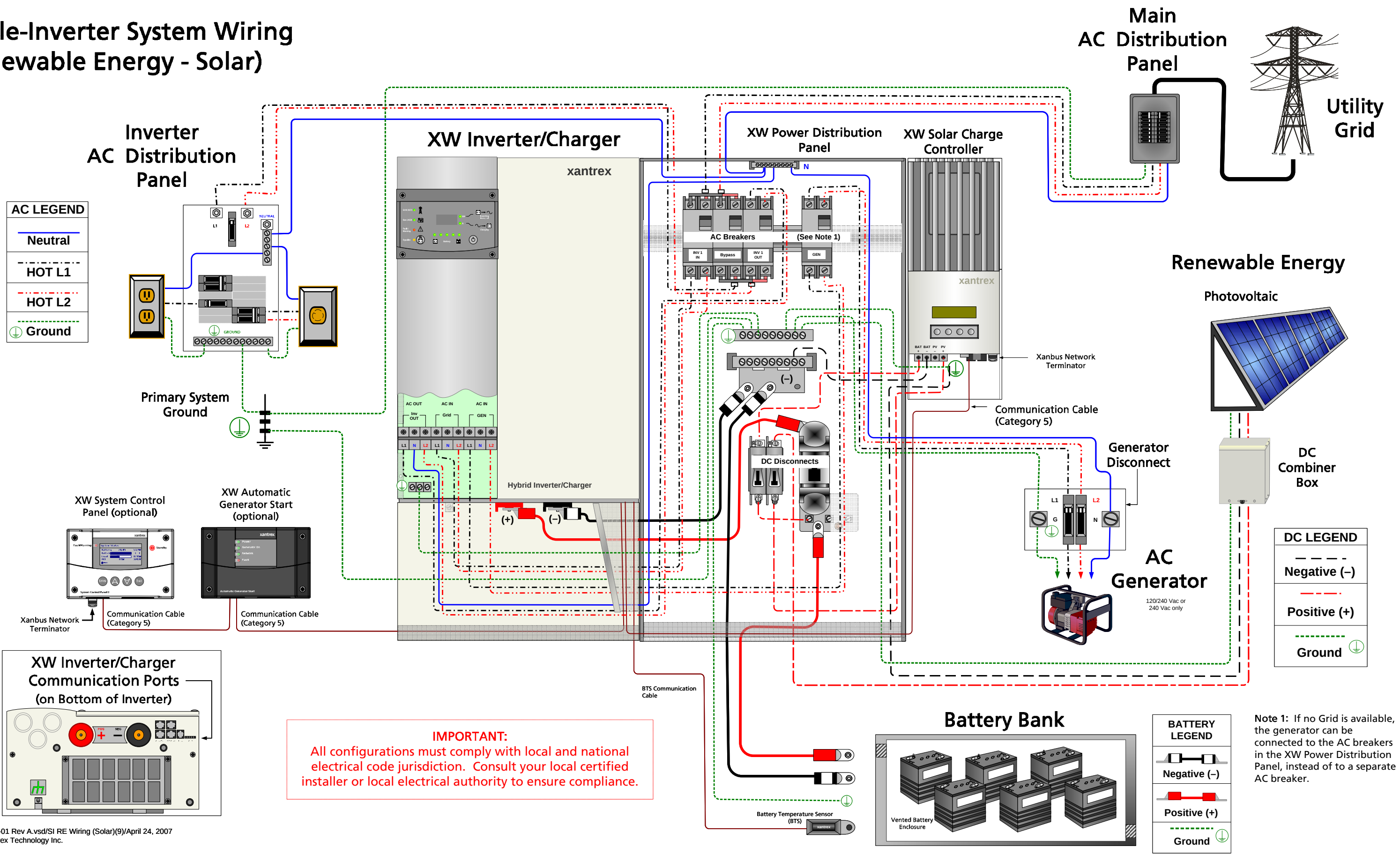
Customer Supplied Components:

