

Growing Markets for Renewable Energy - a case study of PV-

John Mogford

IAEE conference, Prague 6th June

Beyond petroleum?



... the view of the WorldWatch Institute



Source : WorldWatch Institute

Towards lower carbon energy-the unique role of an energy company



Policy-setting and the Growth of the Low Carbon Economy





bp

Renewables-horses for courses

	Biomass	Solar	Wind	Tidal	Geothermal	Wave	Large Hydro	MicroHydro
Cost	-	-	+	-	+	-	+	+
Scale	-	-	+	+	-	+	+	-
Technology	?	+	+	-	+	-	+	-
Environmental impact	?	+	-	-	+	-		-
Continuous supply	+	-	-	+	+	-	+	+

Why Solar now?



Public Awareness of Energy Issues

Significant interest from customers and governments

Technology Advances No technology breakthroughs required to achieve significantly lower costs at the systems level



Large markets (Japan, California) can be economic today without subsidies



Moving from Technology to Market

Costs are Decreasing



- Move down the cost curve
- Move up the efficiency curve



* For on-grid electricity generation applications
Source: Department of Energy; National Renewable Energy Laboratory; IEA; Industry publications; team analysis

Getting PV into the market



PV Market Growth - Germany



2002 residential system prices







2005 residential system prices



Average Residential System Prices -- 3 kWdc Nominal -- 2005 Projection



We are meeting customer's needs

"Once I found out how much solar cost and how much it saved, I felt foolish for not doing it sooner. I feel like a kid everytime I see the meter spin backwards"

Curtis Platte, Sun Vally California

"With only a little over a 5 year payback, it makes sense...not only to help the environment, but also to help out my retirement plans for selfsufficiency"

Alex Smaringa Santa Barbara, California



"We really trust our BP installers; they did everything they said they would do and were meticulous down to the tiniest detail"

Brad Arensman, Castaic California



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