

ForeverPure[®]

Pure Water & Clean Energy



ForeverPure Corporation Company Profile

Company
History plus
Current Goals
and Product
Offerings

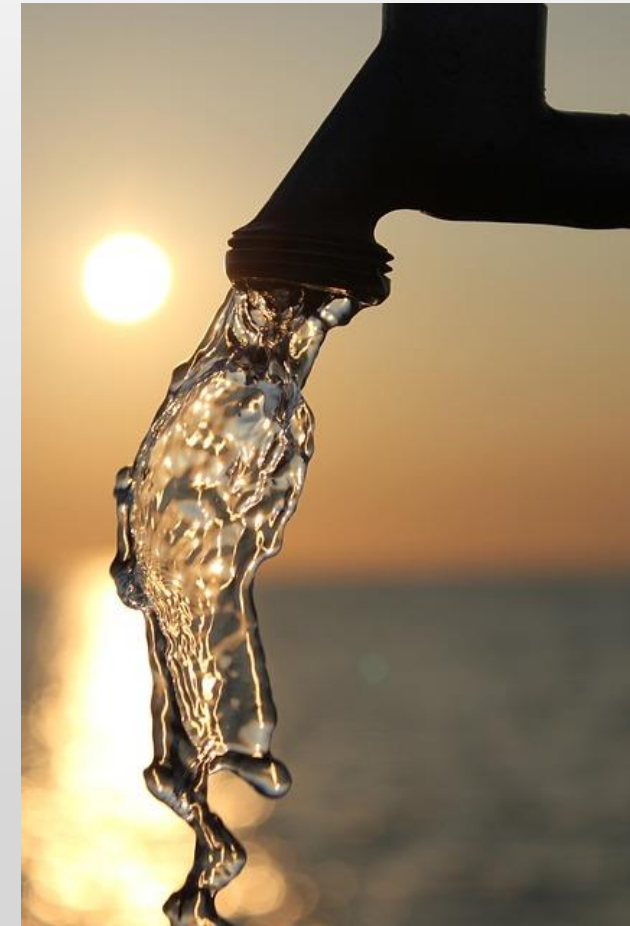


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ForeverPure Mission

- Bring affordable, safe, purified, potable water to people worldwide through the application of the latest reverse osmosis, ultra-filtration, energy recovery, and high efficiency vapor compression distillation technologies
- Protect precious water resources by providing innovative wastewater treatment/reclaim/reuse/recycle technologies
- Preserve our beautiful earth
- Accomplish the Mission by establishing long term, cooperative alliance with individuals and institutions around the world



History of ForeverPure

- Incorporated in California in 1995
- 1995: Manufactured small residential water purification units; sold thousands of units globally
- 1997: Expanded product line to include commercial water purification products; focused on reverse osmosis (RO) membrane technology
- 1998: Developed small scale seawater desalination systems based on RO technology; products sold to Egypt



- 1999: Started to manufacture commercial size RO seawater desalination systems and large industrial size RO systems for water purification
- 1999: Started to supply small scale, turn-key, water bottling lines to customers
- 1999: Introduced water bagging systems to overseas market
- 2000: Established joint-venture manufacturing agreement with a several bottling and packaging machinery companies, bottling line speed reached 300 bottles per minute, or 18,000 bottles per hour
- 2001: Developed mobile water purification and desalination products for remote locations, disaster relief, and military applications.
- 2001: ForeverPure desalination products are sold through out the world. A majority of them were shipped to Middle East, Asia, and Europe.
- 2002: Designed first high speed, automatic deep seawater water bottling plant in Hawaii
- 2003: Finished construction first deep seawater bottling plant in Hawaii. Based upon ForeverPure's original design, the bottling plant has expanded, and now the bottling plant is the largest export company in Hawaii. Deep seawater bottling industry is the second largest industry in Hawaii.



- 2005: ForeverPure built a second turn-key deep seawater desalination plant in Hawaii.
- By 2005, ForeverPure has developed, manufactured, and supplied a full line of seawater desalination, water purification, water bagging, and water bottling equipment. Desalination module can produce up to 250,000 gallons per day. Bottling plant can fill and pack up to 42,000 bottles per hour.
- 2006: ForeverPure started to supply highly energy efficient vapor compression distiller systems for chemical recovery and wastewater treatment.
- 2007 -2008: electro-coagulation systems and submersible ultra-filtration units are developed to provide chemical free or low chemical pretreatment to distiller and reverse osmosis system.
- 2008: mobile, trailer mounted emergency response water bagging units are developed and deployed to three water agencies in the San Francisco Bay Area. ForeverPure is designated as the sole supplier for this type of systems for the Bay Area.
- 2009: developed and built the world's first mobile water bottling plant with integrated blow molder and distiller; started developing higher speed models.



- 2009 : ForeverPure started research and development of ultra-high efficient seawater desalination systems. With the goal to lower the energy consumption of seawater desalination system to below 2.0kwh/M3.
- 2009 : ForeverPure ventures into solar power projects, aiming at the goal of providing both clean water and cleaning energy
- 2010 : ForeverPure brought together a team of land owners, utility company, banks, suppliers, engineers and financier to pursue the largest solar PV project in California history. The project requires a 100MW solar farm to be developed in four phases. Estimated project cost was \$250 million USD.
- 2010 : ForeverPure successfully completed the development of ultra-high efficient desalinations system. Energy consumption for modules above 170M3/day is lower to below 1.8kwh/M3.
- 2011 : ForeverPure expands international financing programs to include water and renewable energy projects
- 2012 : ForeverPure solar powered desalination system was featured on FOX channel 2 evening news.



Current Goals

- Continue to improve Water Purification, Brackish Water, and Seawater Desalination technologies
- Improve current wastewater treatment technologies, aiming at providing low or no chemical equipment/process
- Integrate solar and wind power systems into future desalination, water purification projects, and wastewater treatment projects