- Battery Bank (24 Vdc or 48 Vdc)
- Generator and/or Grid Connection
- Solar Panels and associated cabling
- DC Combiner Boxes (may or may not be required)
- Inverter AC Distribution Panel to Loads
- Wiring and cabling to and from the system
- Communication Cable (Category 5) for XW System Control Panel and/or XW Automatic Generator Start (If used)
- All breakers for loads and peripheral disconnects (e.g., generator disconnect)

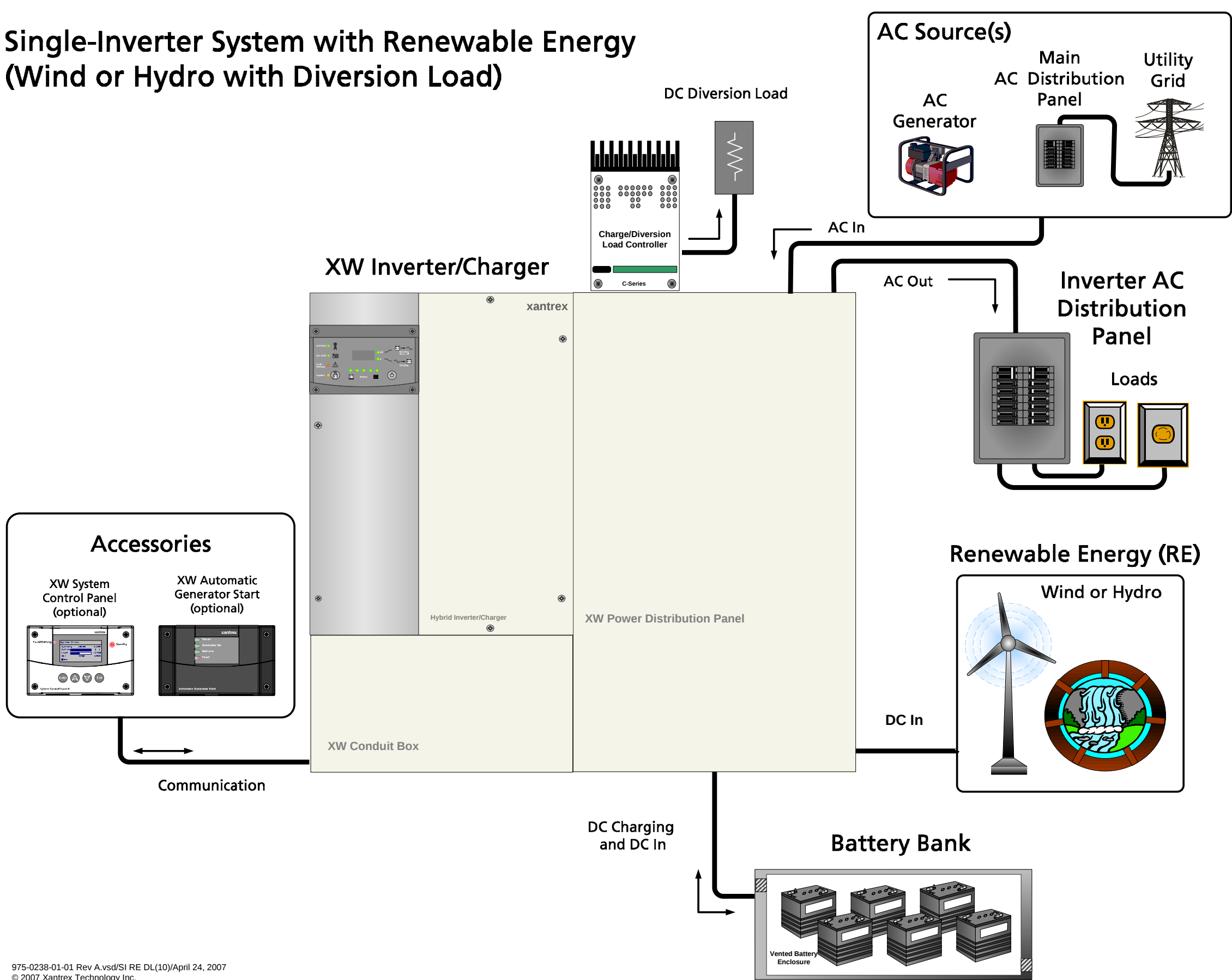
IMPORTANT:

All configurations must comply with local and national electrical code jurisdiction. Consult your local certified installer or local electrical authority to ensure compliance.

