



ENERGY FOUNDATION

building a new energy future

Financing the Clean Energy Revolution

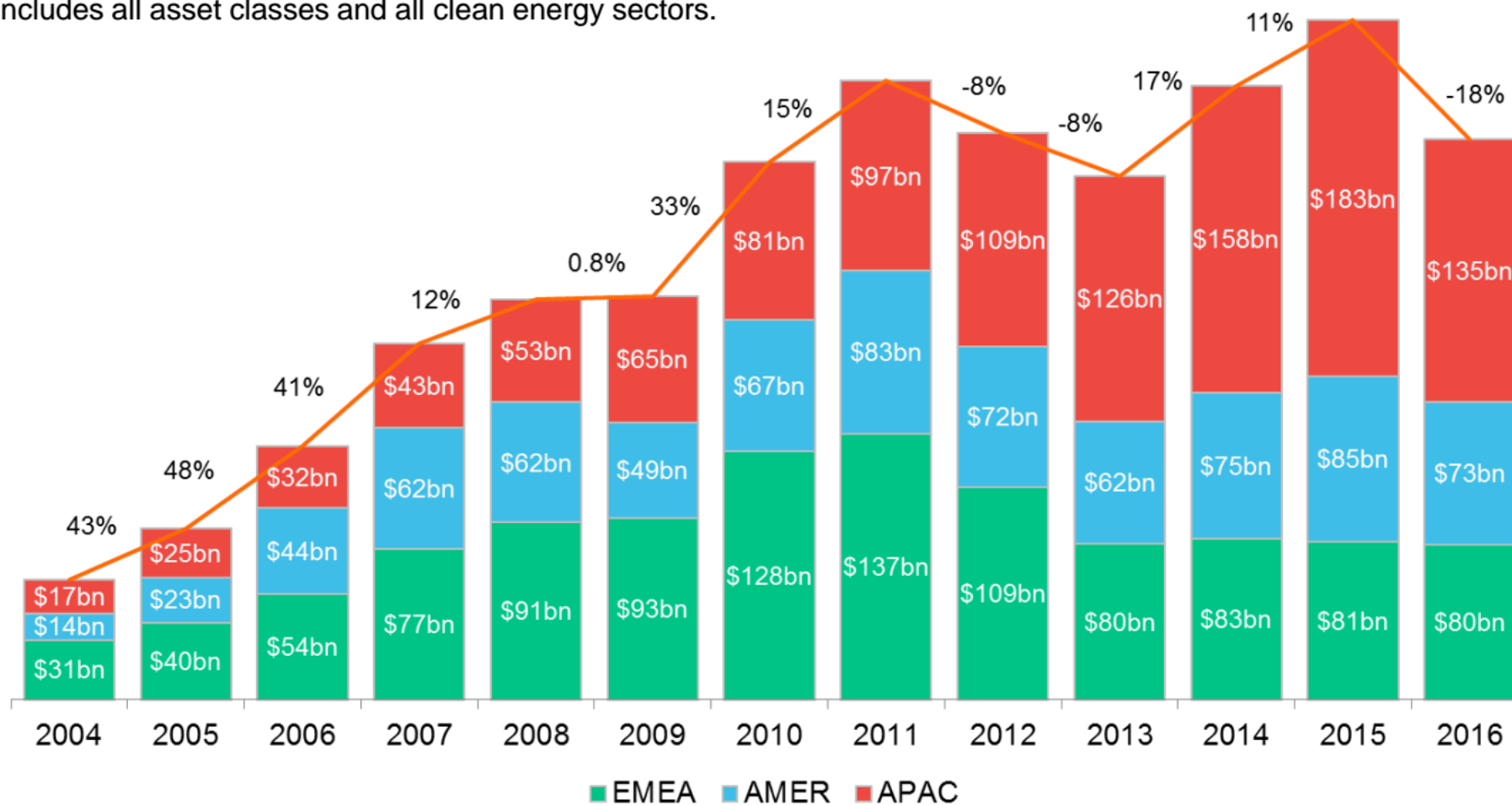
JISEA Annual Conference - 2017

presented by
Ken Locklin
Energy Foundation

