QUILVEST
Ventures

The financing of innovation
Recent trends in US Cleantech

Fuel Cells & Hydrogen
Joint Undertaking

October 2012, Paris

1. **Investing in Technology: the US juggernaut**

2. **Cleantech financing: Lessons from last decade**

3. **Fuel cells: illustration with Bloom Energy**

Investing in Technology

Value created is highly concentrated on few companies, with 4x more successes in the US than in Europe

2002-2010

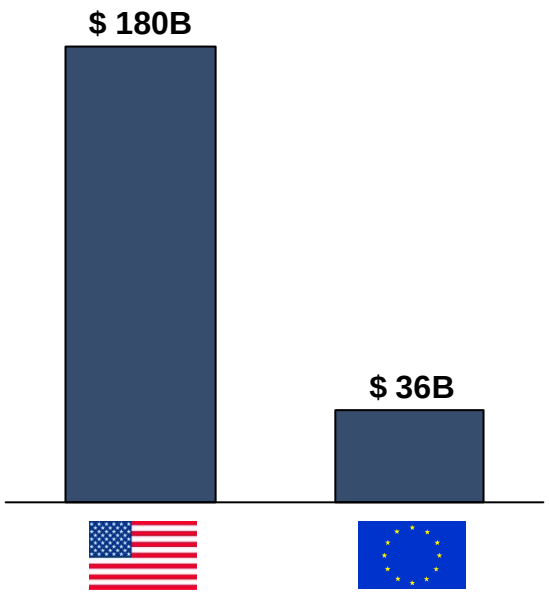
12,900 start-ups	**3,800 exits**	**600 Winners (exits > $100M)**	**22 Billion-dollar Winners**
	1:3	**1:20**	**1:600**
9,000 start-ups	**2,000 exits**	**126 Winners**	**5 Billion-dollar Winners**
	1:4	**1:70**	**1:1800**

Note: The 214 other Winners mostly appeared in China; almost all after 2006
A winner is a VC-backed exits (IPO ou M&A) with an Enterprise Value of $100m and above

