

CLEAN ENERGY INVESTMENT TRENDS

ESMAP: KNOWLEDGE EXCHANGE FORUM

THE WORLD BANK, WASHINGTON, DC

17 MARCH 2011



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NEW ENERGY FINANCE

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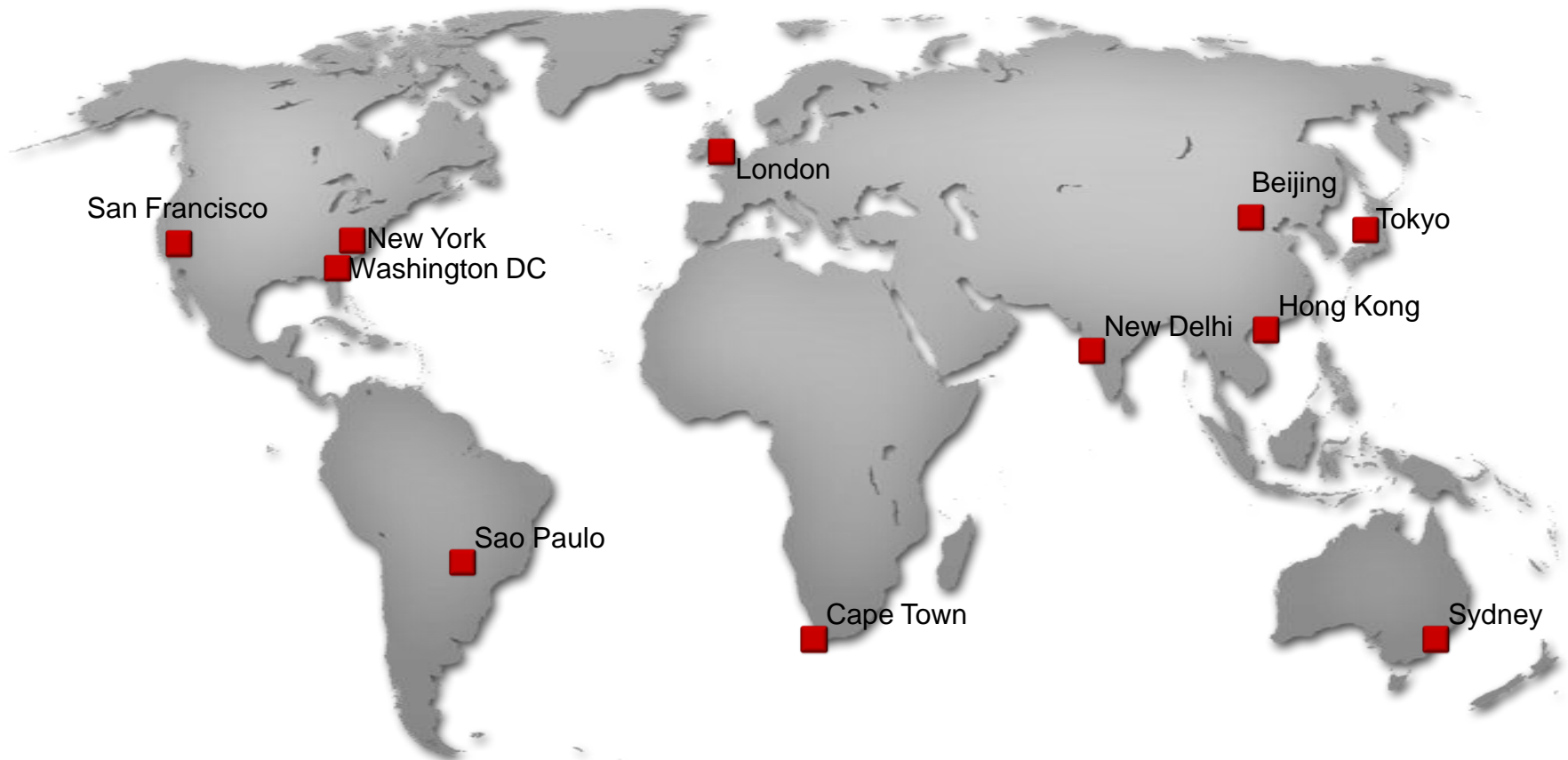
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180 staff in 11 offices worldwide