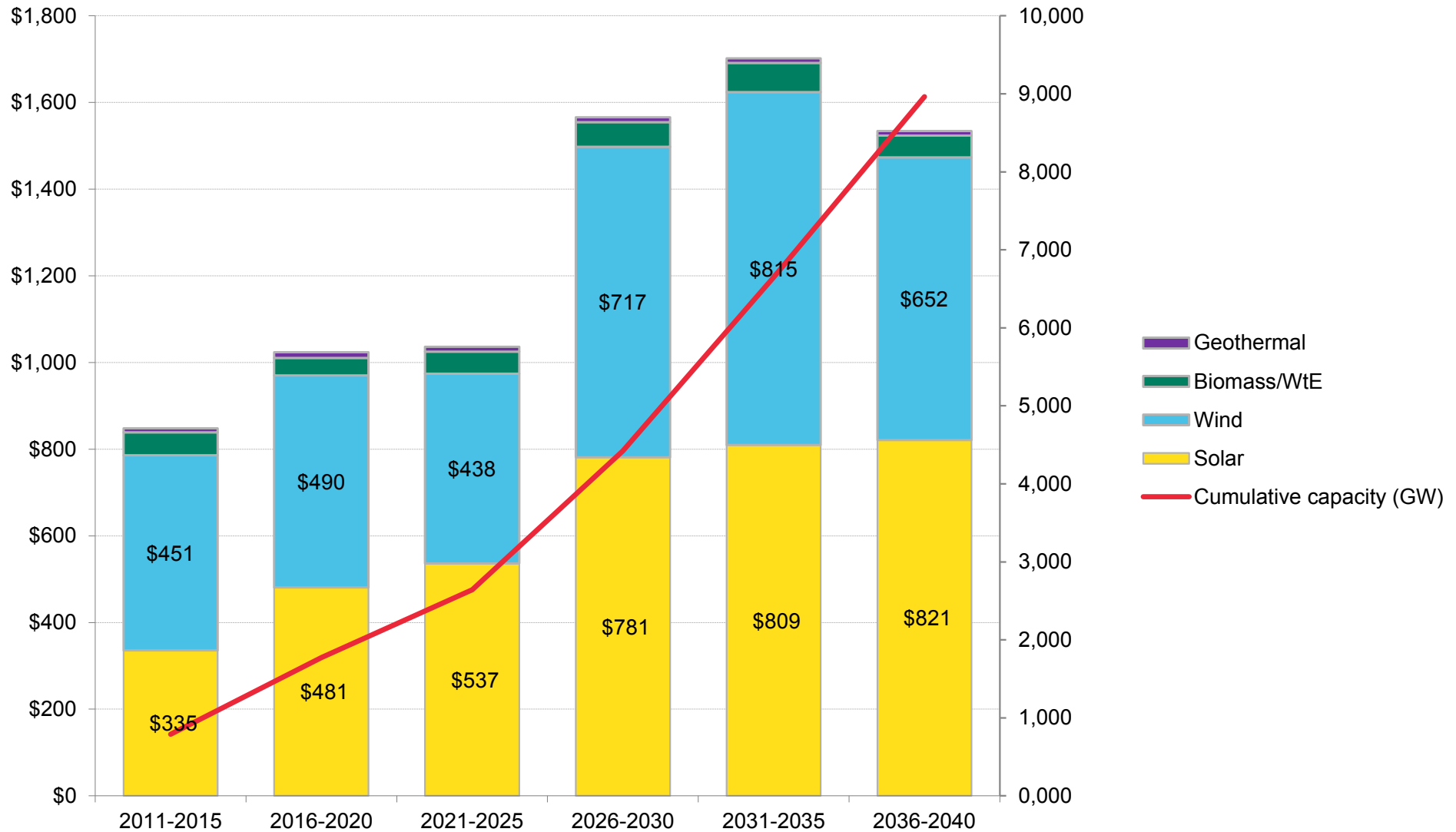
NEW INVESTMENT IN CLEAN ENERGY BY REGION

2004-16 (\$BN)

- Total annual new investment in clean energy by region. This includes all asset classes and all clean energy sectors.