Better US returns are fueled by a greater availability of capital

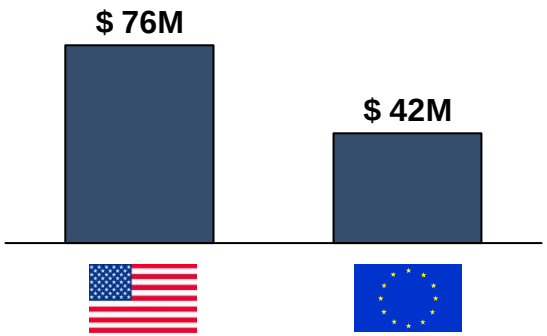
The US raise most of the VC money

Total amounts raised by VC funds since 2002



US start-ups are better financed

Average capital raised by each Winner



1. **Investing in Technology: the US juggernaut**

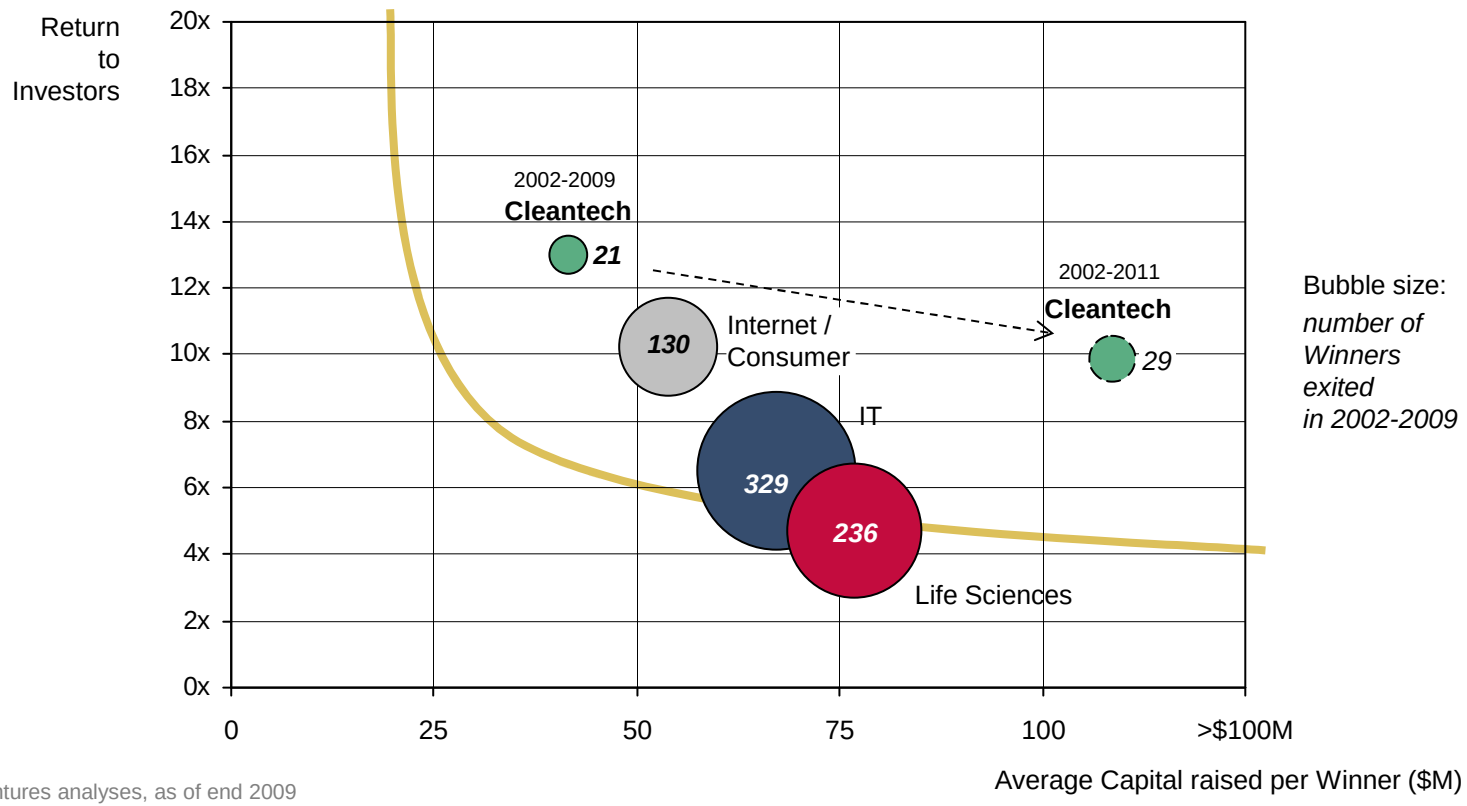
2. **Cleantech financing: Lessons from last decade**
   - **The Scale-up issue**

3. **Fuel cells: illustration with Bloom Energy**

First successes have been financially rewarding

Analysis of 2002-2009 Venture-backed "Winners" (exits valued above $100M)