Introduction to ForeverPure Products

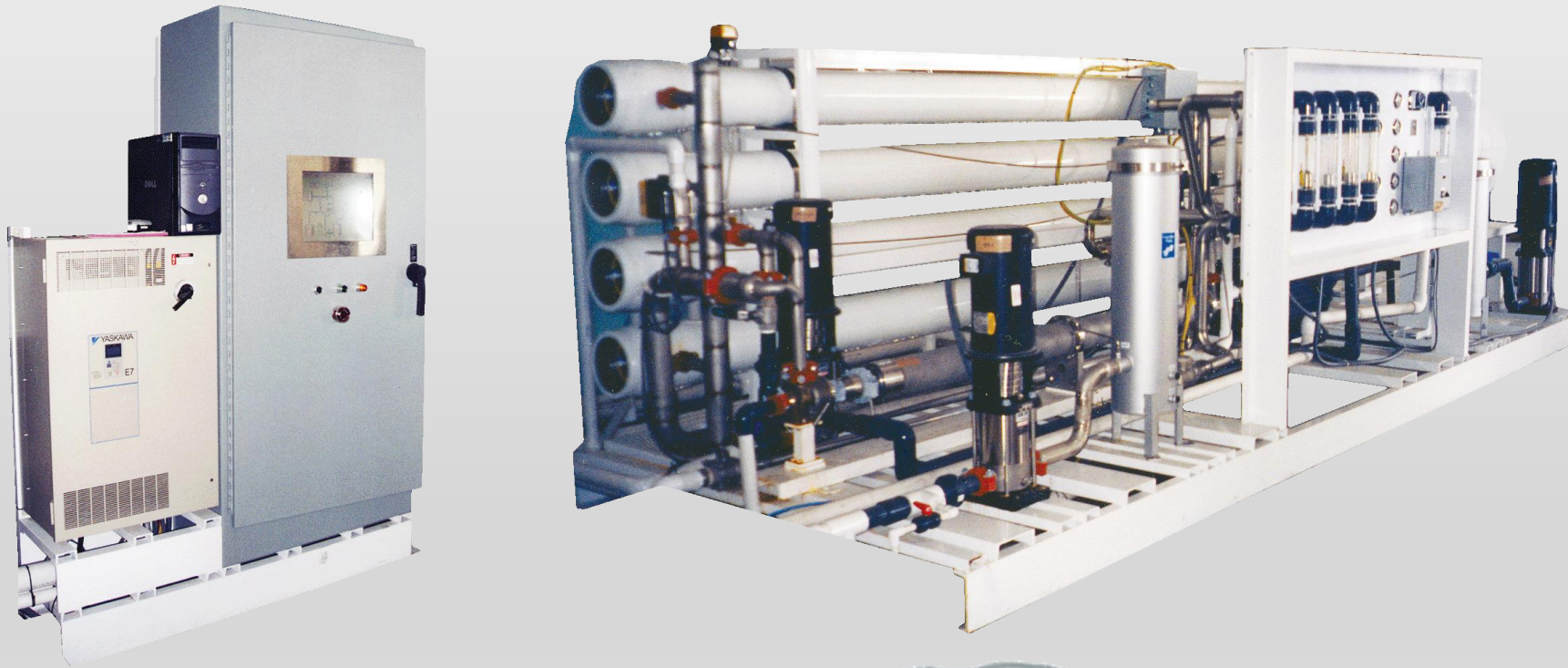
ForeverPure is the only company in the world that offers such a unique combination of water purification, desalination, wastewater treatment, and water packaging products – all under one roof. We are committed to providing our customers with:

Water Purity
Modularity – Scalability
Durability
Mobility
Affordability



Seawater Water Desalination Systems

- 500 GPD to 318,000 GPD
- High energy efficiency, less than 1.8 kwh/M3



Solar Oasis

Solar-powered Desalination Systems for Off-grid Applications



- Perfect for off-grid applications such as remote villages, towns, beach properties, etc.
- Available in 200 GPD, 500 GPD, and 1,000 GPD
- Includes seawater reverse osmosis system + off-grid solar power center package (charger/controller/inverter, batteries, AC distribution box, solar panels and cables)

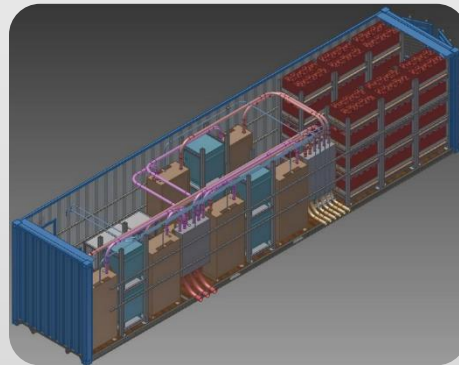
Large Scale SolarWind Oasis

Solar and/or wind-powered Desalination Systems for Large Off-grid Applications

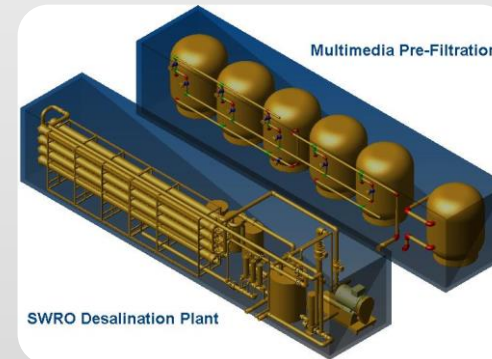
Solar and/or wind Farm



Containerized Battery Bank
with Hybrid Solar Inverter



Containerized
Desalination System



Potable Water



Hybrid Power Input from Grid



Large Scale SolarWind Oasis System Input

The sources of energy input to the system:

- Solar farm installed near the beach
- Wind farm installed near the beach
- Hybrid power input from grid

This grid tie system generates clean energy from the sun or wind. Solar and wind farms can be used in conjunction for maximum power output. Electricity is drawn from the grid to make up for the shortfall when insufficient electricity is generated from solar or wind and the batteries are not charged.



Large Scale SolarWind Oasis

Forever **Pure**

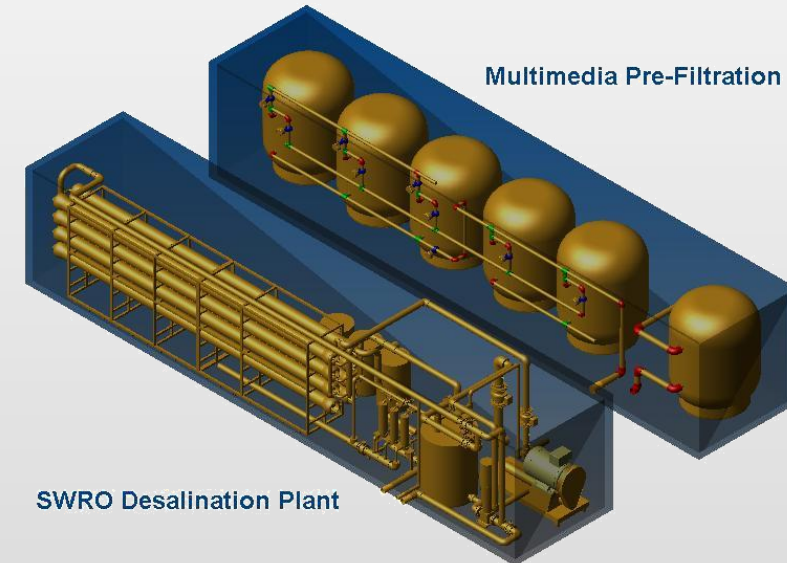
Containerized Battery Bank and Desalination System

Containerized Battery Bank - Overview



- The standard 10 foot insulated shipping container with built-in HVAC combines energy storage, power conversion and a control system.
- The grid tie solar and/or wind system feeds into the containerized battery bank with hybrid solar inverters.

Containerized Desalination System - Overview



- Container comes fully equipped with lighting, air conditioning, insulation, plumbing, electric conduit and comes fully tested before shipping.
- Container is a 40' standard container with exterior weather-proof paint. Easy walk-in access for hassle-free service and maintenance.
- Converts seawater and brackish water into fully potable water



Containerized Desalination System – Detailed View



Containerized unit in the middle of the Nevada desert turning deep borehole brackish water into high quality water.



Full View of the reverse osmosis system that is mounted inside the container. The system is fully equipped with pre-treatment chemical dosing system, touch screen control, fully automatic PLC control, various meters and gauges, clean-in-place system and post treatment chemical dosing system.



