

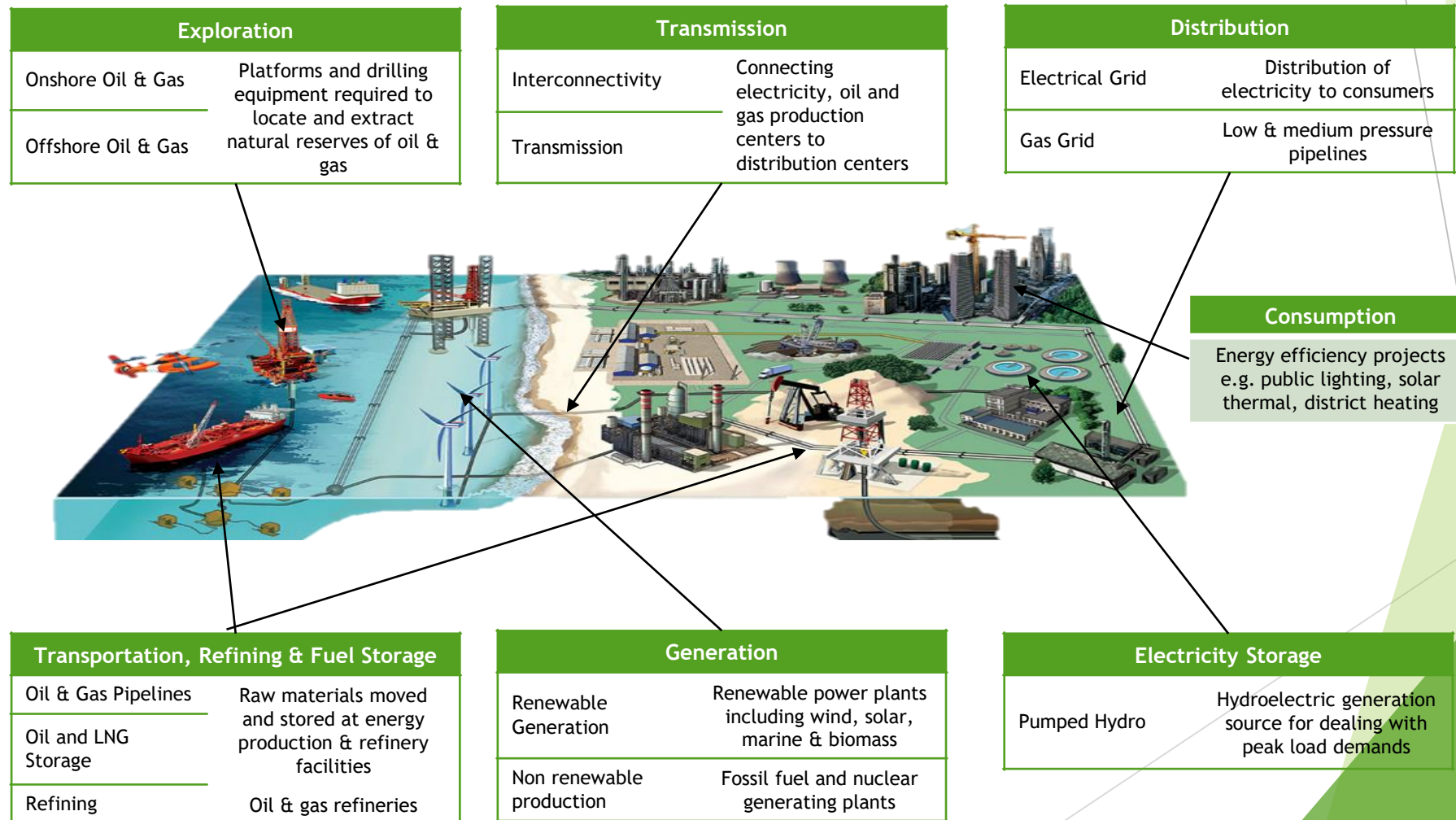
Energy Investment

Where is the investment case?