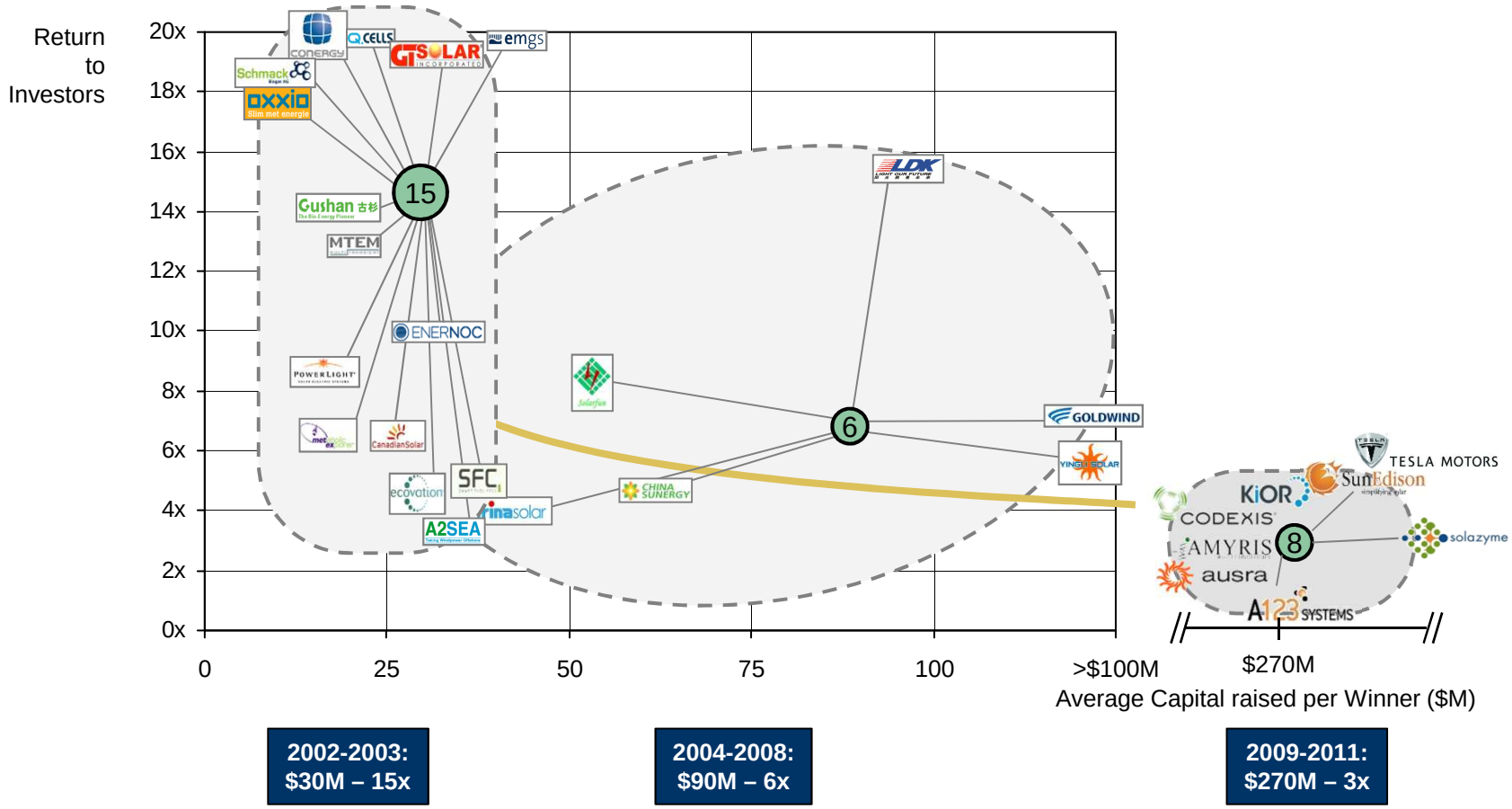
Venture-capital-backed "Winners" (2002-2009)