Single-Inverter System Wiring (Renewable Energy - Solar)



Single-Inverter System with Renewable Energy (Wind or Hydro with Diversion Load)



Xantrex Supplied Components:

- XW Inverter/Charger includes
 - Mounting Plate
 - Battery Temperature Sensor
 - Xanbus Network Terminator
- XW Power Distribution Panel includes
 - Mounting Plate
 - XW Conduit Box
 - three 60A, 120/240 Vac, 2-pole, Square-D type QOU, Din-Rail mounted, AC breakers for Inverter Input, Output, and Bypass
 - AC Distribution Bars for simplified panel wiring
 - Bypass Interlock
 - one Ground Terminal Bus Bar
 - one AC Neutral Bus Bar
 - #6 AWG AC wiring for inverter connection to breakers
 - DC Negative bus bar
 - GJ250A DC Breaker with copper bus bar
 - one pair #4/0 AWG Battery Cables
- C Series Charge Controller for Diversion Load Control
- XW System Control Panel (optional) includes
 - Mounting Bracket
 - Communication Cable (Category 5) (7ft) (2.1m)
 - Xanbus Network Terminator
- XW Automatic Generator Start (optional) includes
 - Wiring Harness
 - Xanbus Network Terminator

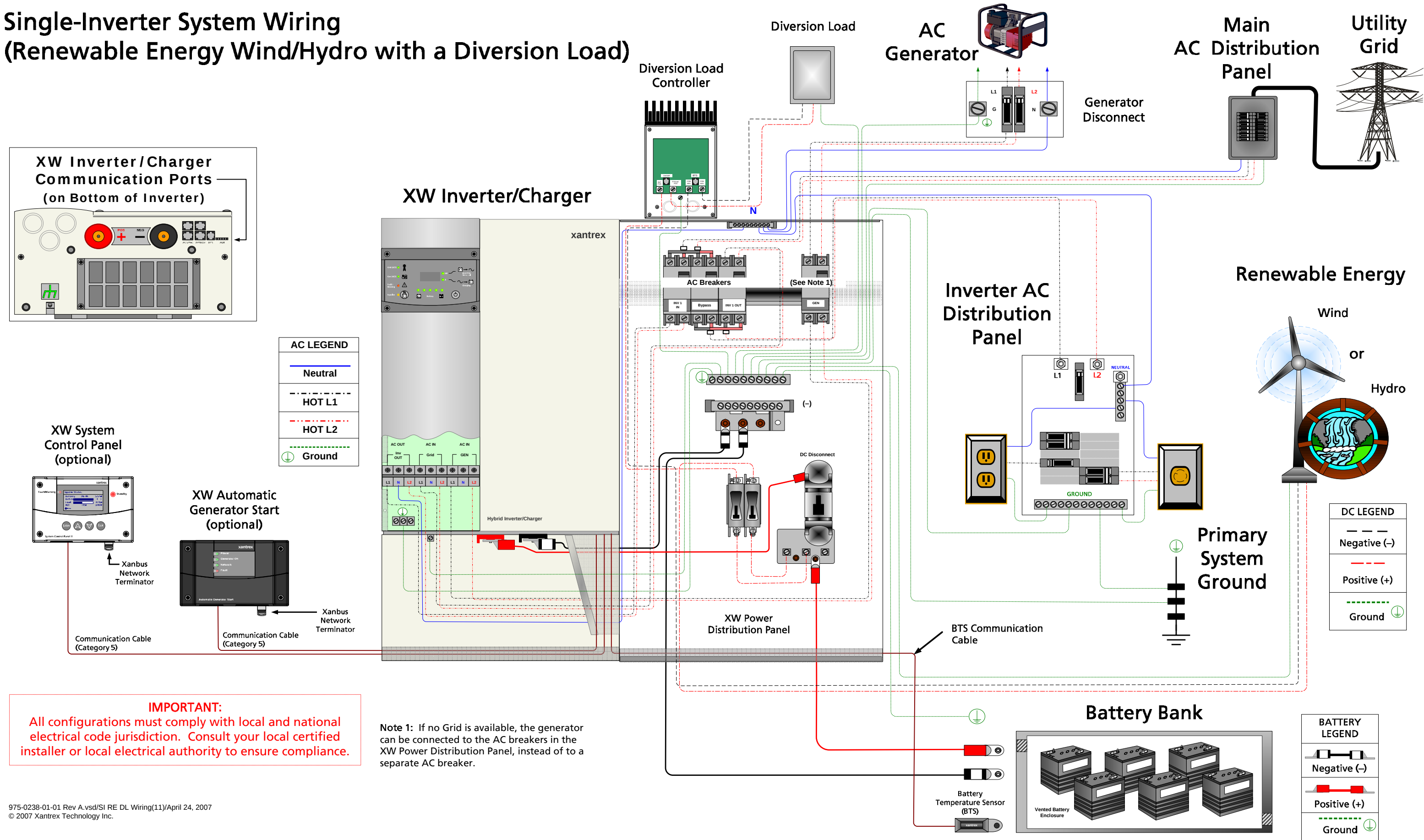
Customer Supplied Components:

