



Scatec Solar
Scandinavian Advanced Technology

Utah Red Hills Renewable Energy Park 100MW Utah PV Solar

by:
Scatec Solar North America

Eric Perreca - President
eric.perreca@scatecsolar.us

Luigi Resta - CSO, Project Lead
luigi.resta@scatecsolar.us

Mountain View, CA
650-969-2245

Scatec Solar: Improving Our Future

We believe it is a path breaking fact
that only 30 minutes of solar irradiation...

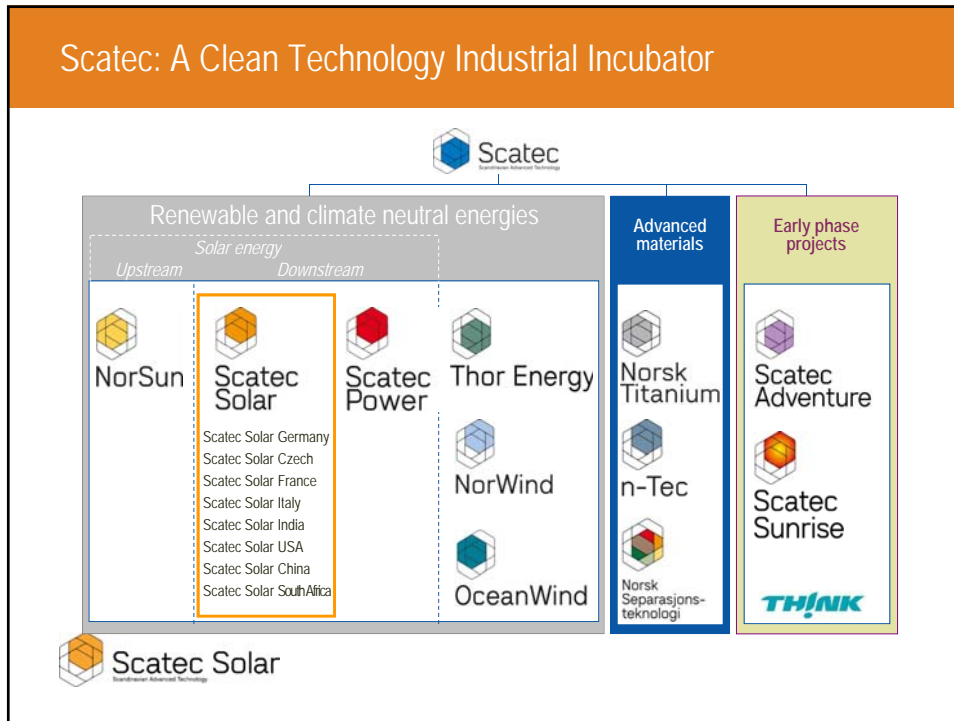


...are enough to cover **100%** of
mankind's annual energy demand

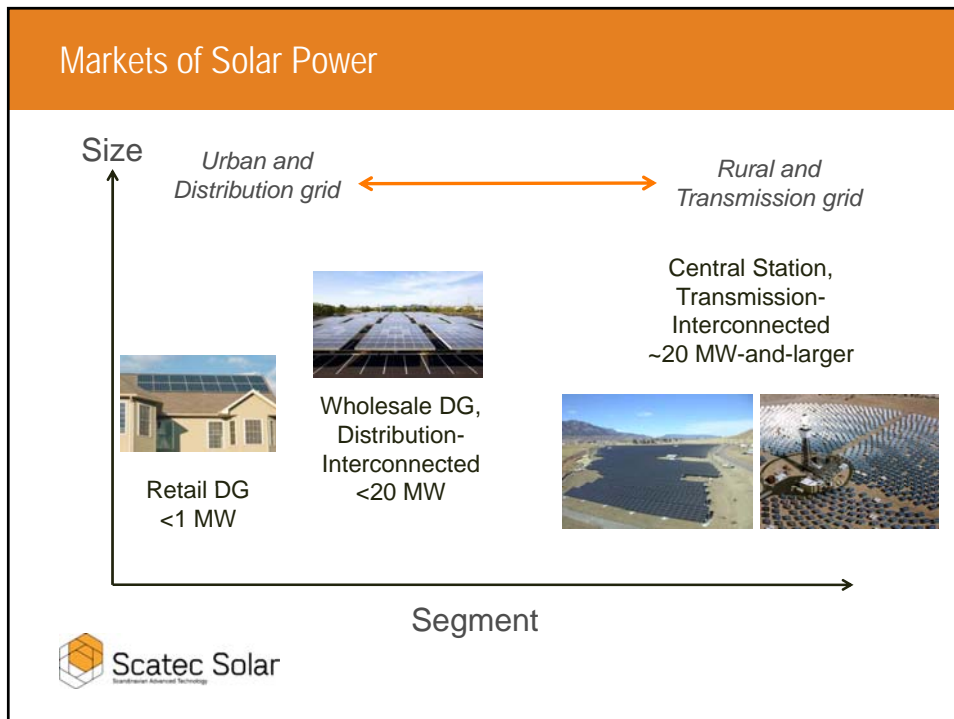


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Scatec: A Clean Technology Industrial Incubator



Markets of Solar Power



Scatec Solar Project Track Record 110 MW

Project references – ground mounted PV systems (solar parks)

Sulkov, 10 MWp  Czech Republic 2010	Puglia, 6 x 1 MWp  Italy 2010	Ergoldsbach, 5.2 MWp  Germany 2010	Switavy, 4 MWp  Czech Republic 2010	San Marzano, 4 MWp  Italy 2010	Hrusovany, 3.1 MWp  Czech 2010
Mramotice, 2.5 MWp  Czech Republic 2010	Krumbach I-II, 5.2 MWp  Germany 2009	Is Arenas, 0.9 MWp  Italy 2009	Pfeffenhausen, 5.6 MWp  Germany 2008	Koppenzell, 1.8 MWp  Germany 2008	In der Kultur, 3.3 MWp  Germany 2007