Source: Quilvest Ventures analyses, as of end 2009

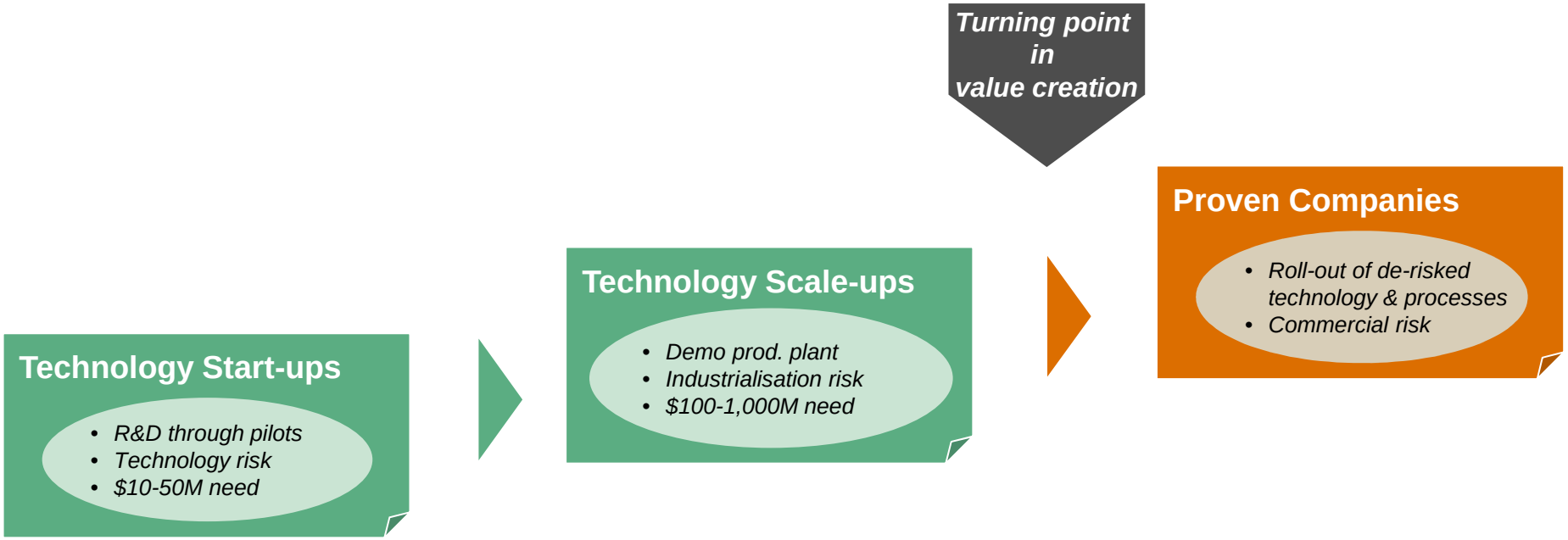
Capital intensity has raised sharply and continuously