Double pass seawater desalination system producing bottled water quality water from the ocean.

SWRO-10K: 10,000 Gallons Per Day



Right Side View

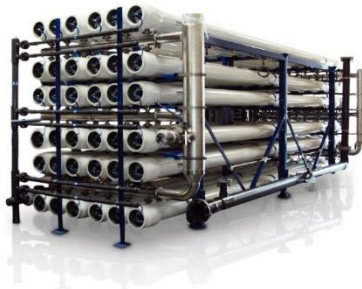


Left Side View

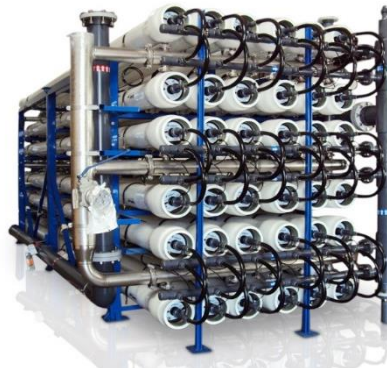


Containerized

SWRO-3000TPD: 3,000 Tonnes Per Day



Right Side View



Left Side View



Control Panels

System Output and Summary

The large scale SolarWindOasis system outputs **potable water** and **clean power**.

System includes:

- ForeverPure containerized desalination system
- ForeverPure Power containerized battery banks with hybrid solar inverters
- Solar farm and/or wind farm installed near the beach
- Hybrid power input from grid
- Output is potable water and clean power

The modular battery banks with hybrid solar inverters and the desalination systems are mostly turnkey and ready to start upon site arrival. They can run in parallel to provide higher production rates. All systems can be configured and supplied to meet the specific need.



SWRO-200, 500, and 1000



- Converts seawater to potable grade water
- Ultra high-efficiency
- Fiberglass membrane housing
- Super duplex stainless steel high pressure RO pump
- Includes water quality monitor, panel mount flow meters, and pressure gauges
- Automatic system controls to control start and shut-down



Brackish Water RO Desalination Systems



- 1000 GPD to 400,000 GPD
- Energy recovery system available for high brackish water
- Coagulant, anti-scalant and biocide dosing system
- Built-in membrane cleaning system
- Chlorine dosing post-treatment
- Handle TDS of up to 50,000 ppm
- High product water quality



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High Speed Water Bottling System

- 3000 to 42000 bottles per hour
- sanitary, totally enclosed model



Containerized Brackish Water System – Exterior View

- Turning deep borehole, brackish water or seawater into high purity water
- 40' standard container with exterior weather proof paint



Containerized Brackish Water System Interior Views

- Clean-In-Place system to extend membrane life time
- Built-in lighting and HVAC
- Side access door



Containerized Brackish Water System Control Panel View



- State-of-the-art color touch screen control provides online trouble shooting and maintenance instructions
- Digital pH and water purity meters

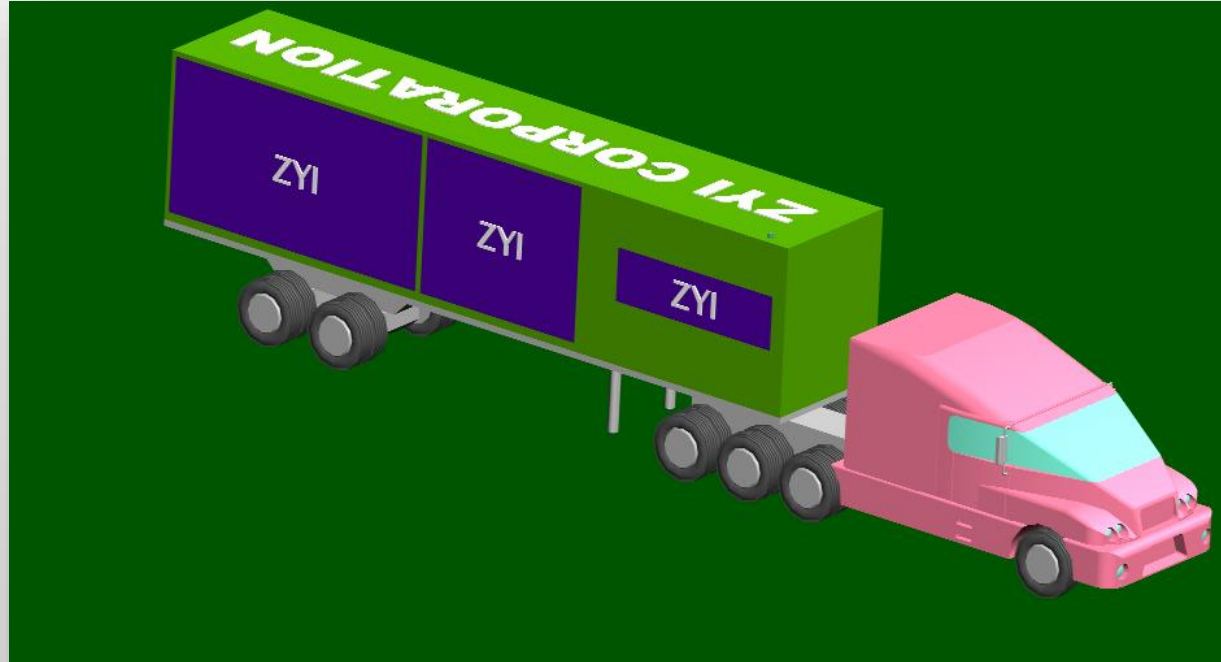
Containerized Brackish Water System Instrument Panel View



- Various flow meters, pressure gauges to monitor the operation parameters of the containerized system