Polditz, 3.2 MWp  Germany 2007	Weichering, 1.7 MWp  Germany 2007	Pfennighof, 1.7 MWp  Germany 2007	Neumarkt, 1.6 MWp  Germany 2007	Ballstadt, 1.9 MWp  Germany 2005	Mühlhausen, 6.3 MWp  Germany 2004
Günching, 1.9 MWp  Germany 2004	Minihof, 1.9 MWp  Germany 2004	Oberotzdorf, 1.7 MWp  Germany 2003	Hemau, 4.0 MWp  Germany 2002	Sonnen, 1.7 MWp  Germany 2002	Marktstetten, 1.6 MWp  Germany 2002

Scatec Solar Project Track Record 110 MW

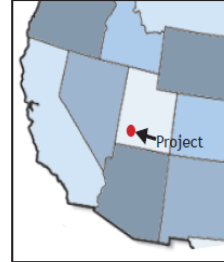
 Italy 2009	 Germany 2008	 Germany 2007 + 2008	 Germany 2007	 Germany 2007
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100MW Red Hills Renewable Energy Park, LLC

Transmission Interconnected Utility Solar

Project: Two 50 MWdc phases, Single-axis tracking
Phase One Output: 104.5 MWh's per year
Location: Parowan, UT
Property: 625 acres
Phase One On-line: July 2012 [Pending PPA]
Phase Two On-line: July 2013



This project supports more than 300 jobs!!!



Red Hills Renewable Energy Park



Conceptual project layout.