- Battery Bank (24 Vdc or 48 Vdc)
- Generator and/or Grid Connection
- Wind or Hydro Turbines and associated cabling
- Diversion Load and associated wiring
- Inverter AC Distribution Panel to Loads
- Wiring and cabling to and from the system
- Communication Cable (Category 5) for XW System Control Panel and/or XW Automatic Generator Start (If used)
- All breakers for loads and peripheral disconnects (e.g., generator disconnect)

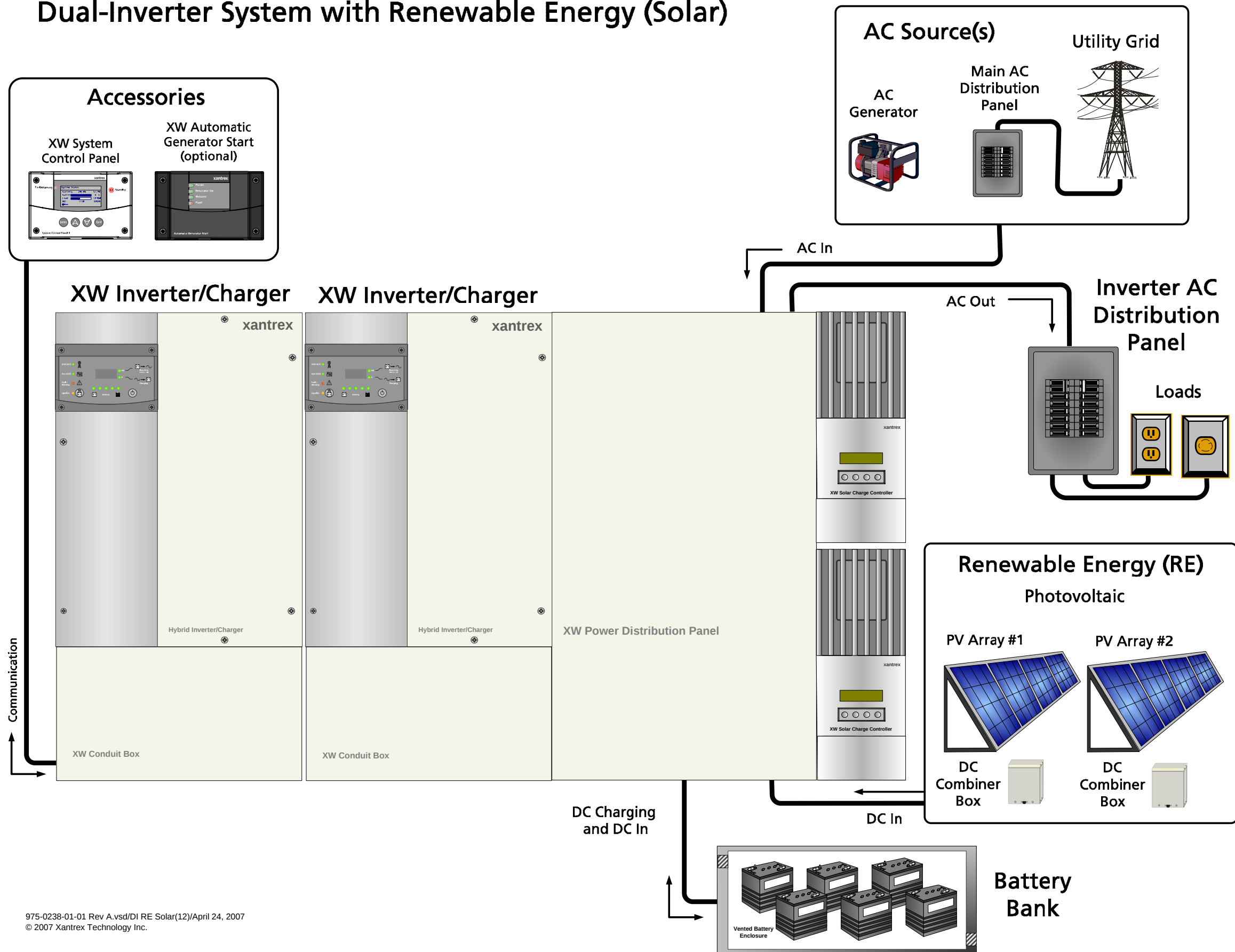
IMPORTANT:

All configurations must comply with local and national electrical code jurisdiction. Consult your local certified installer or local electrical authority to ensure compliance.

Single-Inverter System Wiring (Renewable Energy Wind/Hydro with a Diversion Load)



Dual-Inverter System with Renewable Energy (Solar)



Xantrex Supplied Components:

- XW Inverter/Charger includes
 - Mounting Plate
 - Battery Temperature Sensor
 - Xanbus Network Terminator
- XW Power Distribution Panel includes
 - Mounting Plate
 - XW Conduit Box
 - three 60A, 120/240 Vac, 2-pole, Square-D type QOU, Din-Rail mounted, AC breakers for Inverter Input, Output, and Bypass