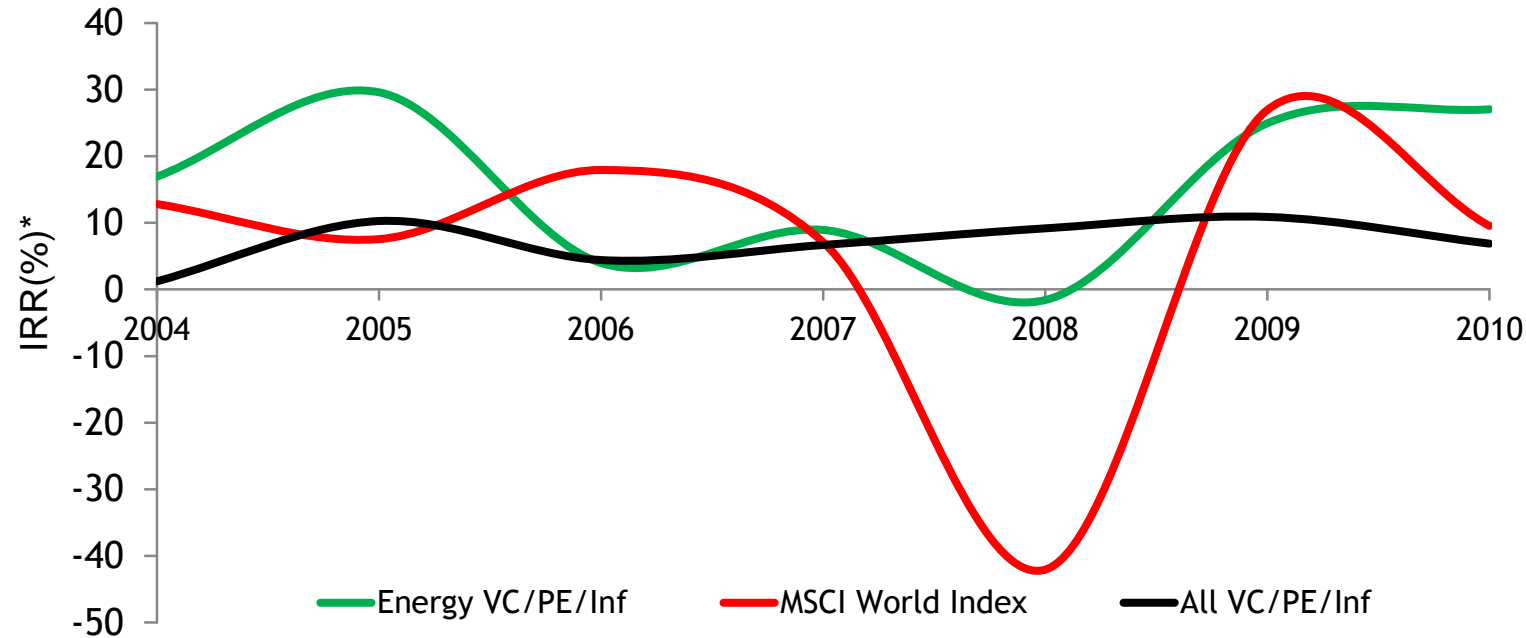
Interreg Atlantic Area annual event
20.10.2021