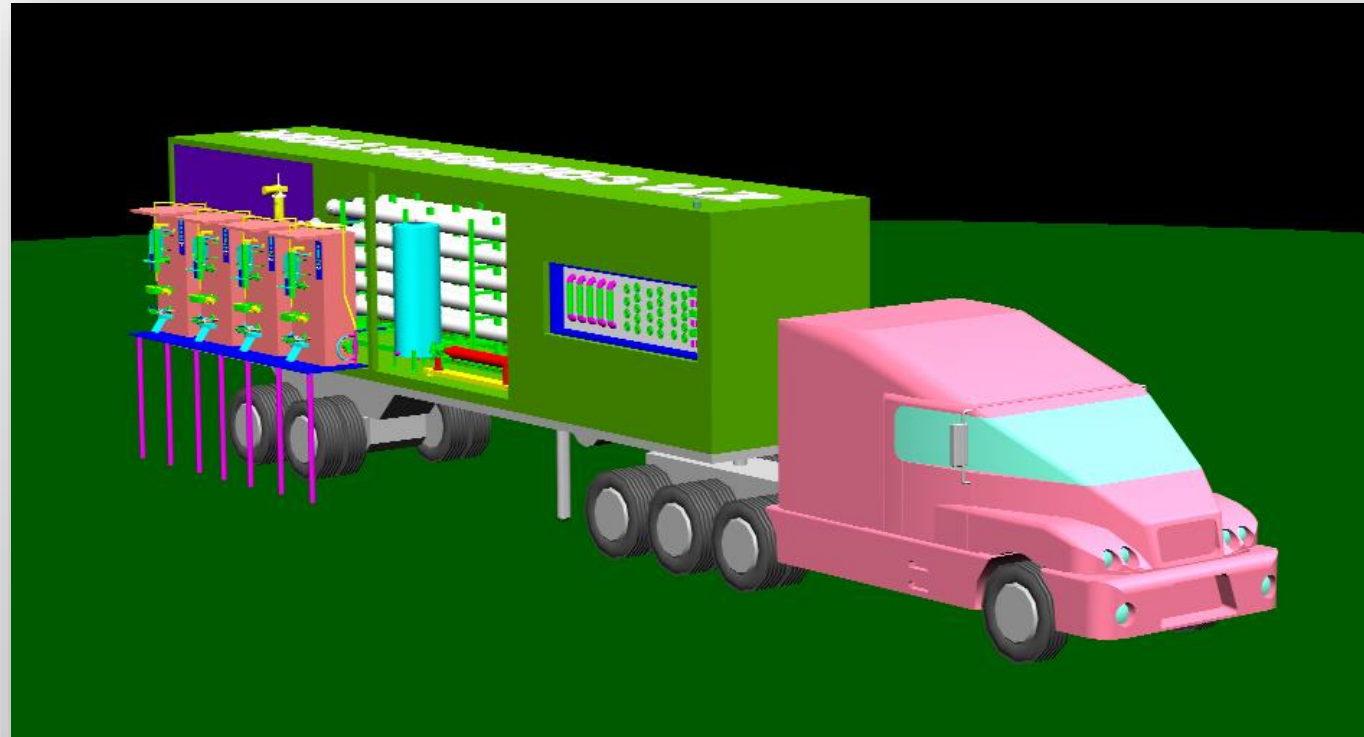
Emergency Water Purification and Water Pouch System ~ Onsite, On Time, On Demand



- Produces pure water and water pouches in one mobile system



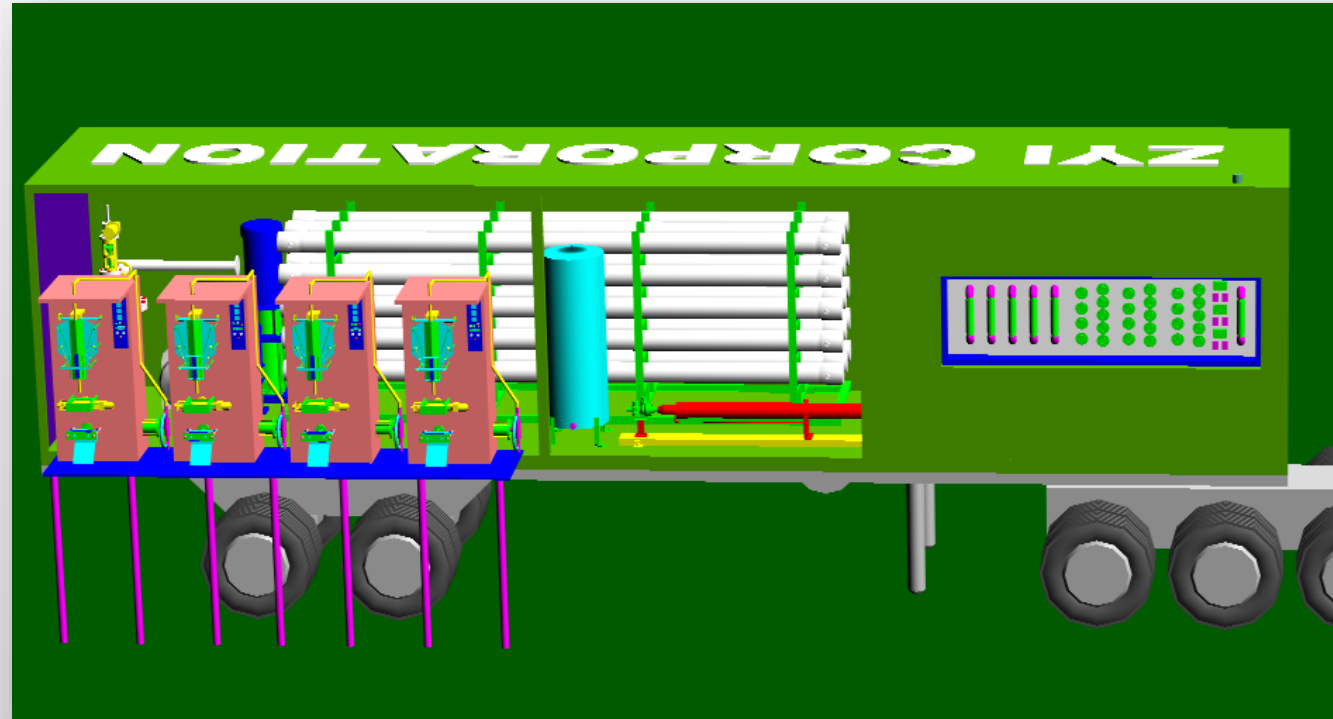
Operation View



- Pouch Fillers slide out before operation begins



Close up View



- Water purification system, pumps, diesel generator, pouch fillers all mounted inside the container, ready for operation.



Water Pouch Form-Fill-Seal Unit -- up to 1800 pouches per hour



Pure Water Pouches Ready to Drink



- 0.5 liter to 1 liter
- Up to 30 bags per minute production rate per bagger



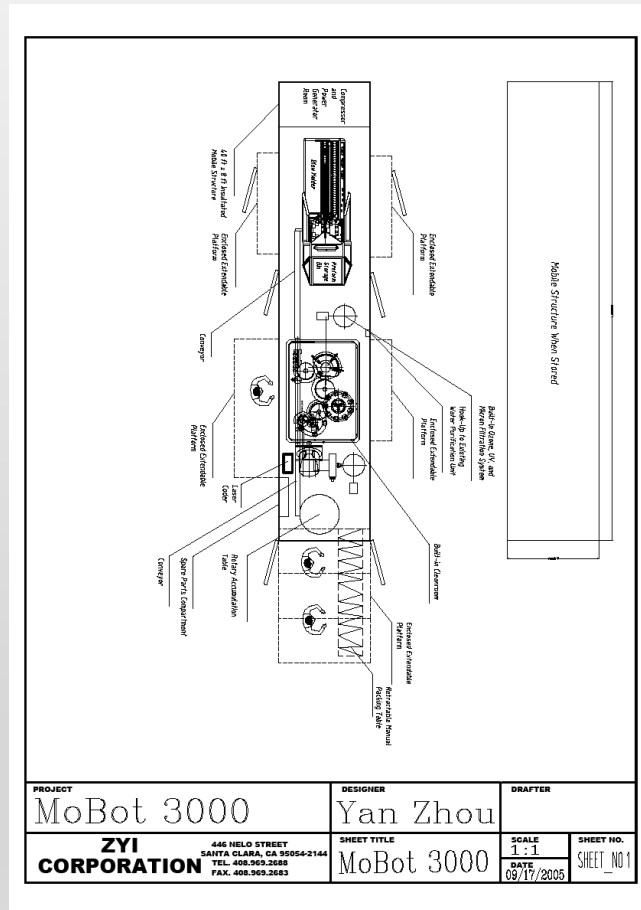
Emergency Response Bagging Unit



- First in the world to incorporate water bagging, filtration, UV+ozone disinfection, propane generator, all inside a 16-foot trailer. Can be driven by anyone with a C class license.