 - AC Distribution Bars for simplified panel wiring
 - Bypass Interlock
 - one Ground Terminal Bus Bar
 - one AC Neutral Bus Bar
 - #6 AWG AC wiring for inverter connection to breakers
 - DC Negative bus bar
 - GJ250A DC Breaker with copper bus bar
 - one pair #4/0 AWG Battery Cables
- XW Connection Kit for Inv2 includes
 - XW Conduit Box for second XW Inverter
 - three 60A, 120/240 Vac, 2-pole, Square-D type QOU, Din-Rail mounted, AC Breakers for Inverter Input, Output, and Bypass
 - AC Distribution Bars for simplified panel wiring
 - Bypass Interlock for dual inverter/chargers
 - #6 AWG AC wiring for inverter connection to breakers
 - one GJ250A DC Breaker with copper bus bar
 - two Communication Cables (for Xanbus networking and AC Sync)
 - one pair #4/0 AWG Battery Cables for second Inverter
- XW Solar Charge Controller includes
 - Battery Temperature Sensor
 - Xanbus Network Terminator
- XW System Control Panel includes
 - Mounting Bracket
 - Communication Cable (Category 5) (7ft) (2.1m)
- Xanbus Network Terminator
- XW Automatic Generator Start (optional) includes
 - Wiring harness
 - Xanbus Network Terminator

