



PETRA SOLAR®

Intelligent Energy By Design

Where Solar Meets Smart Grid



PETRA SOLAR

Intelligent Energy By Design



Company Overview

- U.S. Company Founded in October 2006
- Executive Management Team from the Power, Telecommunications and Semiconductor Industries
- Series A Financing of \$14M, Series B Financing of \$40M
 - Element Partners
 - BlueRun Ventures
 - OnPoint Technologies (US Government)
 - NTEC (Kuwaiti Government)
 - Espirito Santo Ventures (Portugal)
 - Craton Equity Partners
- Locations in New Jersey, Florida and California
- Shipping production volumes now

State Level Partnership

- First Recipient of the New Jersey Economic Development Authority (EDA) clean energy manufacturing funding
 - \$3M low interest loan
 - Partially Convertible into Grant with specific milestones
 - Funding Manufacturing facility equipment, inventory and working capital



Department of Energy Program

SEGIS:

Solar Electric Grid Integration Systems

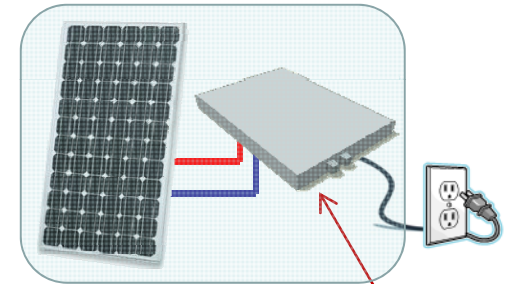
- Focused on funding technology development to enable the preservation of Grid Stability as the penetration of Solar increases
- \$3.2M in funding for Stage 1 and Stage 2 programs to date



