REFERENCE	US PV
Title:	The Industry-Developed PV Roadmap (U.S)
Date:	September, 1999
Author:	
Funded by:	U.S. Department of Energy National Center for Photovoltaic
Hard copy reference:	
URL:	http://photovoltaics.sandia.gov/docs/PVRMPV_Road_Map.htm
Date accessed:	July 2006
Web Format:	No
IEA topics covered	Photovoltaics
Geographical focus:	U.S
Brief Abstract:	The Photovoltaic Industry Roadmap is a U.S. industry-led effort to help guide domestic photovoltaic research, technology, manufacturing, applications, markets, and policy. The roadmap covers the period of 2000-2020 and represents the direction of the photovoltaic industry, its critical partners, and U.S. government programs.

OUTPUTS	
Short Report?	Y (4 pages +73 pages, 1999) (16 pages, 2004)
Major report?	Y (36 pages)
Visualisations?	No
Information held on dedicated software?	N
- which package?	N/A

ARCHITECTURE	
Timescales used:	2000-2004, up to 2020
Trends and drivers?	Y
- list	Total installed (annual) peak capacity will be at about 7 GW_p installed worldwide by our domestic PV industry during 2020, of which 3.2 GW_p will be used in domestic installations. We estimate the mix of applications to be: 1/ 2 AC distributed generation, 1/ 3 DC and AC value applications, and 1/ 6 AC grid (wholesale) generation. Installed volumes will continue to increase, exceeding 25 GW_p of domestic photovoltaics during 2030. In 2020, cumulative installed capacity in the United States will be about 15

	GW_p , or about 20% of the 70 GW_p expected cumulative capacity worldwide. Prices — The system price paid by the end-user (including operating and maintenance costs) will be $3 to $4 per watt AC in 2010. Total manufacturing costs — or the cost to produce the components in the system — are projected to be 50% to 60% of the price of the installed system. The success in 2020 of achieving the Vision and these goals will be a hundredfold growth — over 2000 levels — in domestic markets and the U.S. industry. Our roadmap sets the stage for further ramping up of the use of this valuable renewable resource beyond 2020, providing significant portions of U.S. and world electricity generation with an environmentally clean, reliable, and competitive energy source.
Enablers?	**Market sectors**
- list	
Performance measures/targets?	Y
- list areas	Targets given for the market penetration of new technologies, and indicative efficiencies.
Mapping of RD&D activities?	N
Critical assessment of capabilities?	N

PROCESS	
Methods used:	
- Desk study?	Y
- Consultation	Y
- Interviews?	N
- Facilitated workshop(s)	Y
- Working groups/task force	Y
- Integrated Process	N
Stakeholders engaged:	
– **University based researchers**	Y
– **Other public sector researchers**	Y
– **Business – technology**	Y (in part)
– **Business – other**	N
– **Government - energy**	N
– **Government – SET**	N
– **Government - other**	N
– **NGOs**	N
No of people engaged:	21
Budget (if known):	
Commitment to re-visit?	Completed project

ACTIONS IDENTIFIED	
List of actions?	Y

Actions listed according to timescale?	Y
Actions prioritised?	Y
Sequencing / dependencies identified?	Bottle-necks identified
Responsibility for actions identified?	N
Types of actions identified:	Y
- Basic research?	Y
- list areas	Research targets provided separately for c-Si, thin films, dye cells & polymer
- Applied research?	Y
- list areas	Balance of system and building integration
- Development & demonstration	Y
- list areas?	Building integration
- Other types of action?	Y
- list other types	• Design and establish a long-term R&D vision similar to the Japanese "Sunshine/New Sunshine" (20 years) or US "High Performance PV" (12 years) programmes. • Funding structure should take into account that different technologies are at different development stages and need different support measures • Research topics should cover everything from cells, modules, systems to BIPV and recycling - not only parts. But the different topics should have different time horizons • There is no "winning technology", therefore a viable variety of technology options has to be ensured. The focus on only one technology option could be a road-block in the future.