Customer Supplied Components:

- Battery Bank (24 Vdc or 48 Vdc)
- Generator and/or Grid Connection
- Solar Panels and associated cabling
- DC Combiner Boxes (may or may not be required)
- Inverter AC Distribution Panel to Loads
- Wiring and cabling to and from the system
- Communication Cable (Category 5) for Inverter Stacking
- Communication Cable (Category 5) for XW System Control Panel and/or XW Automatic Generator Start (If used)
- All breakers for loads and peripheral disconnects (e.g., generator disconnect)

IMPORTANT:

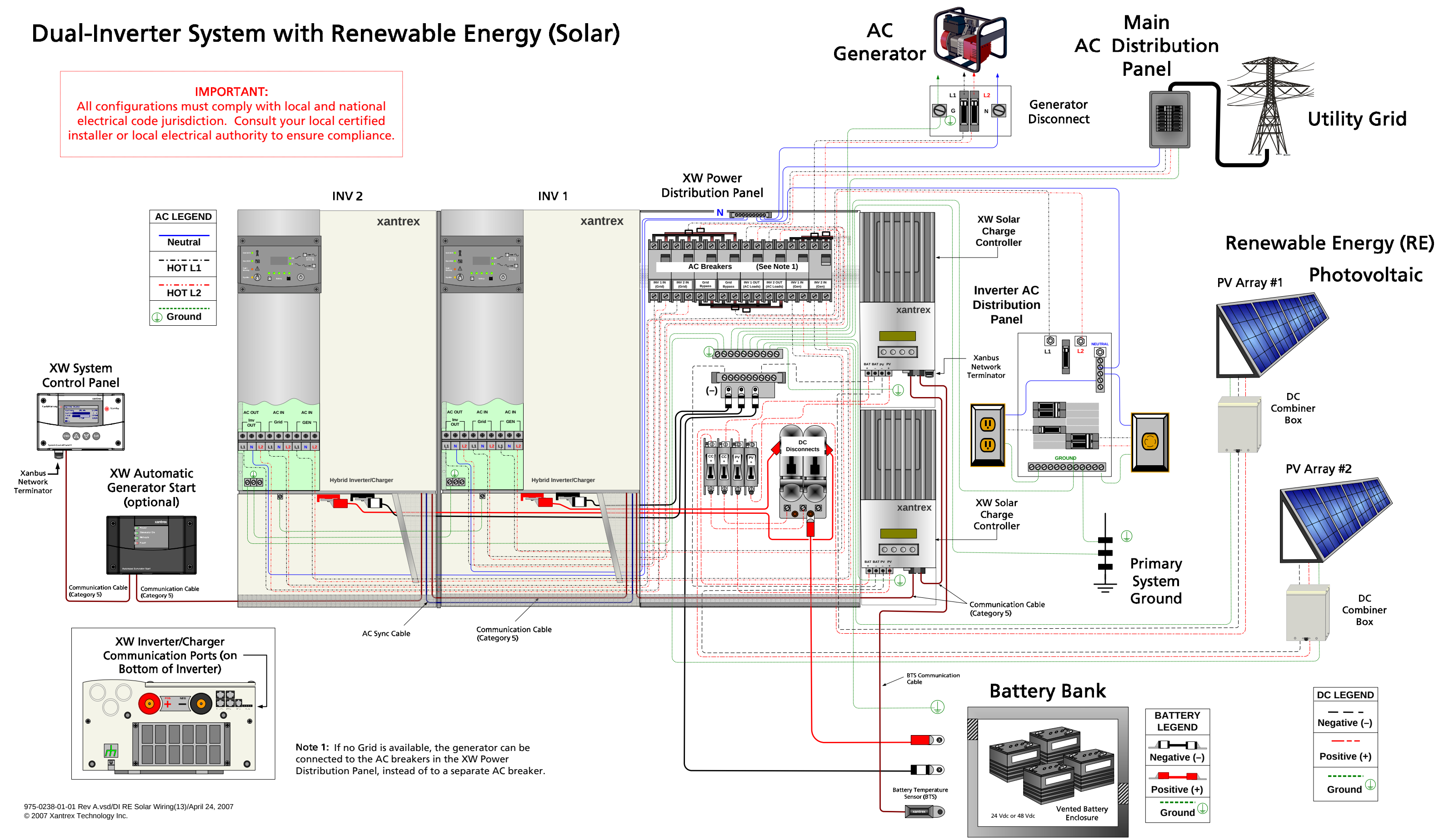
All configurations must comply with local and national electrical code jurisdiction. Consult your local certified installer or local electrical authority to ensure compliance.