3000 Bottle per Hour Containerized, Mobile Water Bottling Plant



- ▶ Built-in Blow Molder to make bottles on board
- ▶ Expandable working area
- ▶ Built in ozone and UV disinfection system
- ▶ Immediate startup upon arrival
- ▶ Transportable by truck, train, boat or plane
- ▶ Most unique design in the world

Ocean Vessel Mounted Desalination Plant

- ▶ Service remote islands or provide emergency water



Electro-coagulation



- ▶ Modularized design
- ▶ Batch process or continuous flow
- ▶ Wastewater treatment
- ▶ Able to treat a wide range of wastewater
- ▶ Low or no chemical treatment of wastewater
- ▶ Less sludge produced than conventional chemical treatment
- ▶ Remediation of groundwater and leachates
- ▶ Breakage of oil/water emulsions produced in the pumping of hydrocarbon contaminated groundwater
- ▶ Zero-discharge applications
- ▶ Low maintenance



Electro-coagulation – Results on Oil Field Wastewater

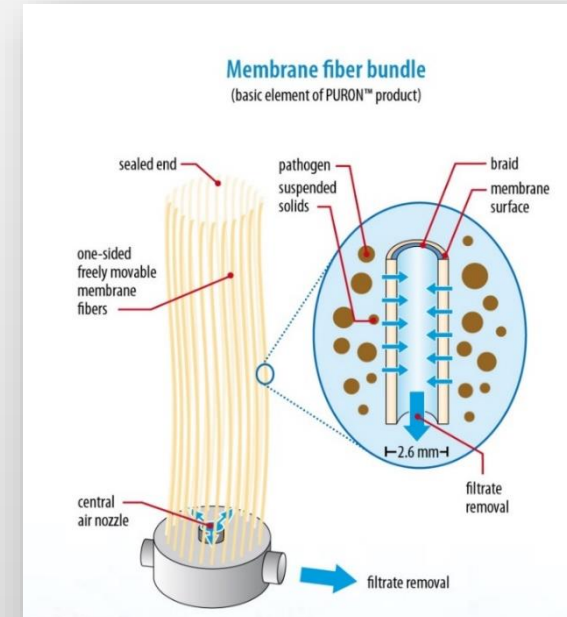
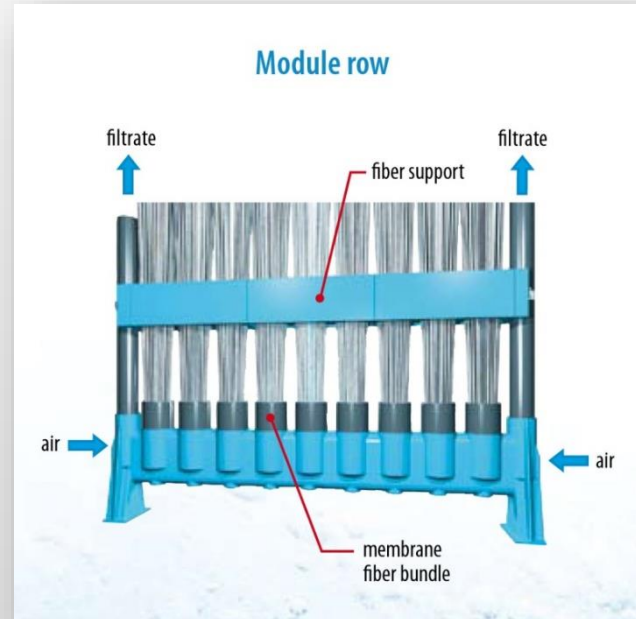


Vapor Compression Distiller



- ▶ Movable, stainless steel shell design
- ▶ 500 GPD to 100,000 GPD
- ▶ Pure water production
- ▶ Wastewater treatment
- ▶ Chemical/acid recovery
- ▶ Produce liquid fertilizer and high purity water at the same time from black/grey water
- ▶ High energy efficiency
- ▶ Automated process
- ▶ Corrosion resistant super stainless steel construction available
- ▶ Zero-discharge application
- ▶ Low maintenance
- ▶ Competitively priced

Submersible UF Membranes



- Easy to install, maintain, and clean
- Low fouling potential
- Blocks out pathogens and suspended solids
- Many years of worldwide field operations ensure uncompromised performance

Submersible UF Membrane Modules in Action

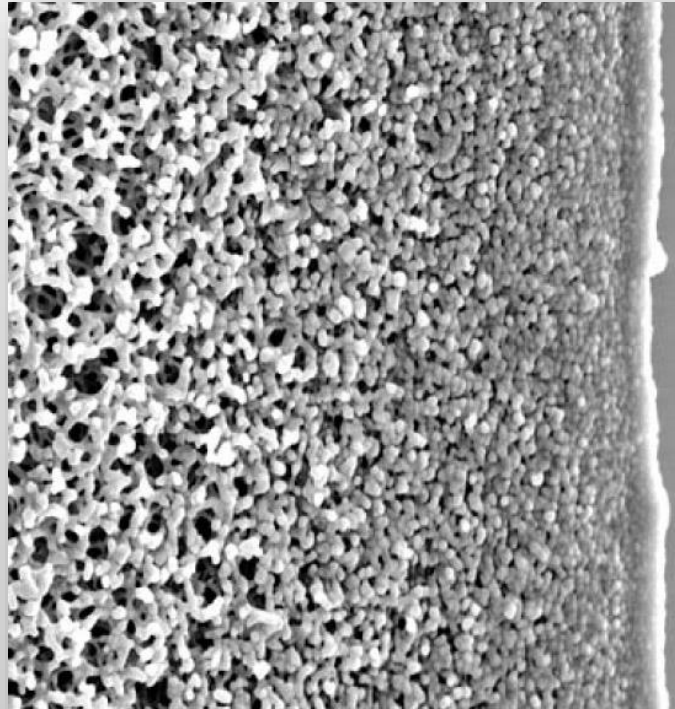


- Produce irrigation grade water directly from sewage collection tanks. UF processed water can be further purified for industrial use or even for potable water
- Thick sludge may be used to produce biogas for heating or power generation by using aerobic digesters
- Direct immersion reduces equipment space
- Low energy consumption