Border fence construction is complete



Adjacent substation

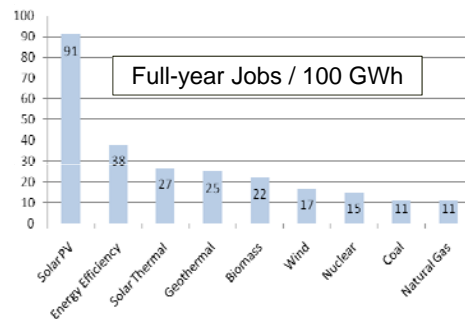
Why Renewable and Why Solar Energy

- Improve local economies
- Create jobs
- Hedge energy costs in the future
- Increase our energy independence
- Improve our national security
- Reduce the consequences of global warming
- Improve Health



Phase 1: Solar Benefits to Utah and Local community

- Recurring community revenues
 - \$2 million Operations and Maintenance budget
- Permanent Jobs Created
 - 22 full-time Operations and Maintenance positions (Utah REDI submittal, 2010)
 - 91 full-time jobs per GWh
- Construction Jobs Created
 - 120 construction jobs (Utah REDI submittal, 2010)
- Indirect Jobs Created
 - 500 job-years (10 jobs-years/MW) per Phase
- Potential to Include Utah's first Solar Education Center



Source: Copenhagen Climate Council, 2010



Cost Benefits of Solar Energy

- Protection from Future Power Costs Increases
 - Solar costs are almost all upfront from installation
 - Warranties for 25 years with expected 50 year plant lives
 - With no fuel costs Solar costs change minimally over project lives
 - This hedges against labor, fuel supply and environmental legislation
 - 15% price increase currently being discussed
- Energy Independence
 - Reduce need to import foreign forms of energy

“Here we have a serious problem: America is addicted to oil, which is often imported from unstable parts of the world.”

-President George W. Bush
 “State of the Union Address,”
 January 31, 2006



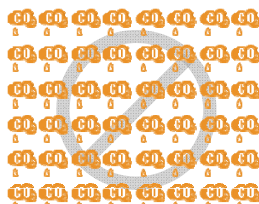
Phase 1: Emissions Benefits

Net Benefit of 100 MW of PV

This project would produce 10.5 Billion kWh of clean energy eliminating 7.2 Million tons of CO2 over it's 50 year life!!!

10,500,000,000
 kWh of clean energy

=



7,200,000 tons of CO2

50 year life

=



OR



OR



By Weight 7,200,00 Tons of CO2 is ...



20

Empire State Buildings

or



90

Queen Mary's

or



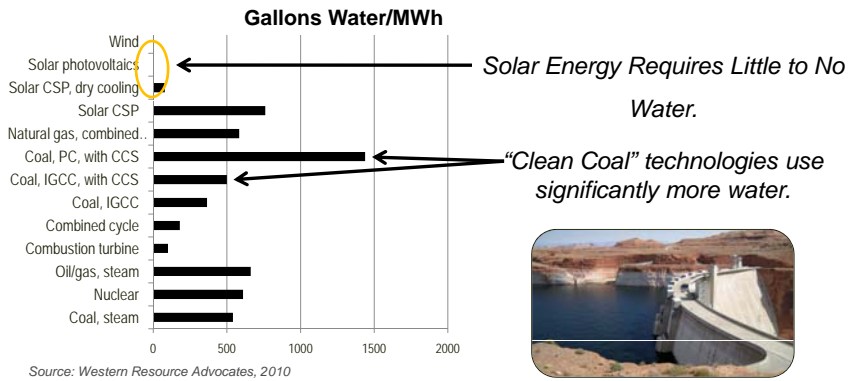
72,000

Rail Cars of Coal



Corporate Confidential

Water Benefits



Solar Energy Requires Little to No Water.

"Clean Coal" technologies use significantly more water.



An 11-year drought has plagued the Colorado River, reducing storage in Lake Mead and Lake Powell to only 55% of capacity.



Health Benefits

Asthma Facts

Every Day in the US:

- 40,000 people miss school or work;
- 30,000 asthma attacks;
- 5,000 emergency room visits; and
- 14 people die from asthma.