Objective: serve clients with the best intelligence on finance, technology and policy developments in clean energy, energy efficiency and carbon markets



AGENDA



Investment overview

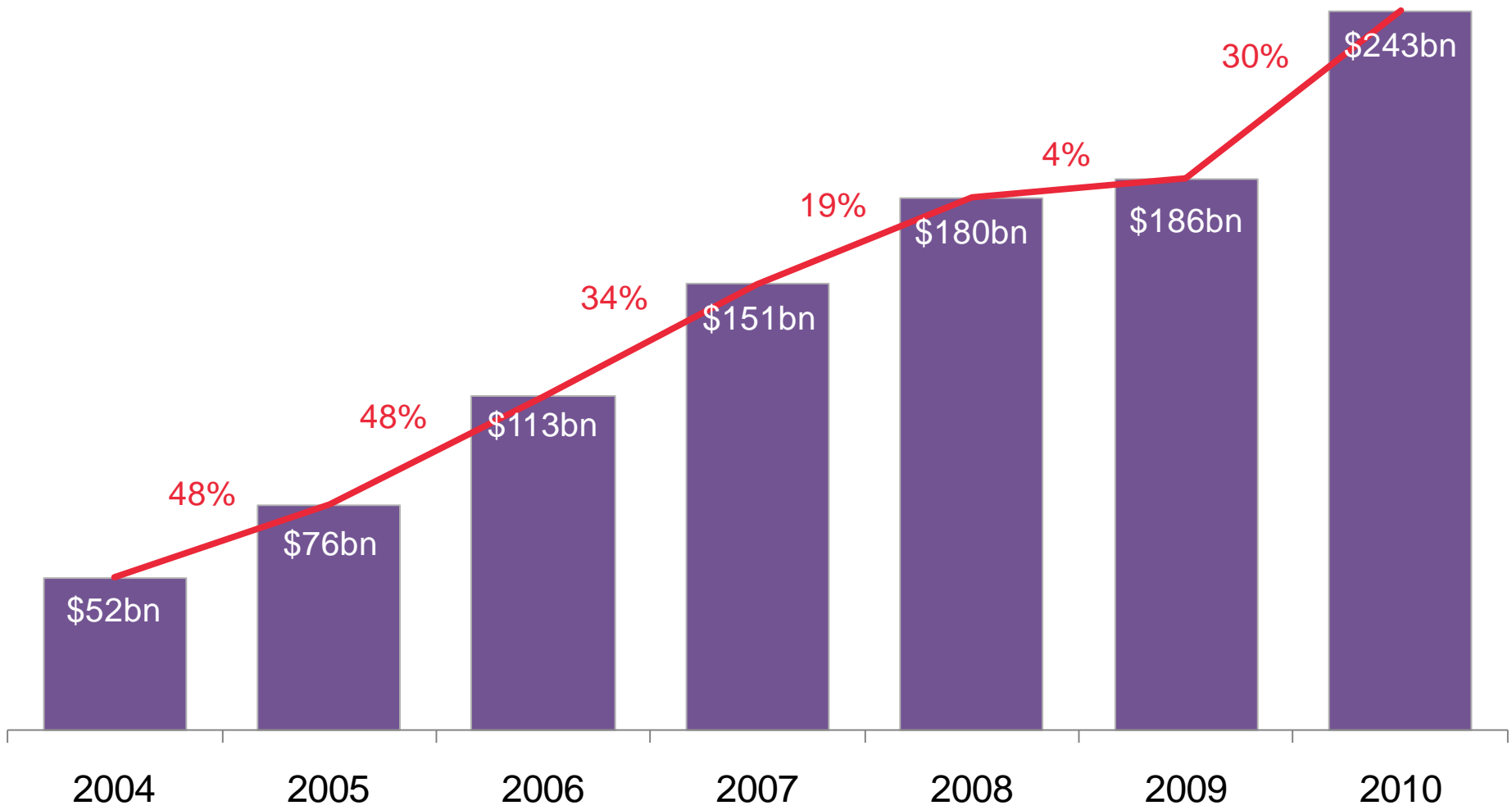


Levelized cost of energy



Thoughts on policy