Venture-capital-backed "Winners" in Cleantech

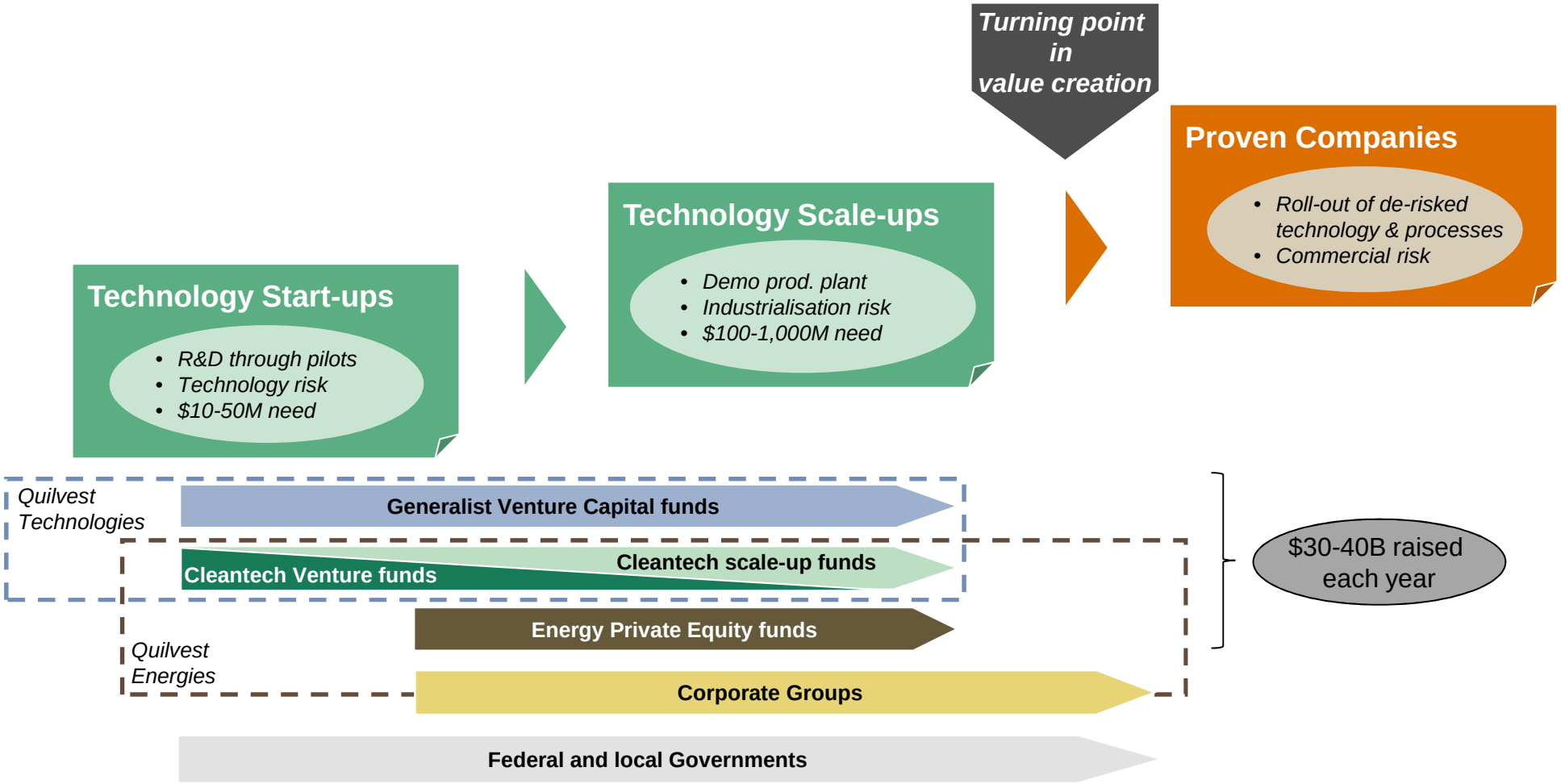


Source: Quilvest Ventures analyses

Value crystallizes at industrial scale only, in particular for corporate groups



Companies scale-up are each time tough to finance, often amongst a combination of heterogeneous investors



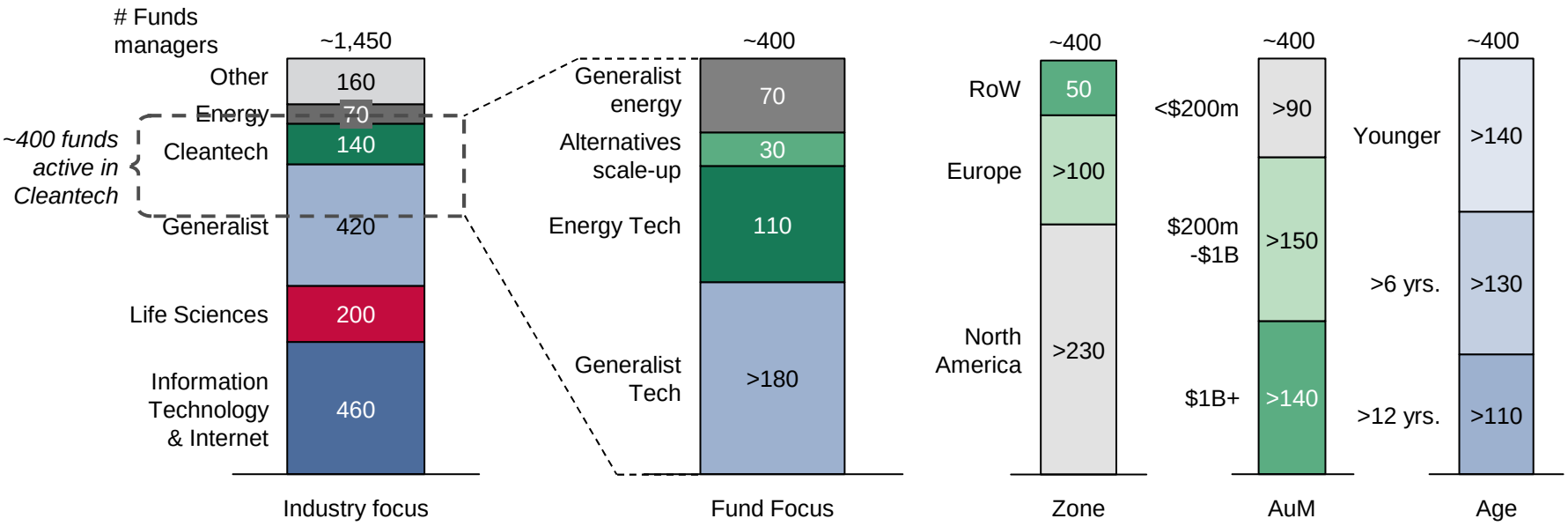
1. **Investing in Technology: the US juggernaut**

