

Evolution of the PV Solar Garden



World's Largest PV Installation



Olmedilla Photovoltaic Park, Spain

Distribution of Top Thirty PV Solar Farms – October 2009

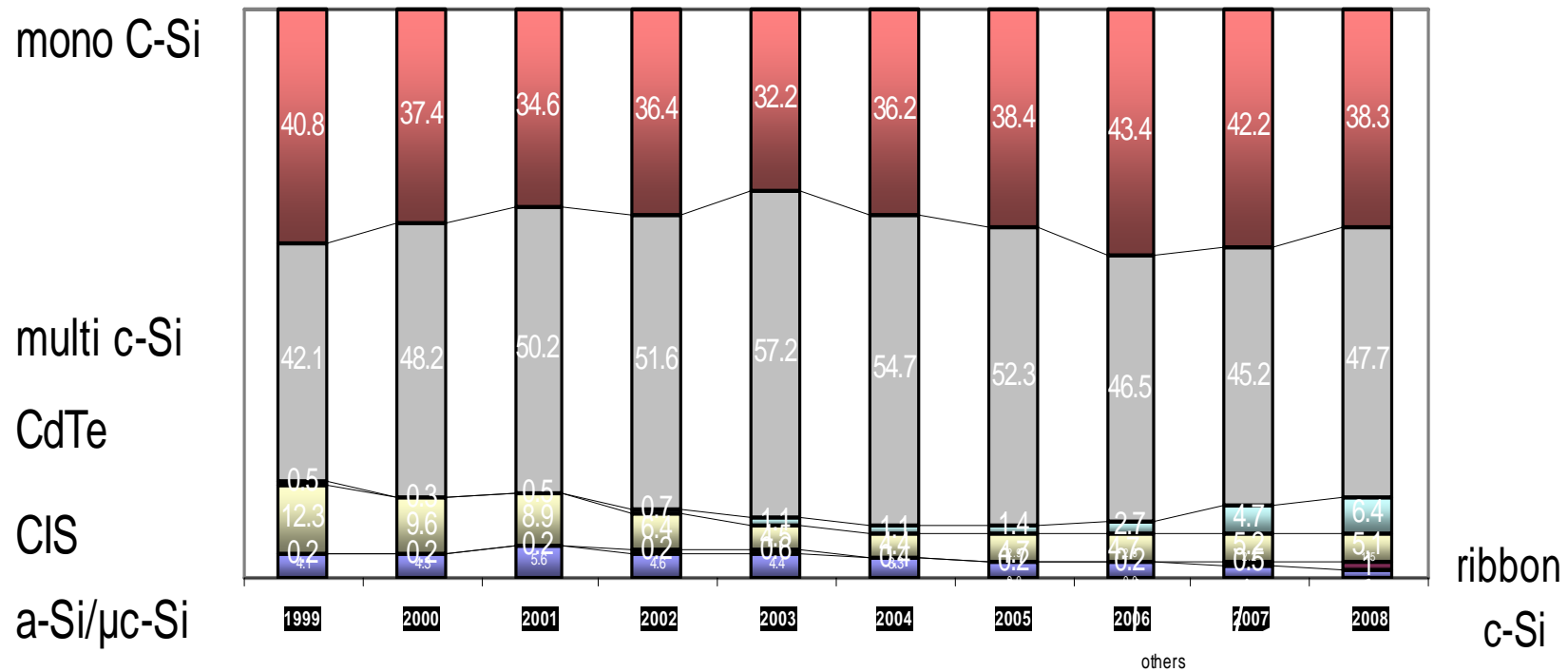
	Spain	Portugal	Germany	Korea	USA
Number	21	2	4	2	1
Total MWp Capacity	470.2	57.4	76.75	38.3	14
Average MWp	22.39	28.7	19.1875	19.15	14

Three PV Technologies

- **Flat Panel Photovoltaic**
- **Thin Film**
- **Concentrated PV**

Solar Technology Distribution

Cell technology shares (%)