The Energy market comprises generation, transmission and consumption

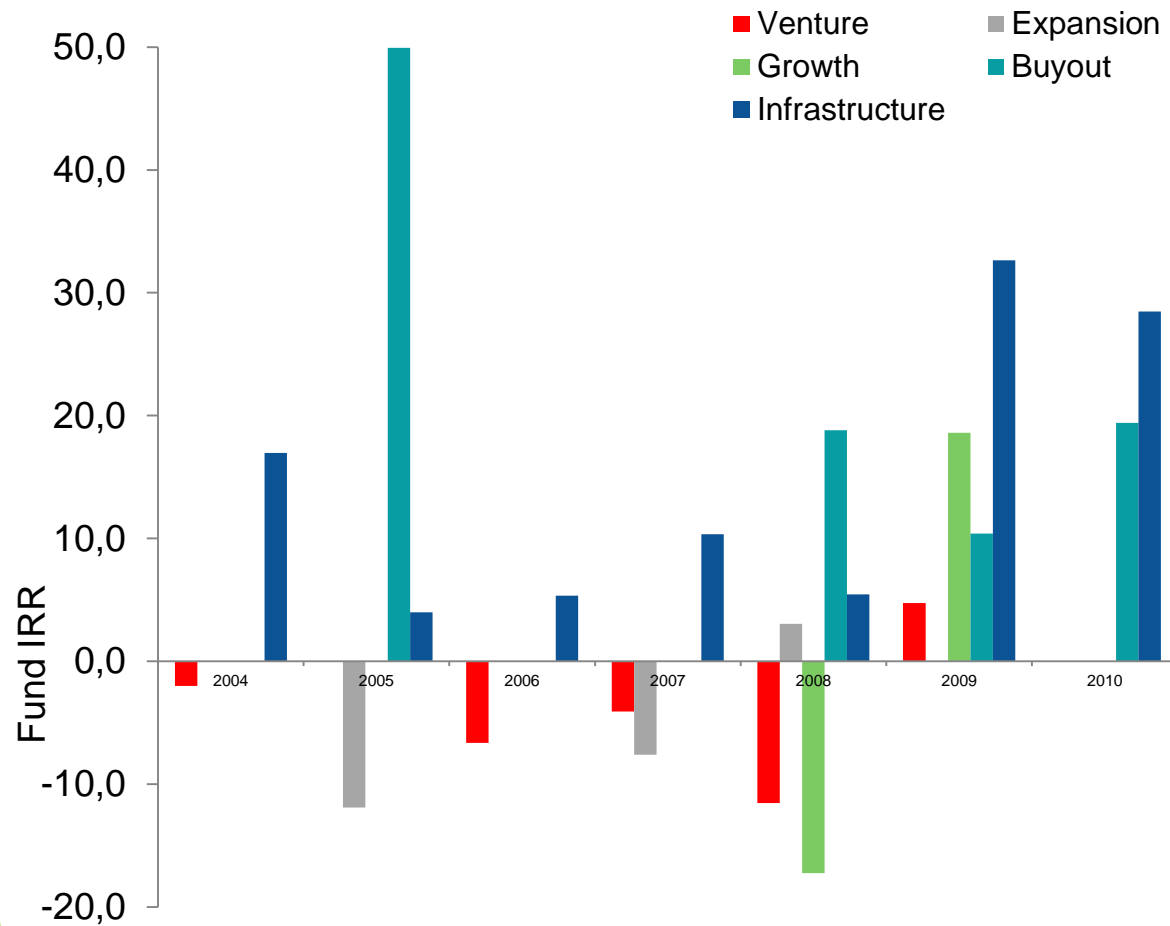


But... Energy investment is attractive!



- Average energy investment IRRs 16% 2004-2010
 - Comparative cross sector investment delivered 7%
 - MSCI benchmark during the same period 6%
- Energy returns more volatile than cross sector investments
 - High of 30% in 2005 & low -2% in 2008

So... why did VC's moved from this space?