Source: Asthma and Allergy Foundation of America, 2006

Mining Health Risks

Risks to Obtaining Fuel:

- 70% increase in kidney disease;
- 64% increase in emphysema;
- 30% more likely to report high blood pressure;
- 29 work days missed /worker annually;
- 49.5 fatalities/100,000 workers in 2006.

Source: Bureau of Labor Statistics, 2008

"The scientific evidence linking air pollution to heart attacks, strokes and cardiovascular death has 'substantially strengthened'."

-American Heart Association, May 10, 2010



Utah's Solar Climate

Assets:

- Utah's solar potential is 13,380 MW (UREZ Task Force Phase II, 2010)
- Like Coal we use our best resources for economic development
- Business-friendly State

Challenges:

- Low Public Awareness
- Required legislation
- Less incentives than other states
- Increased Utility support
- Low power prices



Comparison to U.S. Solar Market

- U.S.
 - Total of 2,100 MW of solar installed
 - 878 MW worth of Solar in 2010
 - Over 100,000 jobs in the solar industry
 - 24,000 new jobs expected in 2011
- Utah
 - Less than 1 MW Solar in whole state
 - 134 KW worth of solar in 2010

The U.S. nearly doubled its solar capacity in 2010. Thousands of new jobs were created helping to revive local economies and the American Working-Class.



State RPS vs Current Installed Solar

- California**
 - 20% by 2010; 33% by 2020
 - **768 MW installed**
- Colorado**
 - 30% by 2025
 - **59.1 MW installed**
- Arizona**
 - 15% by 2025
 - **46.2 MW installed**
- Nevada**
 - 25% by 2025
 - **36.4 MW installed**
- Utah**
 - 20% by 2025 (voluntary)
 - **Less than 1 MW installed**

California's Approach: Complex but Working

State RPS drives Legislation and Policy

- Renewable Auction Mechanism (RAM)
 - 1 GW Solar PV program for mid-sized projects (Under 20 MW)
 - To be deployed in 2011
- California Solar Initiative (CSI)
 - Responsible for more than 479 MW of non-utility-owned solar installations (CPUC, 2011)
 - Goal to support development of 1,750 MW of solar power
 - Created more than 14,370 jobs (CPUC, 2011)
- Publicly Owned vs. Investor Owned Utilities
 - Allegiance to ratepayers vs. shareholders
 - Public utilities more 25% lower rates than investor owned utilities

Utah has greater utility-scale solar potential than California (27,846 GWh)



Opportunities for Solar in Utah: Clean Start for CLEAN Programs

- Designed to encourage and support standard long-term contracts to purchase energy
- Reduce risks and complexity = easier, lower-cost financing
- Streamline contracting procedures = faster, cost-effective development
- Provide streamlined, guaranteed interconnection

More than 75% of the world's solar energy has been deployed with CLEAN Programs



Examples

- State RPS / Renewable Procurement Plan (long and short term)
 - Driven from the Bottom Up by Ratepayers and taxpayers
 - Businesses locate where markets are present
 - Demanding Clean Energy Mix in their power source
 - Supports entrepreneurship and a skilled labor force
 - Opportunities for educational institutions
- Net Metering
 - Needed to balance solar timing with power use
- Direct Access
 - For businesses wishing to relocate: Data Centers
- Others

Solar Job Types

- Manufacturing
- Installation
- Sales
- Wholesale
- Engineering



We are Still Firm Believers in Nuclear Power

For renewable energy to be successful it has to have certain characteristics ...

It has to have proven to be a reliable source of energy in the past and continue to be reliable in the future.

It needs to have good distribution over most of the populated areas and easily available to anyone.

It should be a proven design with no maintenance required and last a very long time without any upgrades or modifications.

There should be no waste to deal with and be inaccessible to terrorists for their use.

Such a power plant already exists. It is 93,000,000 miles away and, oh, so easy to hook up to...

The SUN