UF Treatment of Sewage Water

*Forever***Pure**



UF Membrane Surface View

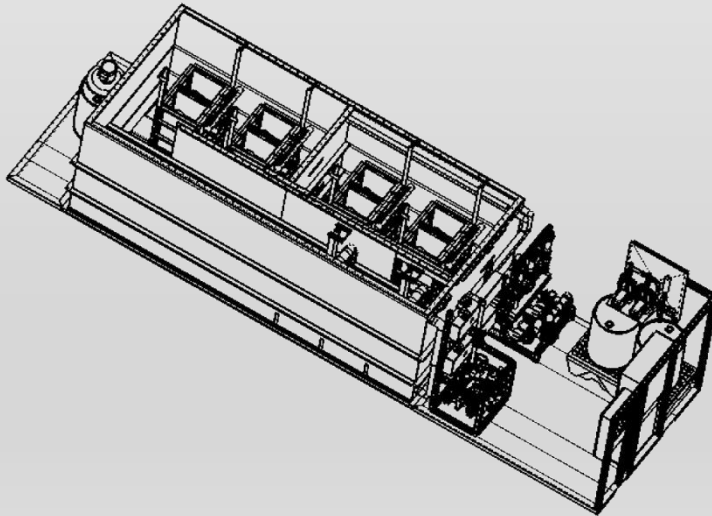
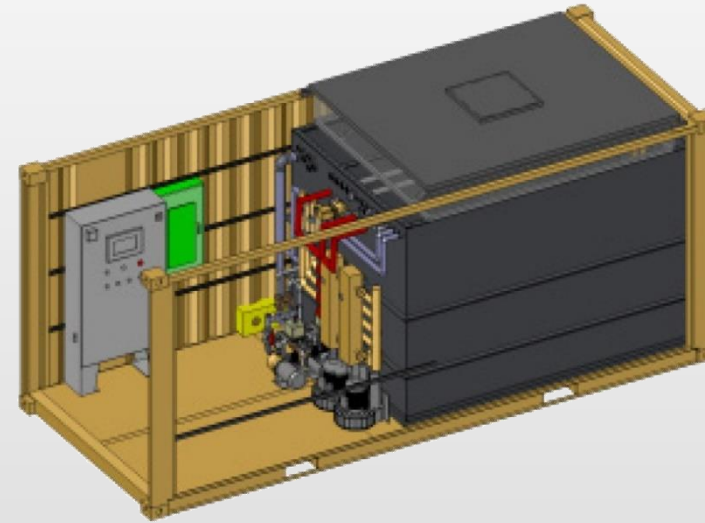
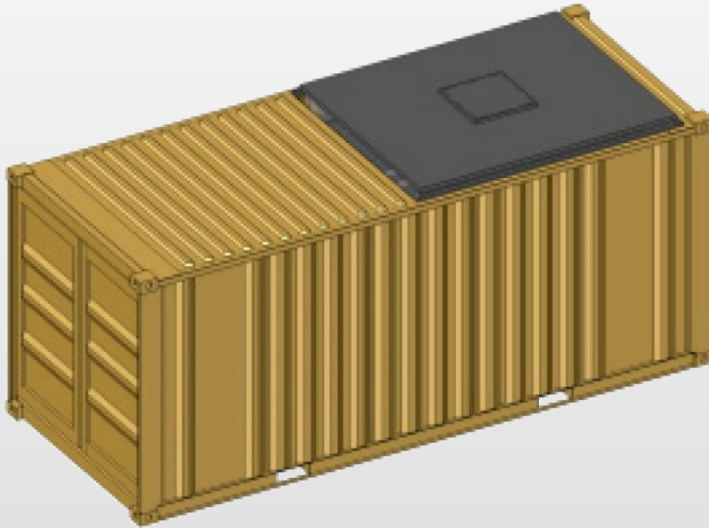


Sludge Before and After UF Treatment



Modularized, Mobile Designs

Forever **Pure**



- Allows decentralized wastewater treatment
- Lower cost due to assembly line style manufacturing
- Shorter delivery and setup time
- Leasing/rental possible
- Pre-manufactured, complete factory tested packages reduce installation and labor costs



Advantages of Modularized, Mobile Systems

- Worldwide applications
- Can treat a wide range of wastewater from industrial to municipal discharge; from toxic chemical fluids to biologically contaminated water
- Modularity allows for flexible expansion
- Suitable for decentralized or centralized wastewater treatment
- Quick start-up
- Lower capital cost
- Low or no chemical consumption in treatment process
- Produces sludge that is safe for landfill disposal or used as soil conditioner for farm lands in many cases



Demineralization system



- ▶ Low operation cost
- ▶ Low power consumption
- ▶ Relatively lower capital cost
- ▶ Proven long time reliability in oil fields, power plants, coal bed methane fields, and other industrial applications
- ▶ High purity effluent
- ▶ High flow design
- ▶ Low regenerant requirement
- ▶ Easy to install

Sediment and Oil Filter With Walnut Shell and Micro Media

*Forever***Pure**



- ▶ Robust: will filter raw feed water with a turbidity of up to 100 NTU
- ▶ Flexible: filters variable feed water sources with no breakthrough of solids
- ▶ Produced filtrate quality of less than 0.1 NTU
- ▶ High purity filtration under various feed water TDS levels with an average particle size of less than 1 μm nominal and a filtrate silt density index of less than 5
- ▶ **Designed to filter water containing TSS up to 20 mg/L and total insoluble oil up to 20 mg/L**



ForeverPure Power Batteries

We produce our own high performing line of ForeverPure Power Renewable Energy Batteries. These deep cycle lead acid batteries are designed to be regularly deeply discharged and recharged to get the most out of a renewable energy system (solar, wind, etc.). They are able to provide system users with an uninterrupted power supply (UPS). ForeverPure Power Batteries are produced in the USA, come with a 5 year warranty, and are available in 12, 24, 36, and 48 Volt.



Vanadium Flow Battery Option

Excess power output by wind and solar can be stored in the Avalon™ Vanadium Flow Battery. This battery employs proprietary vanadium-based chemistry and is fully turn-key for fast and cost-effective installation. These batteries require no ancillary systems, secondary containment, electrolyte filling or secondary electrical connections on site.

ADVANTAGES

- Exceptional durability of >20,000 cycles without capacity fade
- Safe, external fault tolerant operation
- Exceptionally low fire risk
- They can achieve 100% discharge every cycle
- Last for more than 30 years, approximately the same life span as solar systems and desalination plants
- Low overall operation cost



Lithium Ion Battery

We have expanded our renewable battery products to include Lithium Ion batteries, starting with SimpliPhi's deep-cycle Lithium Ferro Phosphate (LFP) batteries. These are modular, light-weight and scalable for installations that range from kWh to MWh. Provides power security and seamless integration of renewable and traditional sources of energy in conjunction with or independent of the grid: net zero, peak shaving, emergency back-up, portable and mobile.



Solar Carports

We offer design, supply and implementation of small to large scale solar carport installations. Some advantages of solar carports:

- ▶ Simplified and economical alternative to complex roof mount systems.
- ▶ Utilize existing parking areas without sacrificing valuable real estate.
- ▶ Increase overall energy production of existing solar project.
- ▶ Little to no maintenance with easy access for service and repair.
- ▶ Provide shaded and covered parking for autos.