Flat Panel PV Solar Farm

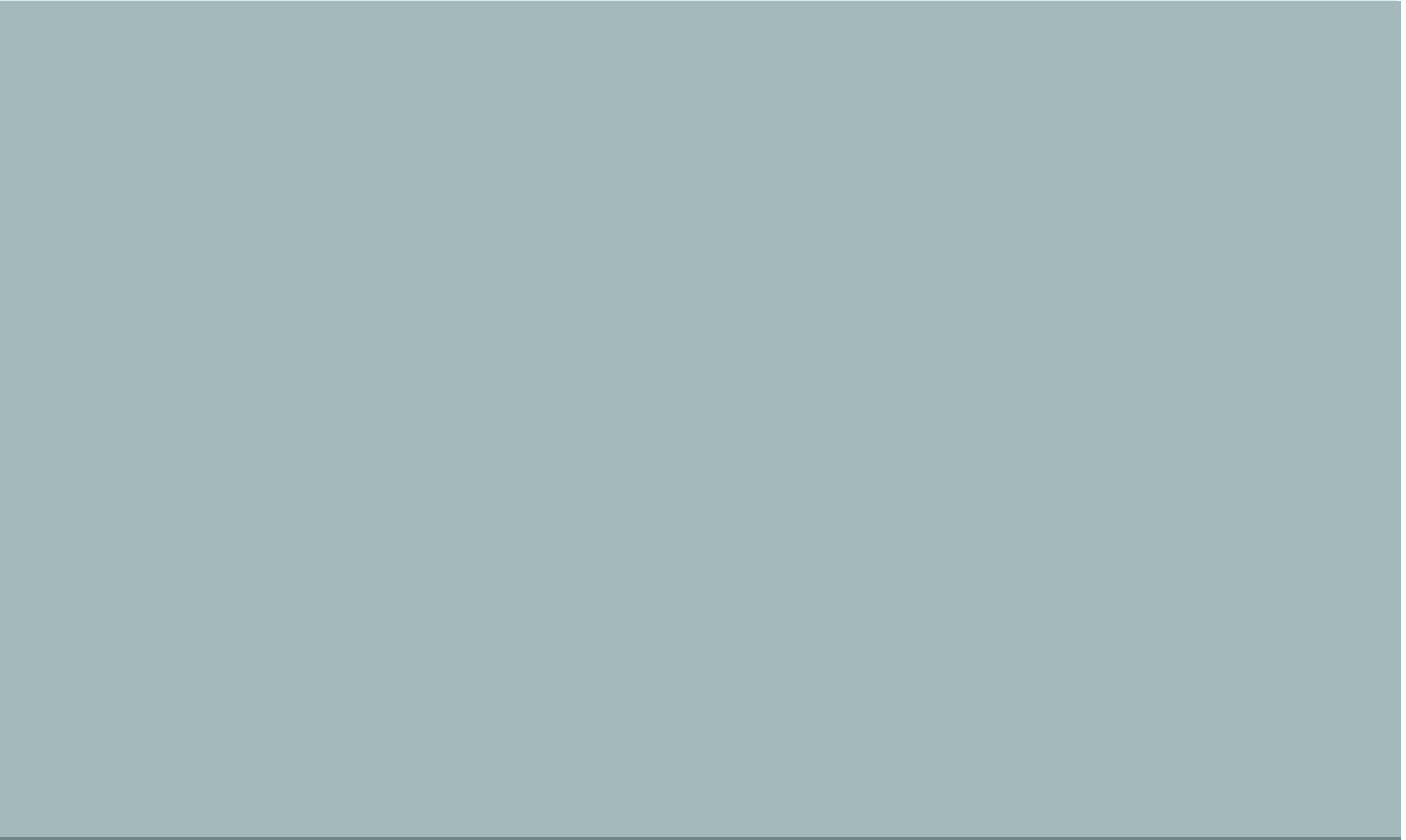


More yield per square metre



Thin Film

Reduced silicon
requirement

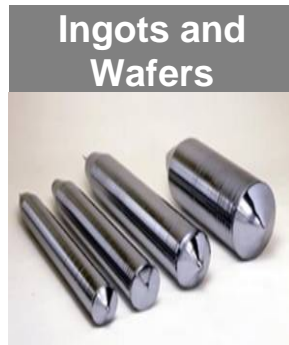
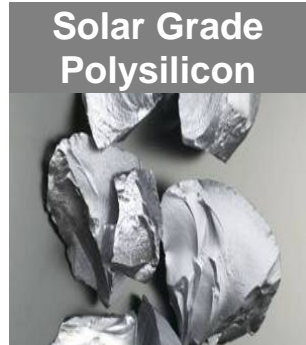


Waldpolenz Solar Park, Germany

Concentrated PV

Improved efficiency
of the cell

The PV Value Chain



Drivers towards larger PV installations

- Climate change
- Increasing black energy prices
- Government incentives
- Increases in PV efficiency
- Improvements in PV manufacturing process
- Reduction in balance of system costs
- Innovative business models
- Investor confidence in technology

Climate Change

- Rio ,Kyoto, Copenhagen
- Public Perception
- Corporate Citizenship
- Enhancing brand image