Recipient of DOE's
Energy Innovator Award

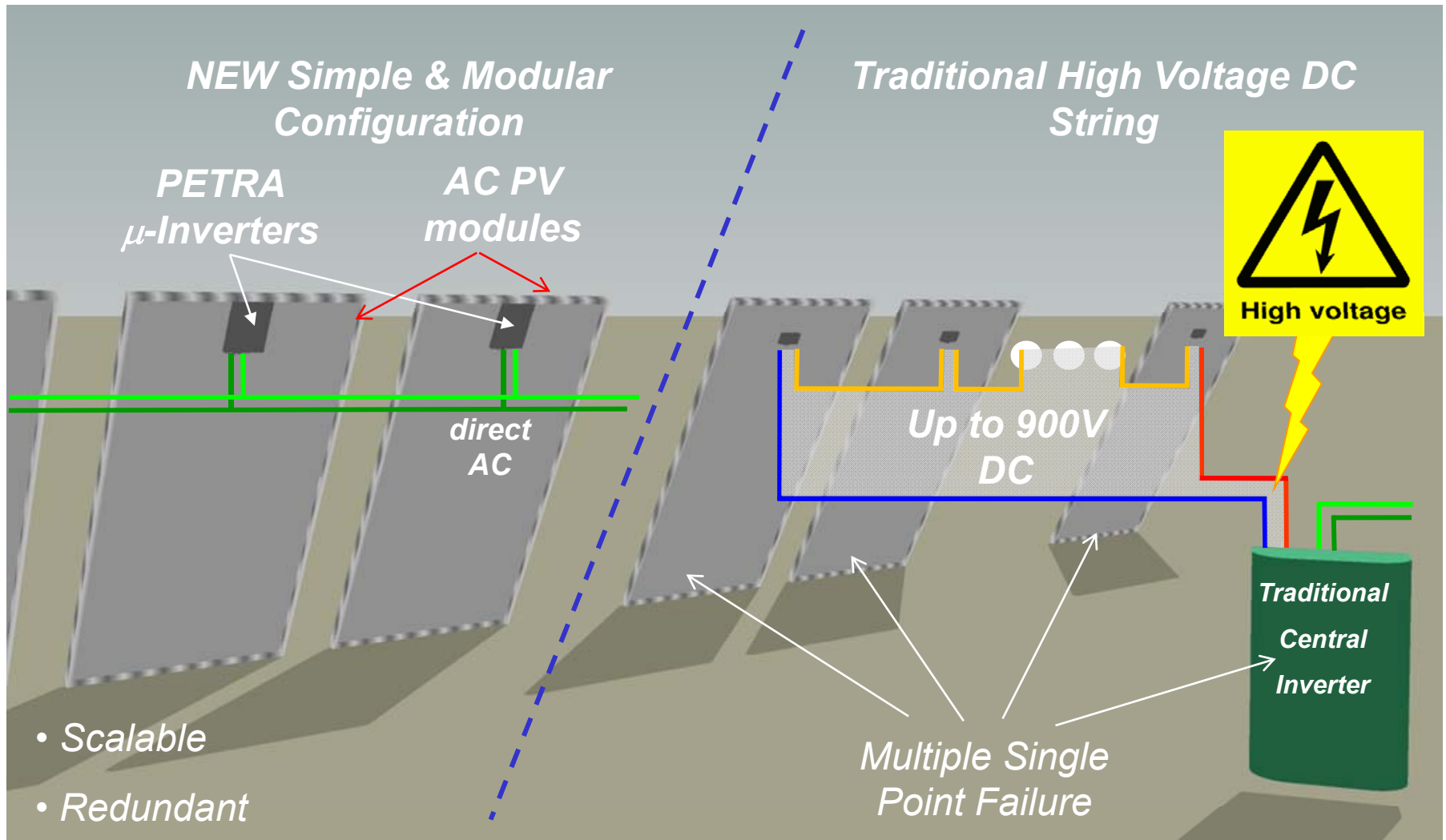
Product Overview

- Petra Solar has core **disruptive technology** in the solar power value chain
 - **The SunWave™ Utility Grade AC Solar Power Module**
 - Integrated solar panel & electronics
 - Enables SMARTGRID functionality
 - Unique Utility functionality
- **Benefits:**
 - 15-20% increased power harnessing
 - Diagnostics and functionality on an individual panel level
 - Utility specific features and benefits with Integrated Smart Grid