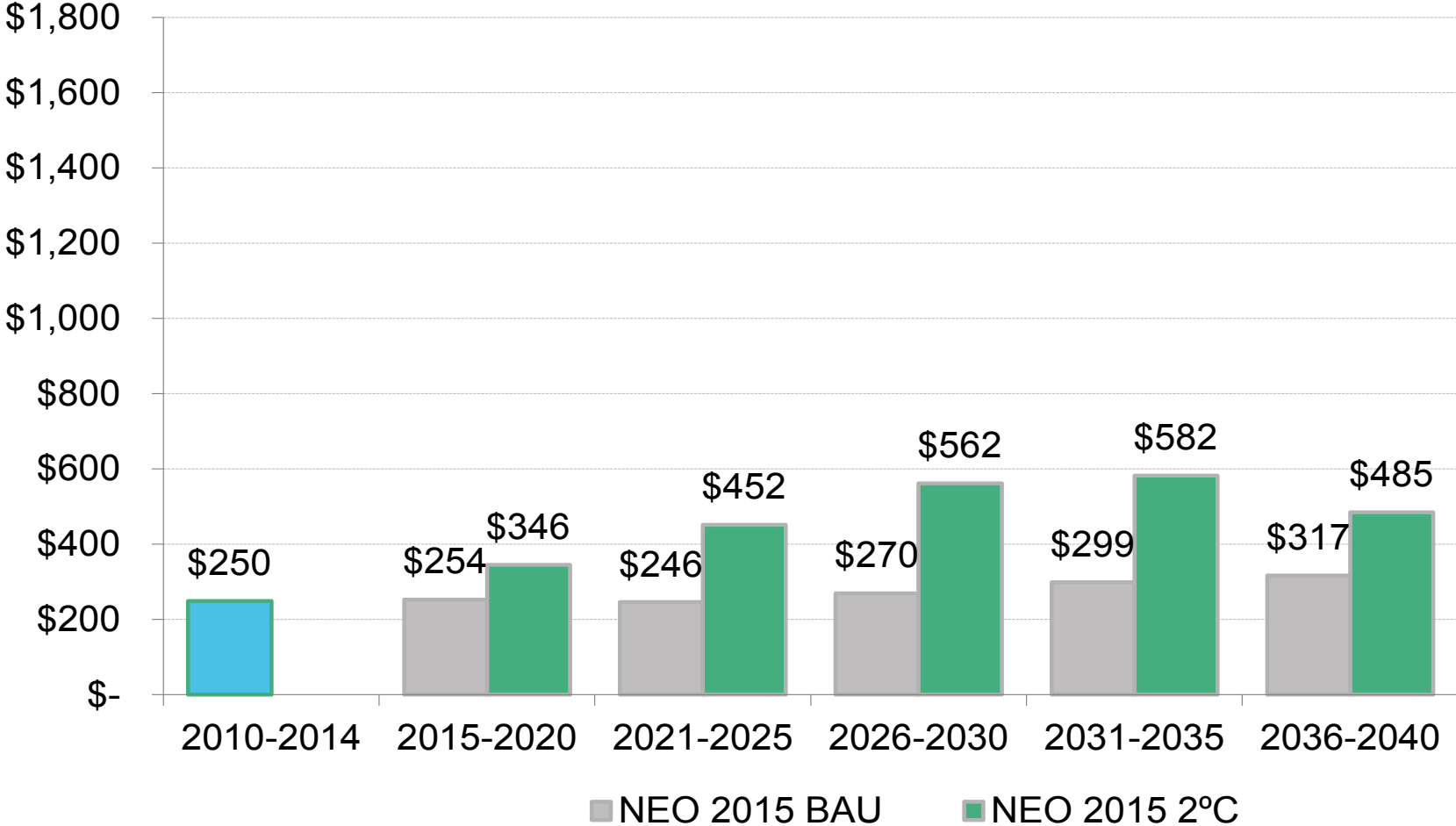
New renewable power generation investment under BNEF 2°C scenario (\$bn, real)



\$2.6 trillion more investment needed than under BAU

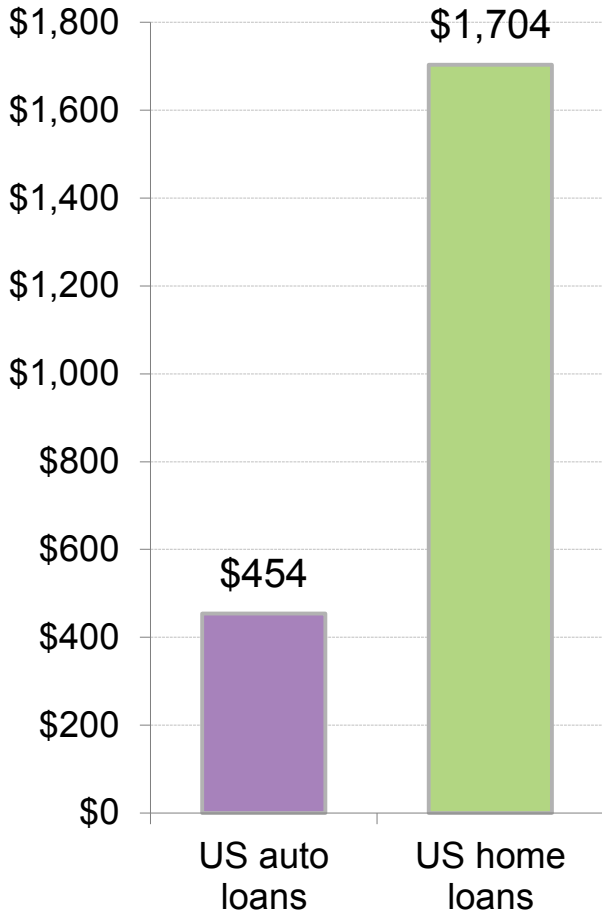
How big is the lift?