Commercial Projects – Satellite Images



Closeup 3D view of a 260kw Solar Carport with REC290TP panels



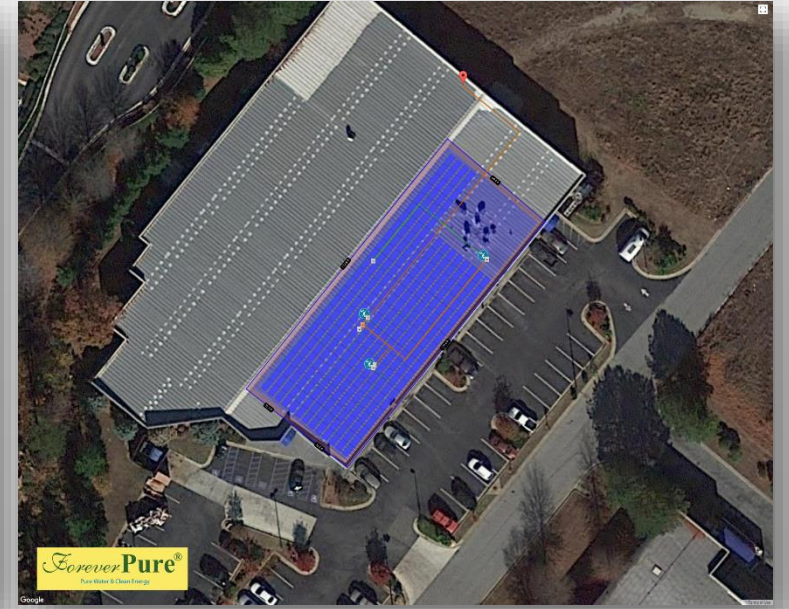
3D View of a 333kw Solar Carport



1.1 MW solar power plant for
wastewater treatment plant

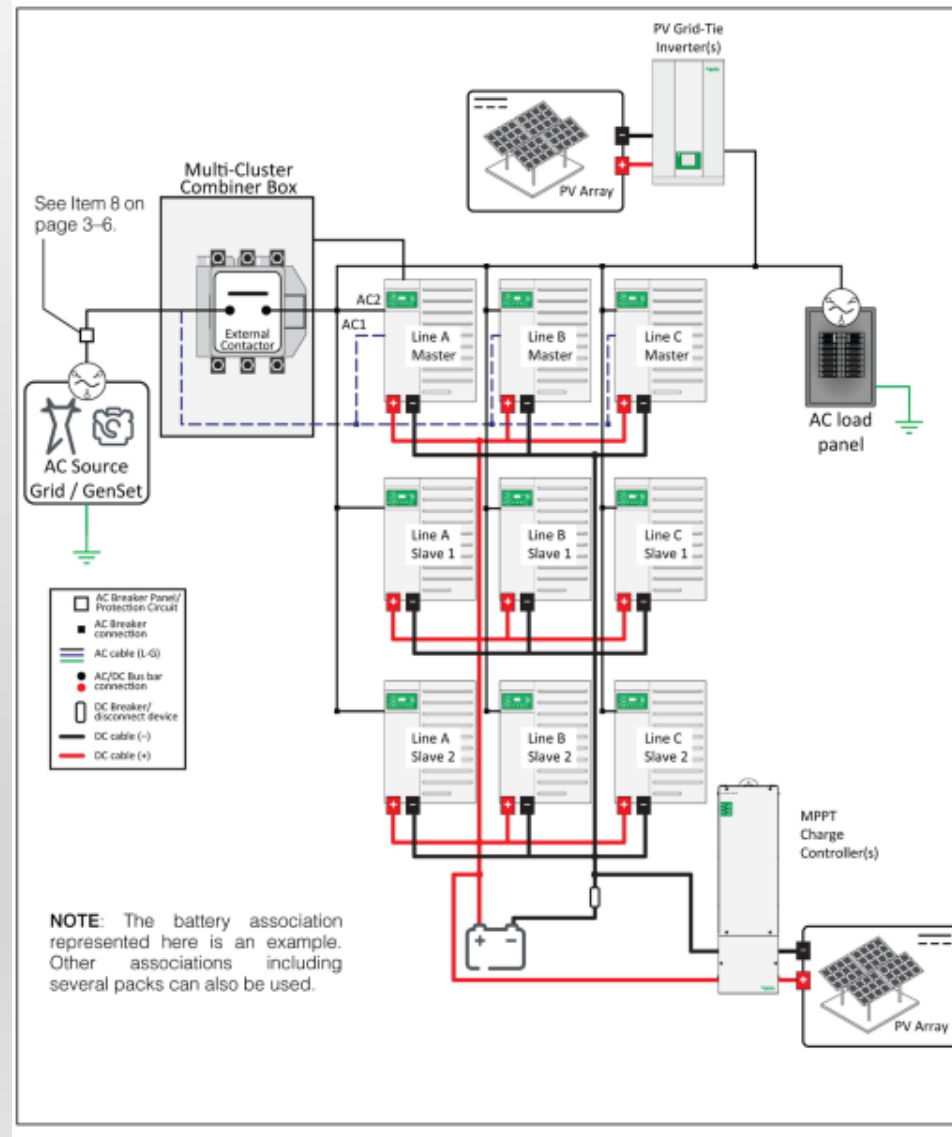


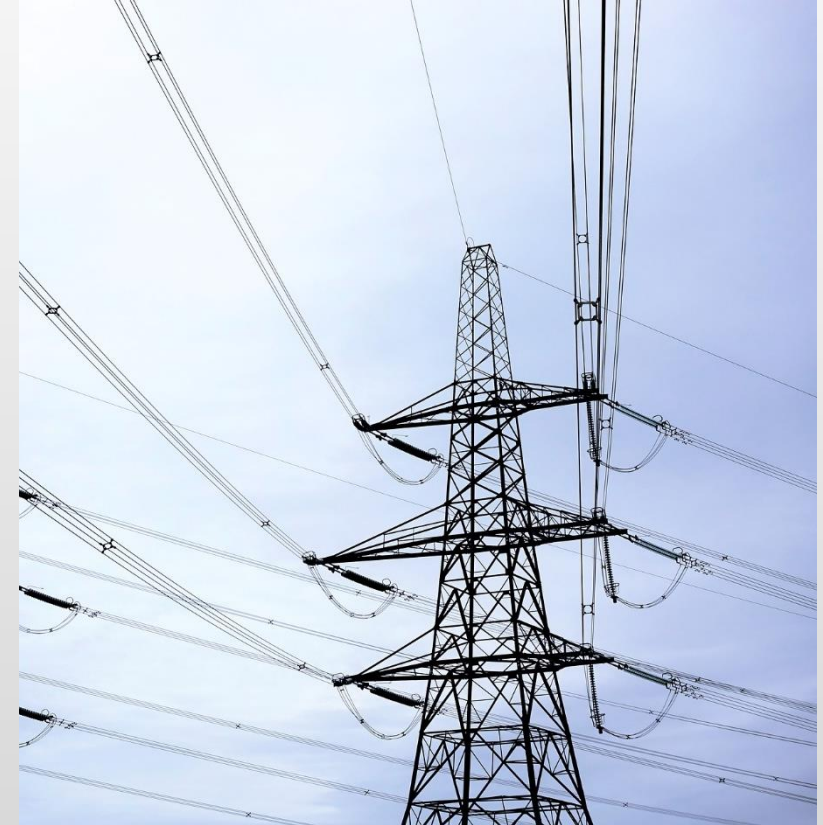
Los Cabos Marina carport solar –
full coverage



Pin Strike layout with Bifacial 370W

XW Multiple Unit Connection Diagram - Cropped





ForeverPure Power® Containerized Energy Storage System

Complete solar inverter and renewable energy storage system for maximum solar efficiency.