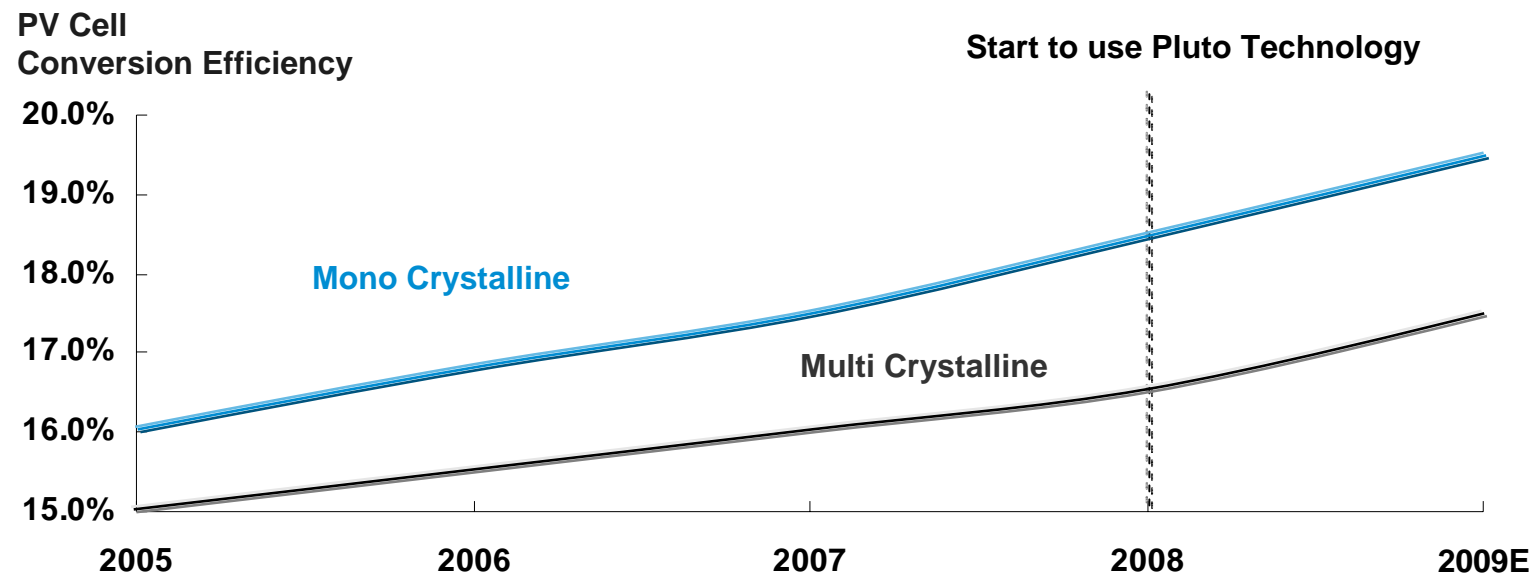
Increasing Black Energy Prices

- Price Volatility of Fossil Fuels
- Carbon Pricing

Government Incentives

- Investment Subsidies
- Feed in Tariffs
- Renewable Energy Certificates

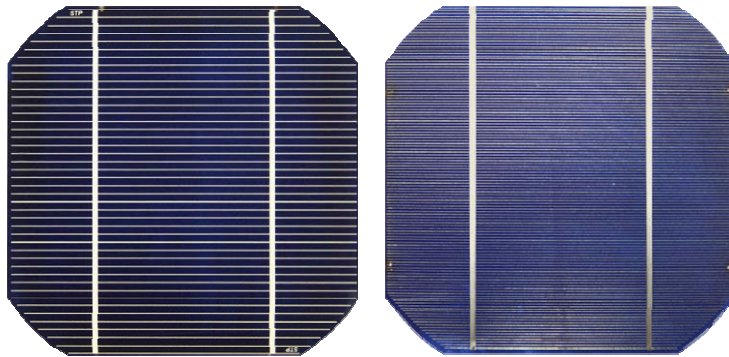
Rising Conversion Efficiency Drives Cost Reduction



Source: Company estimates.

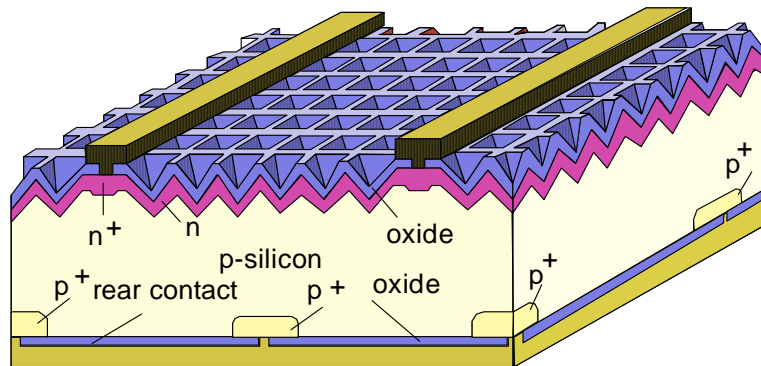
(1) Indicates efficiency of best performing cell in production.