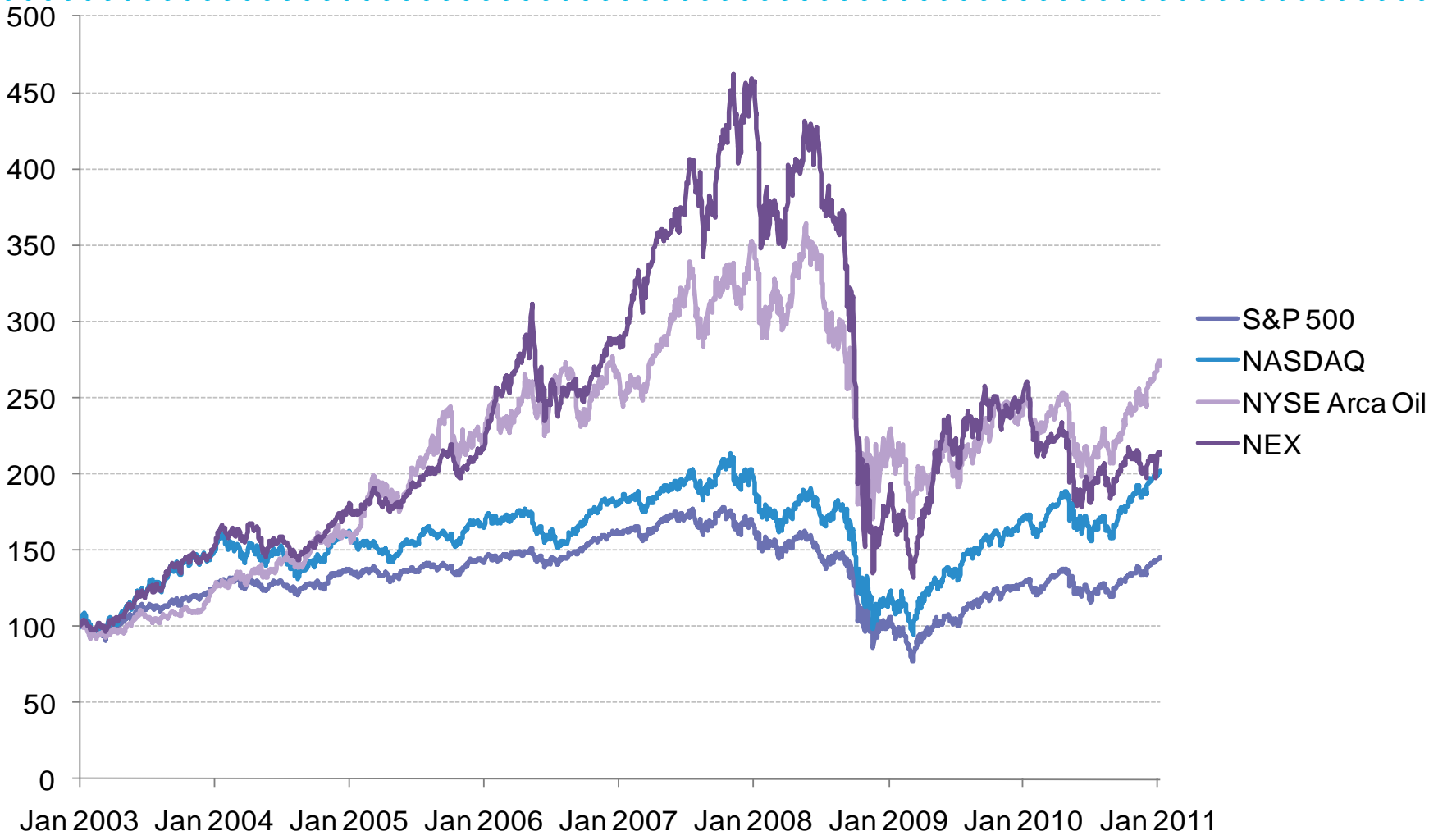
GLOBAL TOTAL NEW INVESTMENT IN CLEAN ENERGY, 2004-10 (\$BN)



Note: Includes corporate and government R&D, and small distributed capacity. Adjusted for re-invested equity. Does not include proceeds from acquisition transactions