2. **Cleantech financing: Lessons from last decade**
   - **The Financial investors' contribution**

3. **Fuel cells: illustration with Bloom Energy**

400 funds active in Cleantech are tracked by Quilvest Ventures, amongst 1,450 Technology and Energy funds overall

Quilvest Ventures' Funds universe



Successes have been more often backed by generalist Venture Capital funds, than by specialized Cleantech funds

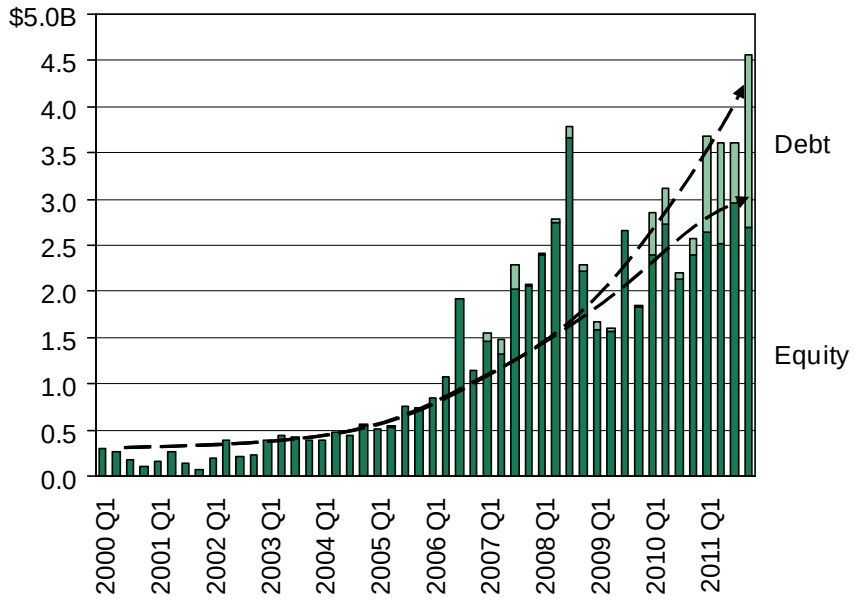
- **Generalist VC funds**
- **Cleantech funds**
- Energy PE funds
- Corporate Groups
- Governments

Illustration: financing of 34 high-potential Solar companies

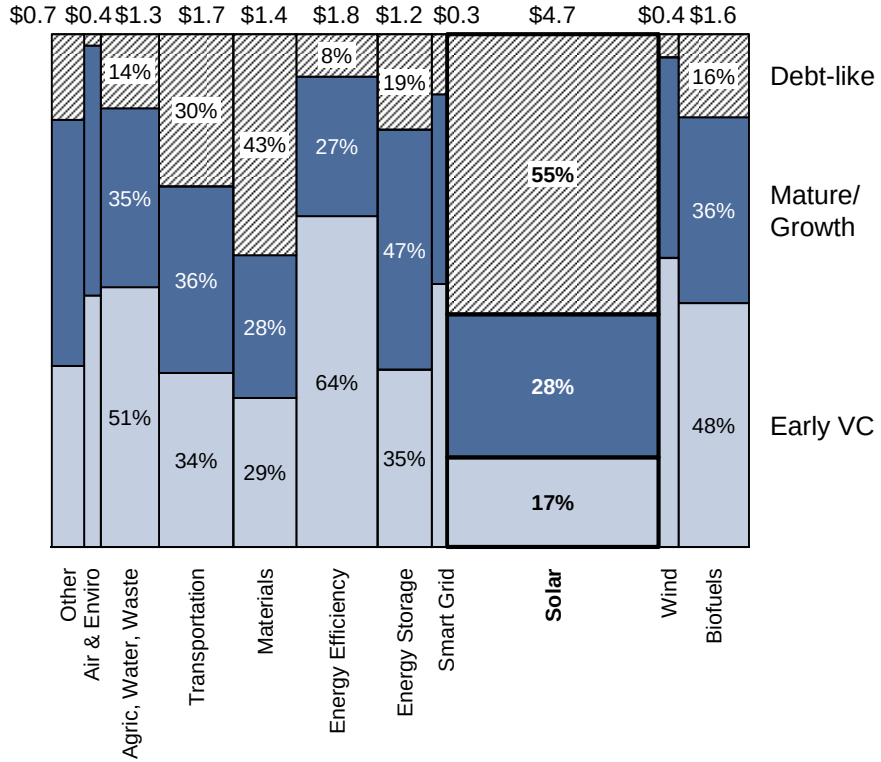
	Coverage ratio	
Generalist Venture Capital funds	**82%**	28 / 34
Cleantech scale-up funds / **Cleantech funds**	**38%**	13 / 34