Increasing PV Efficiency – Targets 20%



Standard Cell

Pluto Cell



PERL Cell Structure



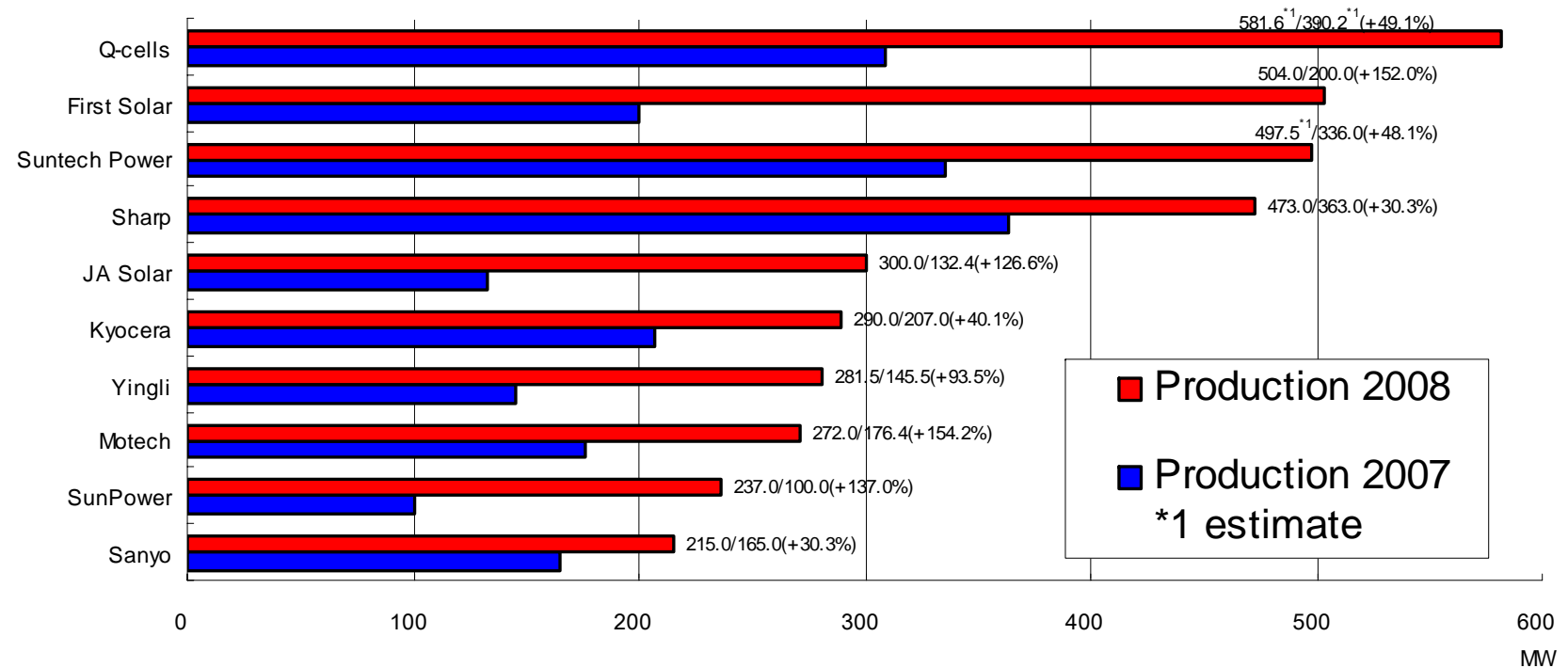
- Already achieving 19% on mono cells
- Close to 17% on multi cells
- Independently tested by Fraunhofer Institute
- Increases power output by 12%+
- Suntech proprietary technology
- Applicable to various grades of silicon including mono and multi
- 34MW line already fully operational

Improvements in Production Efficiency

- Production Scale
- Cell sorting
- Robotics
- Techniques from other industries

Increasing manufacturing scale

Top 10 producers in 2008 (2007)



Reduction in Balance of Systems

- Typical ratio 50/50
- Tracking Systems – single and dual
- Fixed Mounting Systems
- EPC expertise/Development of an industry
- Local Government Assistance

Innovative Business Models

- Power Purchase Agreements (PPA)
 - Minimizes risk
 - Provides capital
 - Popular in the US
 - Early evolution in Australia

Investor Confidence in Technology

- Proven Technology
- Mature production companies with track records
- Viable Return on Investment

What about the future

- 2000 MW Thin Film Plant for Mongolia, China
- 600 MW Racho Cielo, USA
- 550 MW Topaz, USA

- Integration/Storage
- Increasing efficiencies
- Silicon Prices

Thank you

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Elecnor Solar Power Plant

35 MW – Trujillo, Spain



One of the world's largest PV power plants

Over 180,000 Suntech modules, covers 240 acres

Year 1 energy production 110% of estimated kWh

10 MW Power Plant Comparison (2010)

- **Suntech**



1-Axis Tracker – 0 Degree Tilt

- **54 Acres**
- **22,700 MWh/year**

• **LCOE Leader**

- **SunPower**



• 1-Axis Tracker – 20 Degree Tilt

- **60 Acres**
- **24,300 MWh/year**

7% more energy, but at a significant capex premium

- **First Solar**



• 30 Degree Fixed Tilt

- **50 Acres**
- **18,900 MWh/year**

16.7% less energy with only a small capex discount