Source: Bloomberg New Energy Finance

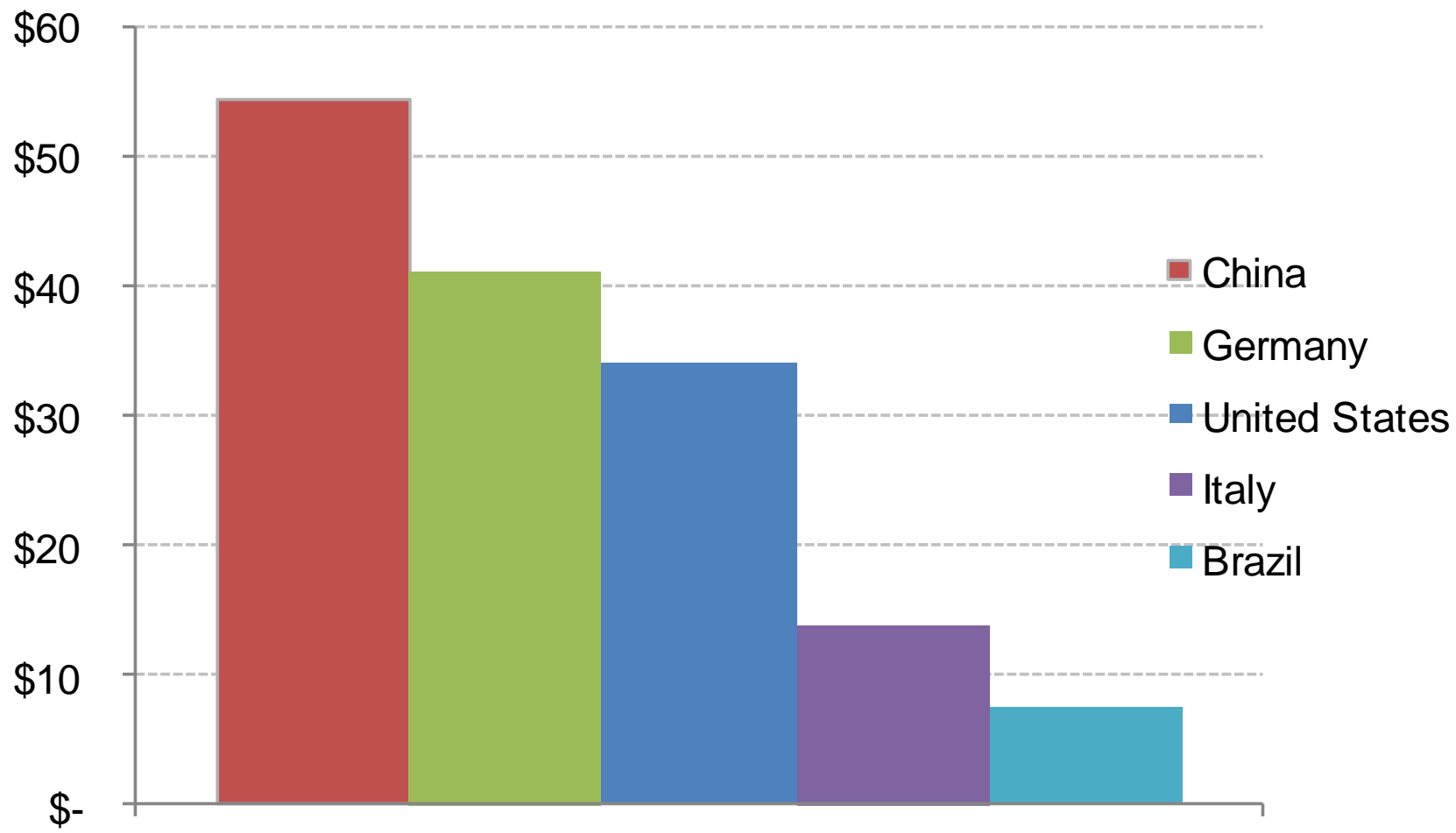
NEX CLEAN ENERGY INDEX, 2003-10



Note: Values as at 7 January 2010; AMEX Oil, NASDAQ and S&P rebased to 100 on 1 January 2003