Solar is the first segment to mature financially, with debt financing now relaying pure equity

Cleantech VC-backed financings, by quarter ($B)



2011 financings, by segment and type ($B)



Note: Includes non-VC financings (project finance, government grants…) only when done into a VC-backed company

1. **Investing in Technology: the US juggernaut**

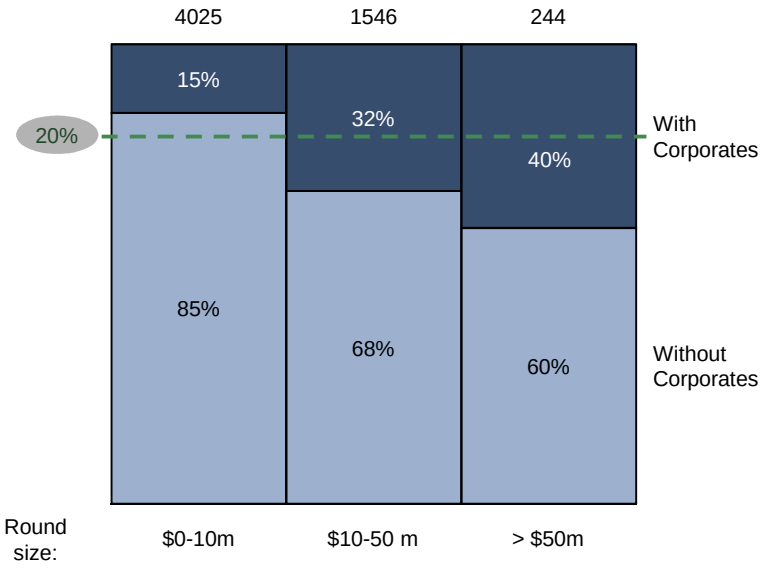
2. **Cleantech financing: Lessons from last decade**
   - **The Corporate Groups' contribution**

3. **Fuel cells: illustration with Bloom Energy**

Corporate groups become a key component of the Cleantech financing ecosystem

Corporates are present in 20% of all Cleantech financings, and in 40% of the bigger ones