AVERAGE ANNUAL INVESTMENT NEEDS FOR GLOBAL NEW RENEWABLE POWER GENERATION (\$BN, REAL)



Source: BNEF

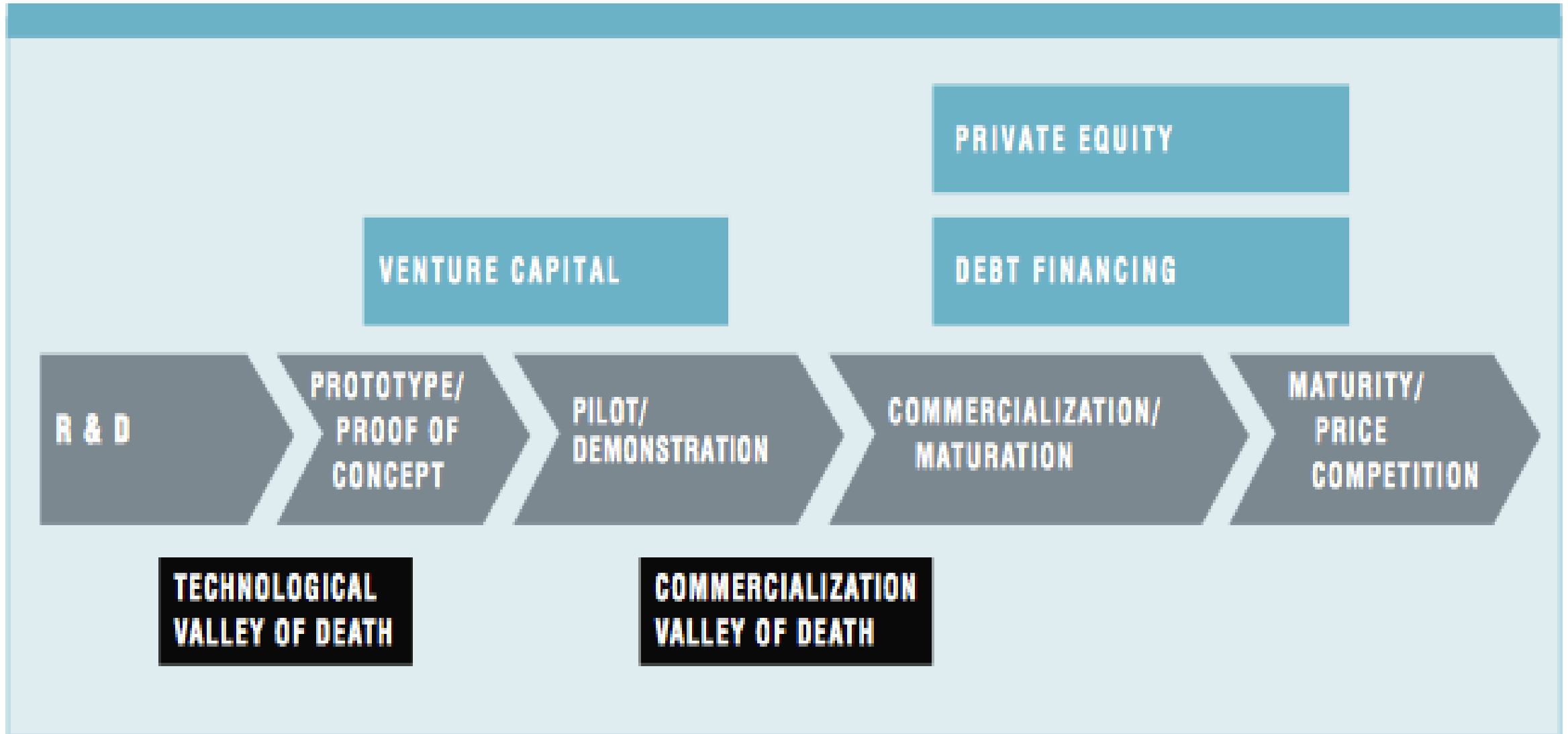
ANNUAL ORIGINATIONS FOR USAUTO LOANS, US MORTGAGES (\$BN)