XW Series Power System

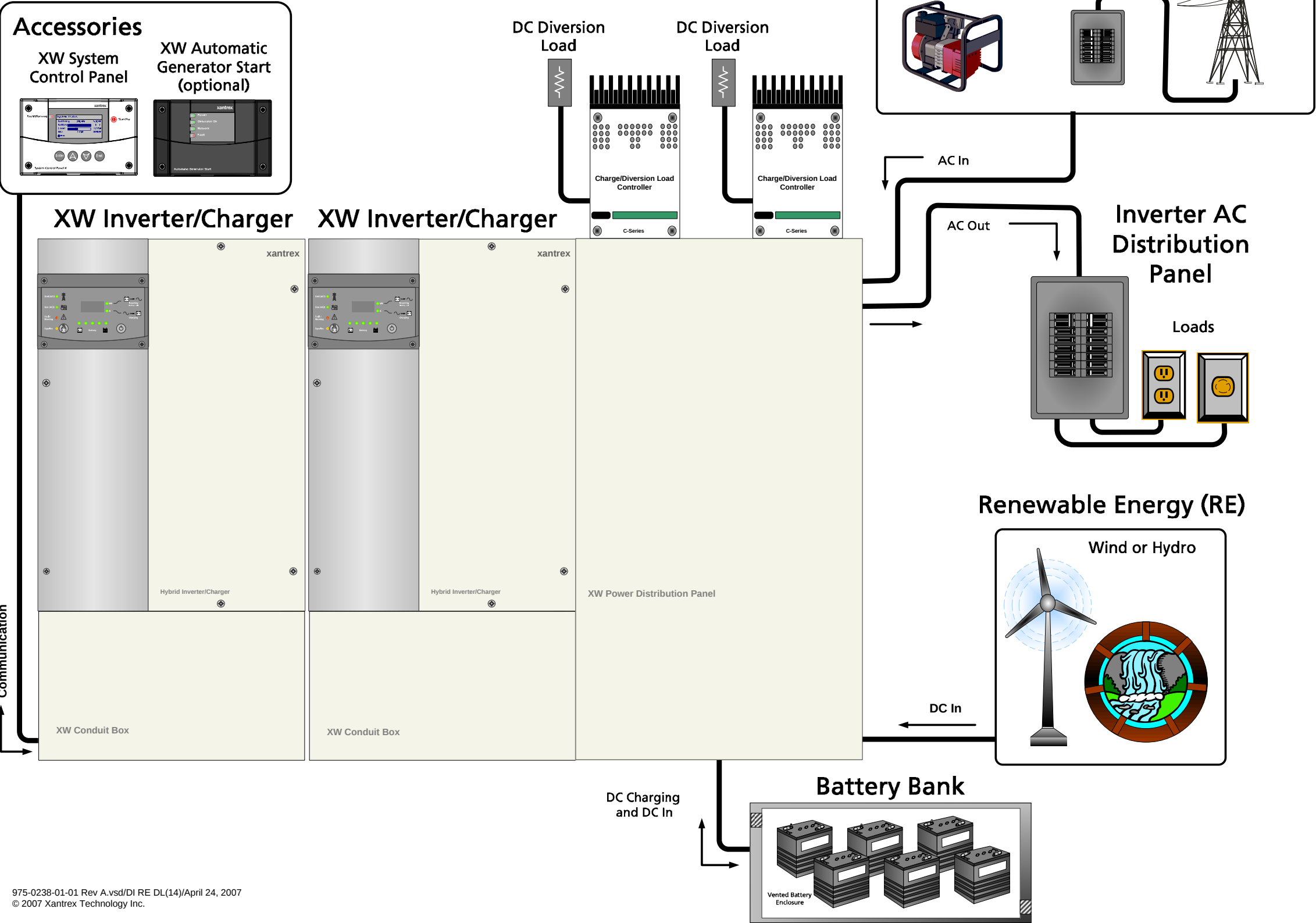


Dual-Inverter System with Renewable Energy (Solar)

IMPORTANT:
All configurations must comply with local and national electrical code jurisdiction. Consult your local certified installer or local electrical authority to ensure compliance.



Dual-Inverter System (Renewable Energy with Diversion Loads)



Xantrex Supplied Components:

- **XW Inverter/Charger** includes
 - Mounting Plate
 - Battery Temperature Sensor
 - Xanbus Network Terminator
- **XW Power Distribution Panel** includes
 - Mounting Plate
 - XW Conduit Box
 - three 60A, 120/240 Vac, 2-pole, Square-D type QOU, Din-Rail mounted, AC breakers for Inverter Input, Output, and Bypass
 - AC Distribution Bars for simplified panel wiring
 - Bypass Interlock
 - one Ground Terminal Bus Bar
 - one AC Neutral Bus Bar
 - #6 AWG AC wiring for inverter connection to breakers
 - DC Negative bus bar
 - GJ250A DC Breaker with copper bus bar
 - one pair #4/0 AWG Battery Cables
- **XW Connection Kit for Inv2** includes
 - XW Conduit Box for second XW Inverter
 - three 60A, 120/240 Vac, 2-pole, Square-D type QOU, Din-Rail mounted, AC Breakers for Inverter Input, Output, and Bypass
 - AC Distribution Bars for simplified panel wiring
 - Bypass Interlock for dual inverter/chargers
 - #6 AWG AC wiring for inverter connection to breakers
 - one GJ250A DC Breaker with copper bus bar