All Cleantech financing rounds since 2000



Activity levels by Corporate group tend to vary quickly

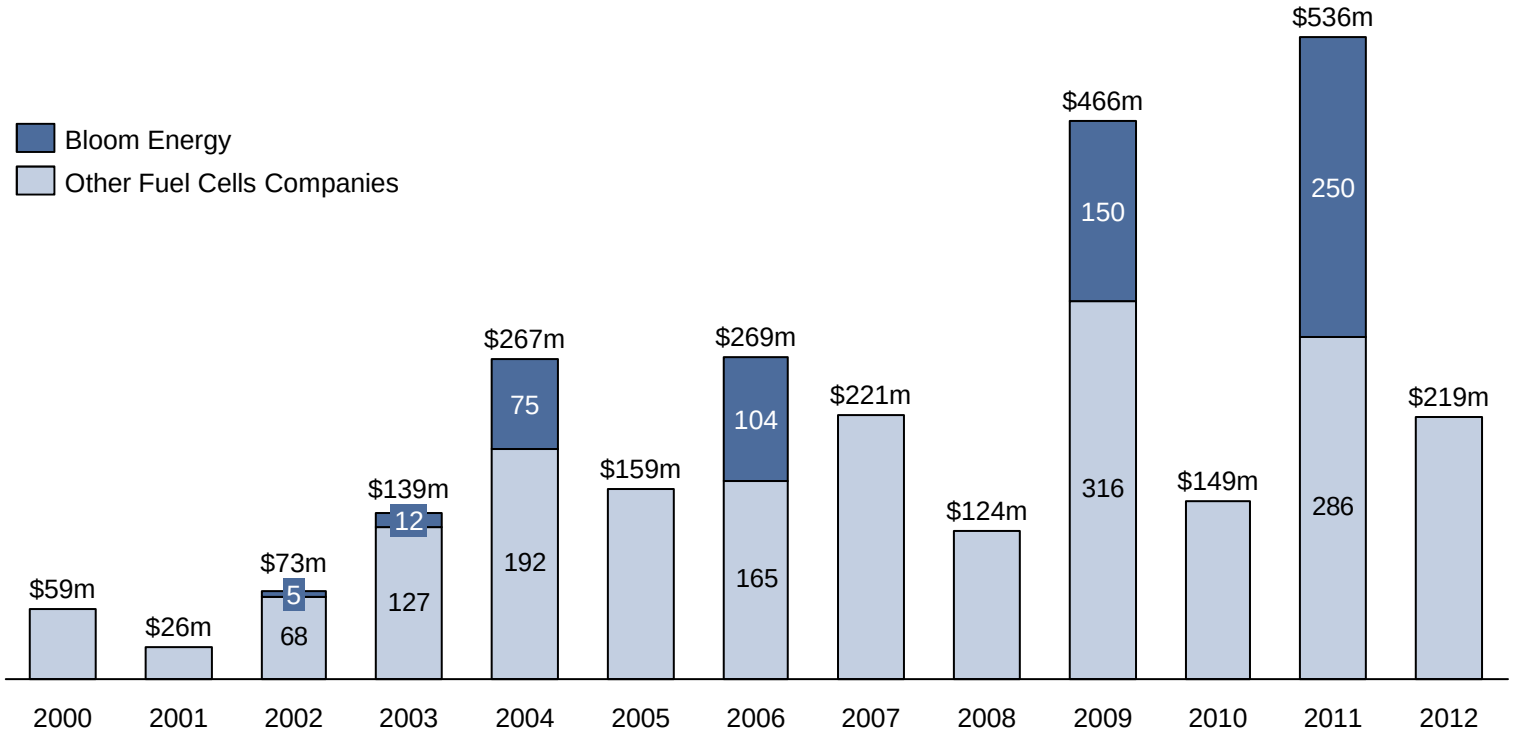
Top 15 Energy-focused Corporate groups (by number of Cleantech financings)

	2000-2005	2006-2010	2011 - 2012
#1	GE	GE	GE
#2	Siemens	Siemens	Mitsui
#3	BASF	Applied Materials	Waste Mgt
#4	Hydro-Quebec	Dow Chemical	Siemens
#5	Chevron	Chevron	BP
#6	Schneider / Aster	Mitsui	General Motors
#7	Shell	SOLON	Total
#8	Duke Energy	BP	BASF
#9	Dow Chemical	BASF	ABB
#10	Mitsui	Schneider / Aster	Shell
#11	ITOCHU	ITOCHU	3M
#12	Scottish & Southern	Scottish & Southern	Gamesa
#13	Volvo	Total	Applied Materials
#14	Samsung	Volvo	Dow Chemical
#15	Sumitomo	SNCF	Schneider / Aster

1. Investing in Technology: the US juggernaut

2. Cleantech financing: Lessons from last decade

3. **Fuel cells: illustration with Bloom Energy**

Fuel cell deals raised substantial money across the last decade, with Bloom Energy taking the lion's share

Fuel Cells Companies Fundraising since 2000 ($m)