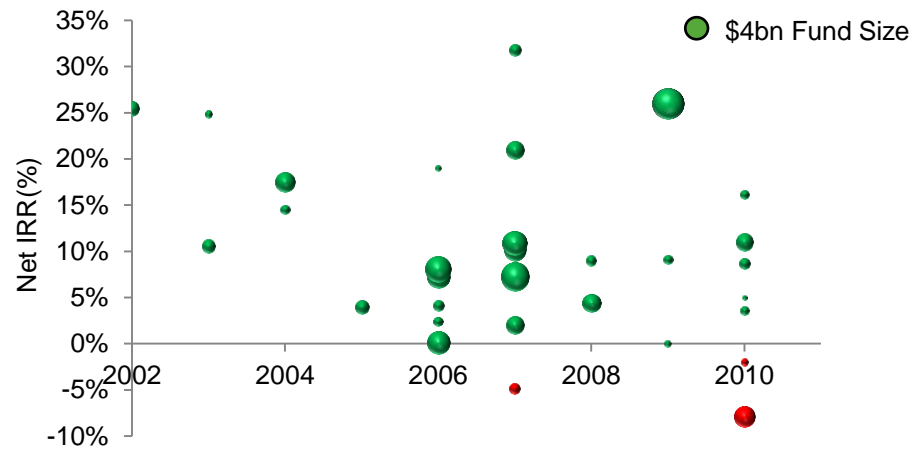


Infrastructure & Buyout have driven performance

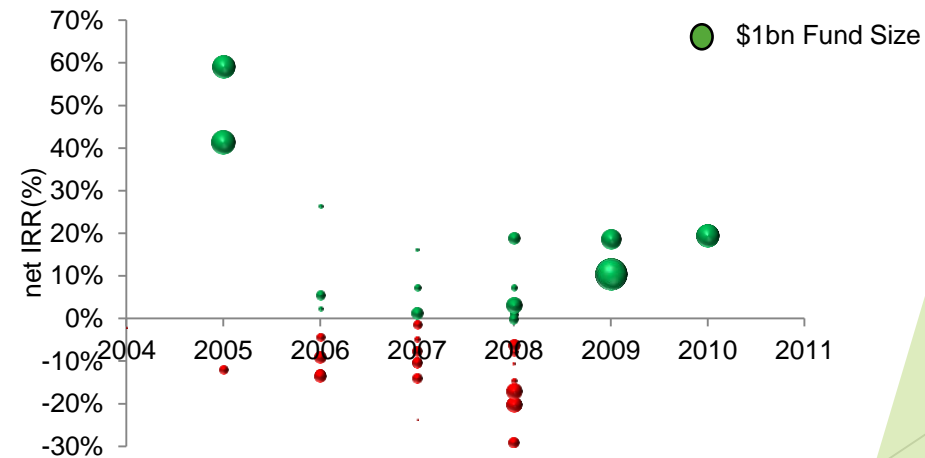
- Energy Infrastructure & buyout funds have performed well
 - Infrastructure fund IRRs 16% 2004 – 2010
 - Buyout fund IRRs 28% 2004 – 2010
- Expansion and growth funds have experienced mixed performance
- In total early stage energy venture has performed poorly
 - Average venture fund IRRs -9% 2004 to 2010

>50% of Infrastructure funds had >10% returns; PE mostly positive; VC mostly with poor performance

Infrastructure Investment



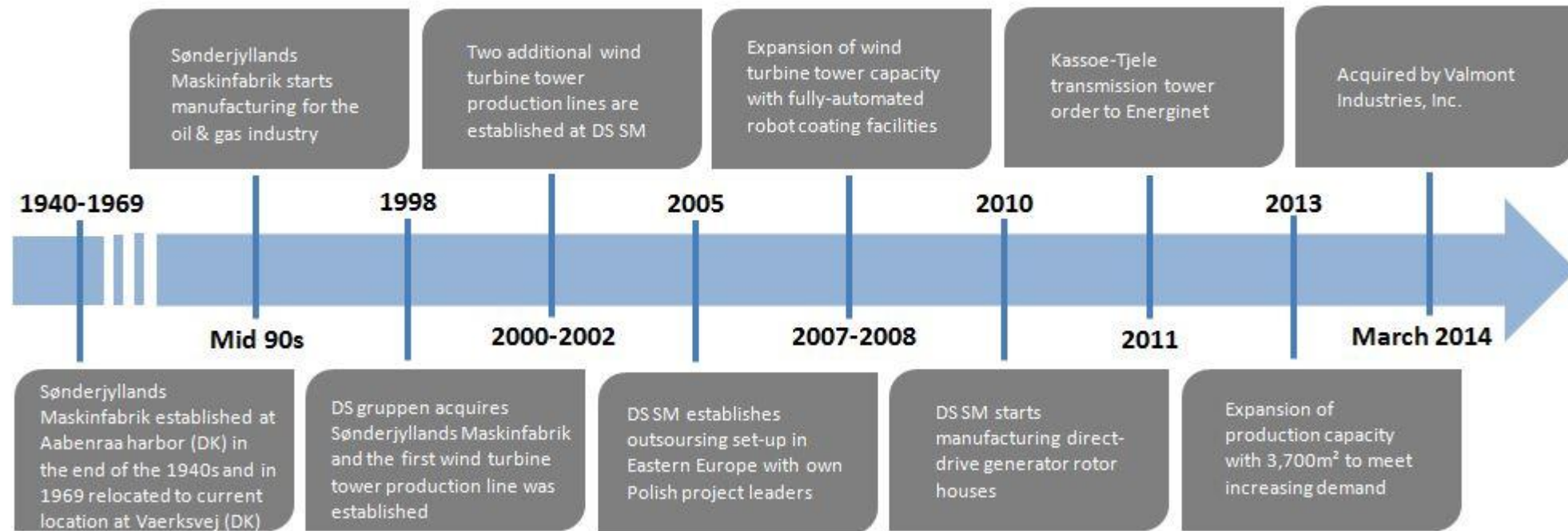
VC/PE Investment



“Just because it’s a good idea doesn’t make it a good investment ...
This [Cleantech Investment] has been a noble way to lose money.”
(CalPERS CIO)