System Overview and Options

ForeverPure Power Containerized Energy Storage Systems are complete solar inverter and renewable energy storage units to enable consumers to get the most from their solar power. Each HVAC and lighting equipped storage container comes fully equipped with everything you need: Inverters, AC and DC Distribution Boxes, and renewable deep cycle lead acid batteries.

We offer three standard modules:

- 1. 2 x XW+ 6848 NA Inverters with 2 x 48V,1600AH batteries
- 2. 3 x XW+ 6848 NA Inverters with 3 x 48V,1600AH batteries
- 3. 4 x XW+ 6848 NA Inverters with 4 x 48V,1600AH batteries

Multiple modules can run in parallel to increase total output capacity. They can run on grid-connect mode or completely off grid.



Inside the Containers

- Each container is 10'L x 8'W x 8'5"H and comes equipped with lighting and HVAC.
- Multiple containers can run in parallel to increase total output capacity.
- Each container is equipped with Schneider XW+ 6848 NA Inverters, ForeverPure AC and DC Distribution Boxes, and ForeverPure Power Renewable Energy Batteries. Battery alternatives: [lithium ion](#) or [vanadium flow](#).



Inverter Features

- Conext™ XW+ is an adaptable single-phase and three-phase hybrid inverter that supports DC coupled and AC coupled off-grid and grid-tie architectures
- Balance-of-system components integrates battery bank, solar charge controllers and generators
- Excellent load starting with high 30-minute and 5-second power
- Performs in hot environments up to 70°C
- Backup power with grid-tie functionality converts external DC power to AC power for export to the utility grid



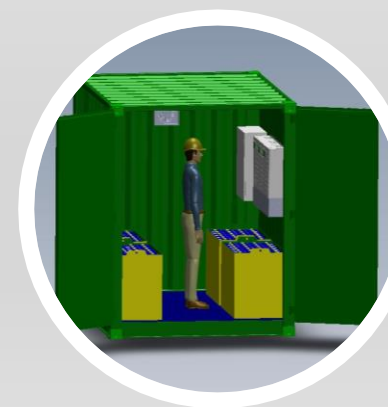
Battery Features

- Our Containerized Energy Storage Systems are equipped with 48 Volt, 1600 AH ForeverPure Power Renewable Energy Batteries.
- Our deep cycle lead acid batteries are designed to be regularly deeply discharged and recharged to get the most out of a renewable energy system.
- Our batteries are able to provide system users with an uninterrupted power supply (UPS).
- ForeverPure Power Batteries are produced in the USA and come with a 5 year Warranty.



System Advantages

- Intelligent functionality enables solar prioritization, load shifting, peak shaving, and assists small generators with heavy loads
- Serves as a reliable backup system in areas with an unreliable grid
- Reduces generator dependency and works with your generator to supplement your power capacity
- Prioritizes consumption of solar power before purchasing power from the utility
- Exports excess solar power to the grid where permitted
- Avoid peak utility charges
- User can monitor battery capacity and system from PC or device
- Adaptable and scalable



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ForeverPure Power[®] Solarized Modular Living Units
Complete off-grid container homes with solar power and purified water.

System Overview

ForeverPure Power® Solarized Modular Living Units offer the flexible and independent modular home lifestyle with the option of going completely off grid or being grid tied. These comfortable container homes run on solar power. ForeverPure's Solar Oasis system provides the unit with potable water through the desalination and purification of water from a nearby beach, brackish water or surface water source. The addition of a satellite phone and wifi device provides complete communication and the ability to go anywhere.

The consumer has the option to purchase the entire package or can select each component separately based on their need. All components are standardized for easy configuration and installation. By adding modules to increase capacity we have the capacity to develop commercial sites with multiple dwellings.





Solar Options

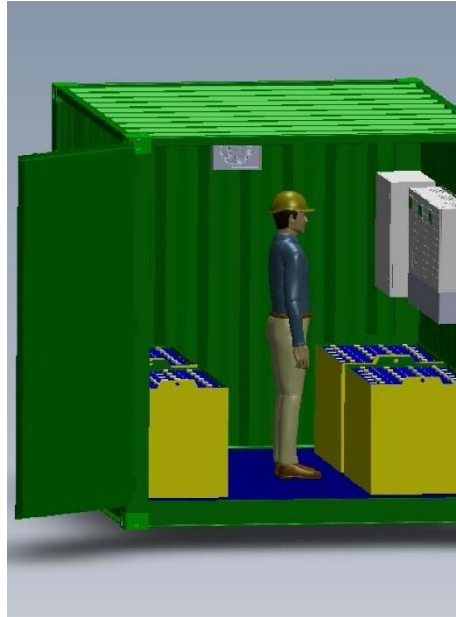
Solar panels can be mounted on the container home's rooftop, or installed on a solar carport structure.

ForeverPure Power Containerized Energy Storage Systems

In order to maximize energy efficiency and minimize the need for grid power, the Solarized Modular Living units come equipped with ForeverPure Power® Containerized Energy Storage Systems. These are complete solar inverter and renewable energy storage units that enable consumers to get the most from their solar power. Each HVAC and lighting equipped storage container comes fully outfitted with everything you need: Schneider Inverters, ForeverPure AC and DC Distribution Boxes, and our renewable deep cycle lead acid batteries.

Advantages

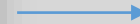
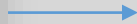
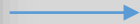
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- Avoid peak utility charges
- User can monitor battery capacity and system from PC or device
- Adaptable and scalable



Solar Oasis

Each solarized container home has the option to be equipped with our Solar Oasis system. This is a solar-powered seawater and brackish water desalination system for off-grid applications, complete with solar center package and watermaker.

- Solar Oasis systems are available in various daily usage capacities depending on the user's need.
- Each off-grid solar center package includes: charger/controller/inverter, batteries, AC distribution box, solar panels and cables. The solar inverter converts the direct current output of the solar panels into AC current for your off-grid applications.
- AC current is used to power the connected Seawater Reverse Osmosis Desalination System. A feed water pump delivers water from the ocean or raw water storage tank to the desalination system where it is pre-filtered to reduce the concentration of suspended solids before entering the RO pressure vessel.





Iridium Satellite Phone and Wifi System

With the addition of an Iridium satellite phone/wifi system, the modules can be setup anywhere near the beach, a brackish water source or any surface water source.

- Customers can live remotely and cost effectively while maintaining a full range of communications.
- Customers can also move the modules easily should they decide to live elsewhere.



System Advantages

- The system is fully adaptable and scalable to meet the consumer's needs
- Decreased reliability on grid power and local water utility
- Maximized solar energy storage and usage
- On demand fully potable water purified on site
- The ability and means to lead a more independent and self-sufficient lifestyle
- Minimized carbon footprint and help preserve our Earth and resources

ForeverPure®

We are committed to:

- Bringing clean drinking water to people around the world
- Promoting the widespread use of clean energy
- Improving global health
- Reducing water borne diseases
- Preserving our beautiful Earth



Please visit www.foreverpureplace.com for more information about our water purification technologies. You can also visit our B2B site for further information on our commercial and wastewater treatment systems at www.foreverpure.com