 - two Communication Cables (for Xanbus networking and AC Sync)
 - one pair #4/0 AWG Battery Cables for second Inverter
- **XW System Control Panel** includes
 - Mounting Bracket
 - Communication Cable (Category 5) (7ft) (2.1m)
- **Xanbus Network Terminator**
- **XW Solar Charge Controller** includes
 - Battery Temperature Sensor
 - Xanbus Network Terminator
- **XW Automatic Generator Start (optional)** includes
 - Wiring Harness
 - Xanbus Network Terminator

Customer Supplied Components:

- Battery Bank (24 Vdc or 48 Vdc)
- Generator and/or Grid Connection
- Solar Panels and associated cabling
- DC Combiner Boxes (may or may not be required)
- Inverter AC Distribution Panel to Loads
- Wiring and cabling to and from the system
- Communication Cable (Category 5) for Inverter Stacking
- Communication Cable (Category 5) for XW System Control Panel and/or XW Automatic Generator Start (If used)
- All breakers for loads and peripheral disconnects (e.g., generator disconnect)

IMPORTANT:

All configurations must comply with local and national electrical code jurisdiction. Consult your local certified installer or local electrical authority to ensure compliance.

Dual-Inverter System (Renewable Energy with Diversion Loads)

IMPORTANT:
All configurations must comply with local and national electrical code jurisdiction. Consult your local certified installer or local electrical authority to ensure compliance.