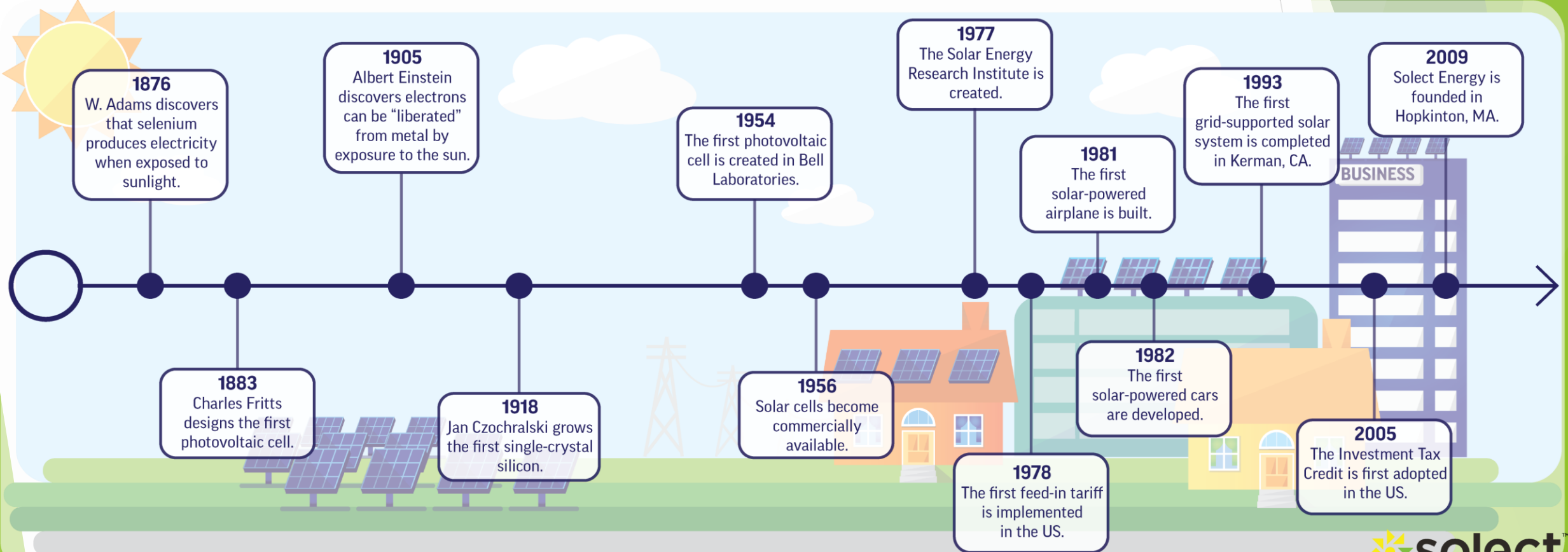
California Public Employees’ Retirement System, has lost a considerable amount of money investing in clean technology. CalPERS had close to a 10 percent negative return (9.8 percent) on the around \$900 million that it’s put in the cleantech sector, which includes \$460 million that it’s put into clean tech venture funds, said CAIPERS CIO

New energy technologies tend to have long development cycles (Wind)



New energy technologies tend to have long development cycles (Solar)

A Brief History of Solar



EMPORIA4KT Portugal:

2 Wave Energy Projects:

- REEFS (Renewable Electric Energy From Sea)
- Waveplat - Wave platform for support of offshore activities

1 Food related project:

- SCW - Subcritical water as a solvent (Food sub-products)



The Main Outcomes:

Wave Energy Projects:

- Full scale prototypes >€10M;
- Time to market higher than the average VC fund lifetime (10 years);
- Interest from potential users only past technology risk mitigation;
- Public funding required to bridge the funding gap for technology development;
- Most projects use project finance with 30% Equity/ 70% Project finance:
 - Need to provide collateral to support scale up (e.g. feed-in-tariffs)

The Main Outcomes:

Food sub-products:

- In conversation with market players;
- Discussions might generate early stage commercial engagement;
- Lower time to market/ lower investment required;
- Early stage traction might result in commercial revenue assurance and/or equity finance;