Source: Federal Reserve Bank of New York Note: Based on five-year average 2011-Q3 2015

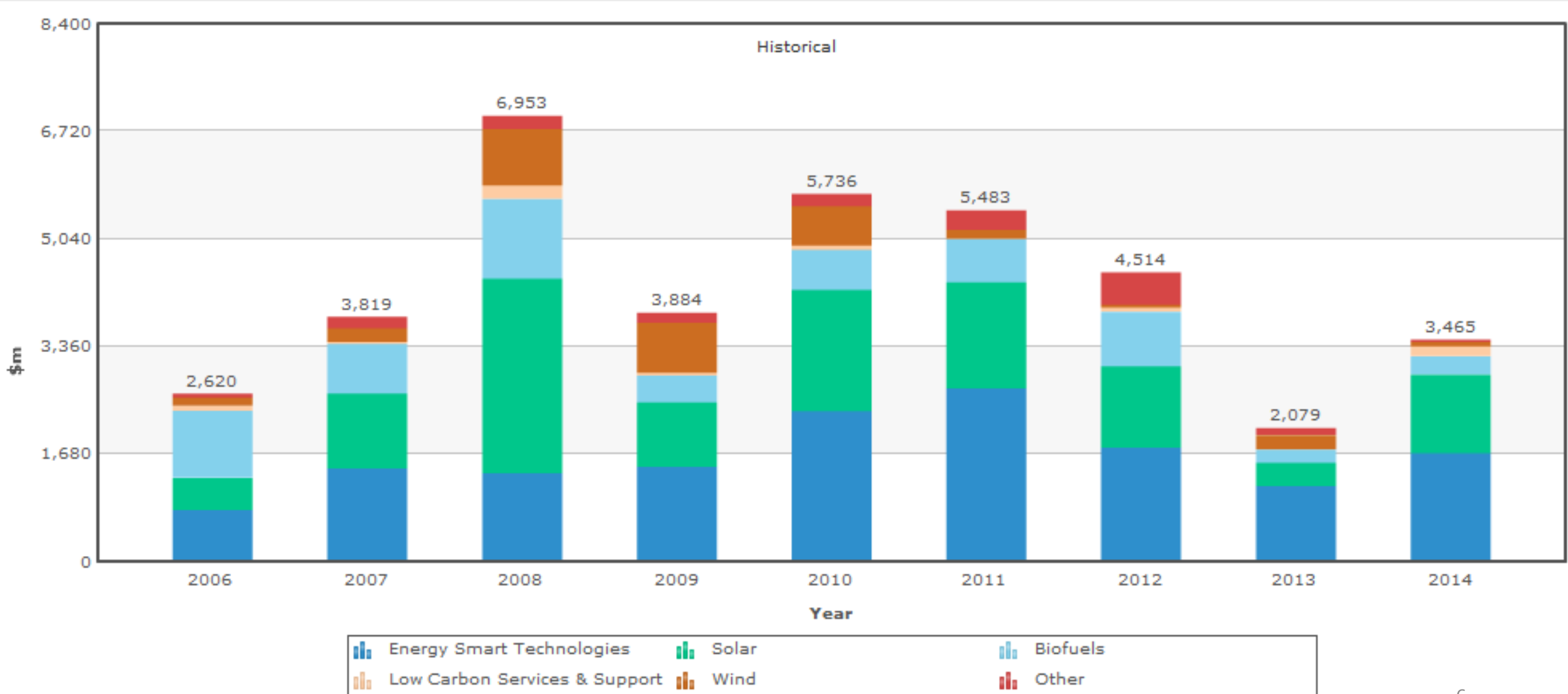
The energy innovation cycle and the clean energy valleys of death

Source: Jenkins and Mansur 2011



U.S. VC/PE new investment in renewable energy by sector, 2006–2014, \$bn

Source: Bloomberg New Energy Finance 2015





Crossing the Valley of Death



Solutions to the next generation clean energy project financing gap



21 June 2010

...the response --

- **Commercialization Assistance Program (NREL)**
- **Small Business Voucher Program (DoE)**
- **CalCharge (UC Davis)**
- **State CE Funds (CA, CO, CT, MA, NJ, NY, OR)**
- **Cyclotron Road (LBNL)**
- **Aligned Intermediary (independent 501c3)**
- **Prime Coalition (independent 501c3)**
- **Innovation Incubator (NREL, Wells Fargo)**