Petra Solar
Smart Energy Module

AC Modules vs Traditional Approach



New Solar Application: Utility Pole Mount



Modular architecture enables new products & business models

Eliminates Traditional PV Challenges

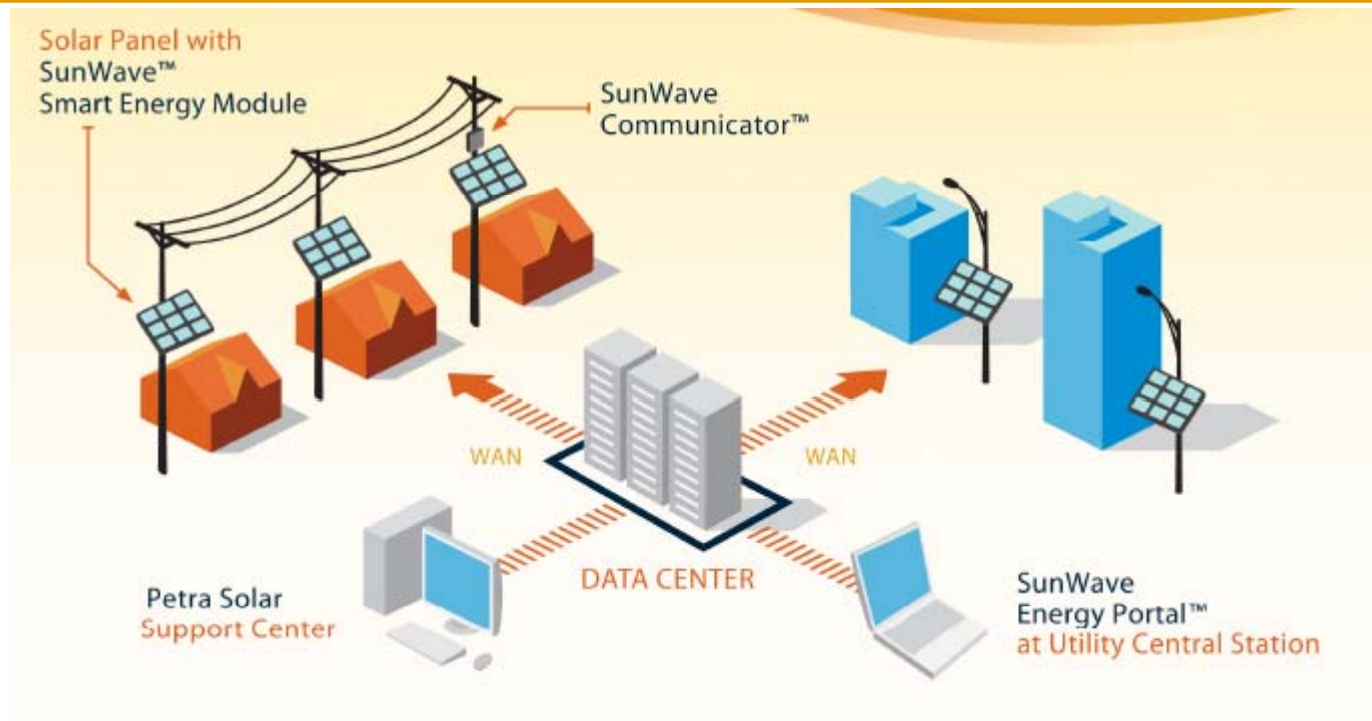
Breakthrough Solar/Smart-Grid Solution



- Enables profitable, direct utility ownership of solar
- Addresses Renewable Portfolio Standard (RPS)
- Avoids siting and permitting problems
- Eliminates interconnection costs and uncertainties
- Smart-Grid Integration

Breakthrough Solar/Smart Grid Solution

The Industry's First Smart Grid Integrated Solar Energy System



- Modular SunWave™ AC Solar units enable distributed power generation on widespread assets
 - Independent Solar Module operation enables installation on small buildings/structures
 - Features direct AC power connectivity and optimized energy harvest per-Module
- Smart Grid Integration provides central control of virtual power plant

World's First Pole Mounted Solar Utility Contract

- Contract with one of the nation's leading utilities
- 200,000 SunWave™ systems to be deployed
- 40MW Virtual Power Plant distributed across the state of NJ
- More than 25,000 units already installed




PSE&G




System Dashboard

- Key System Operational View enabling monitoring of large scale system distributed Solar deployment
- Programmable Alarm and Alert thresholds provide a management-by-exception capability



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A Few Clouds
34.0 F (1.0 C)

Updated: Dec 8, 2009 09:34 AM

[Help](#) | [Logout](#)

Dashboard
Clients
Reports
Management
Settings

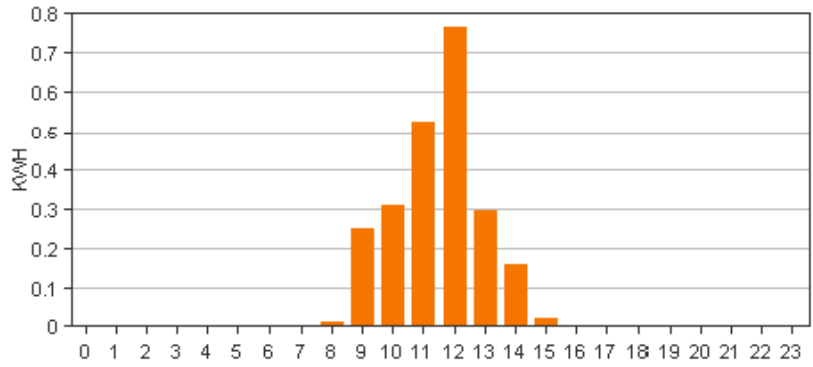
Alert Summary

Show alerts for: [Show Current Status](#)

	GREEN	YELLOW	RED
System Connect	9	0	1
Equipment	0	0	0
24hr Diagnostics	0	0	9
30 day Diagnostics	3	5	2
Expected Month Comp	9	1	0


Generation Summary

DAY
30 DAYS
YEAR
LIFETIME



System Totals

Data Summary		Environmental Benefits	
Total Generation (kW/h)	0.71	Carbon offset (lbs)	0.71
Peak Voltage	126.56	Oil offset (barrels)	0.71
Total thermal (BTU)	0.00	Tree offset	0.71



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Kiosk View for PR Benefits



Thank You !