Source: Bloomberg New Energy Finance

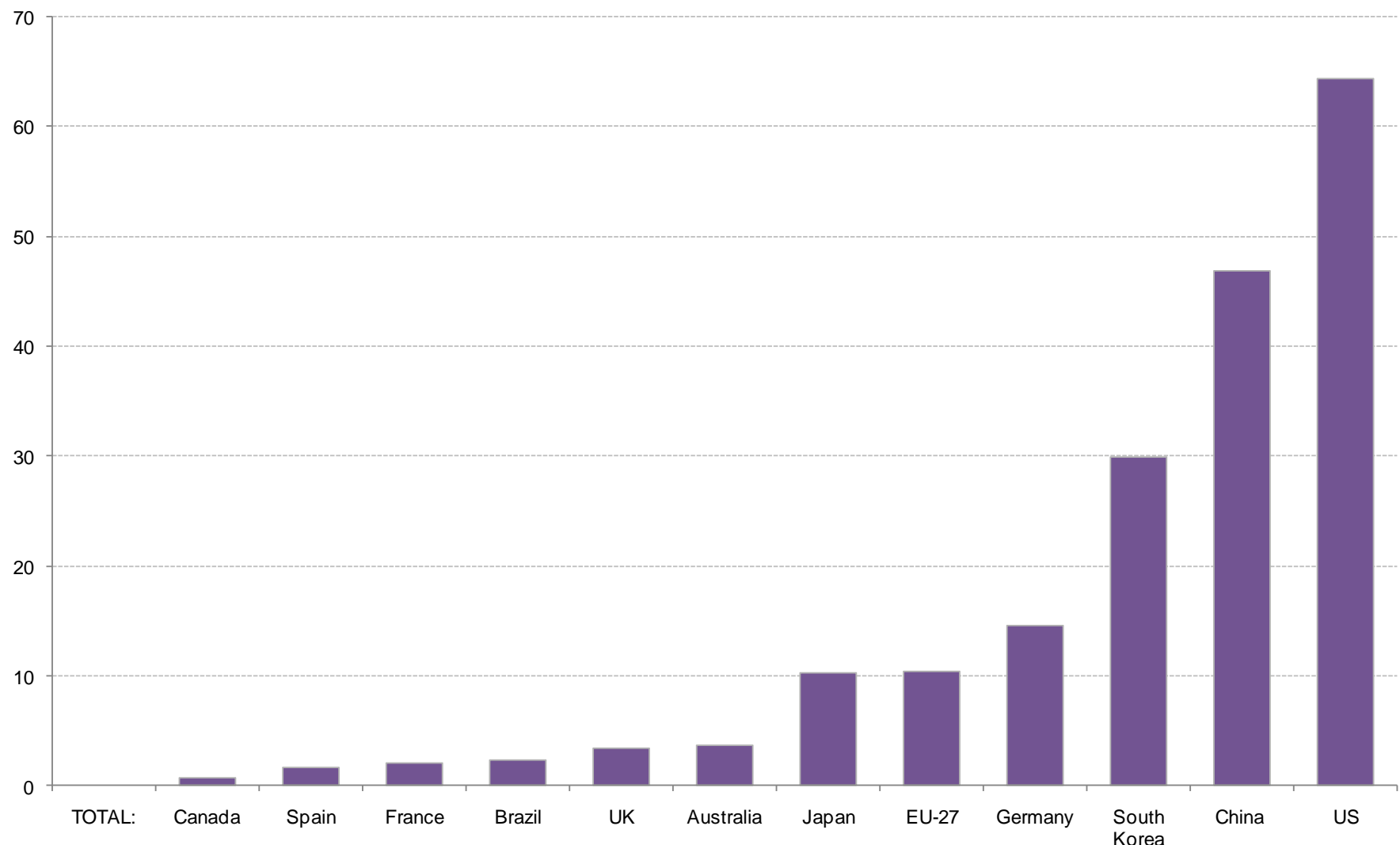
TOTAL FINANCIAL AND SMALL SCALE PROJECT CLEAN ENERGY INVESTMENT, 2010 \$BN



Note: Includes Asset Finance, Venture Capital / Venture Capital, Public Markets, and Small Scale Project Financings. Does not include public investment.

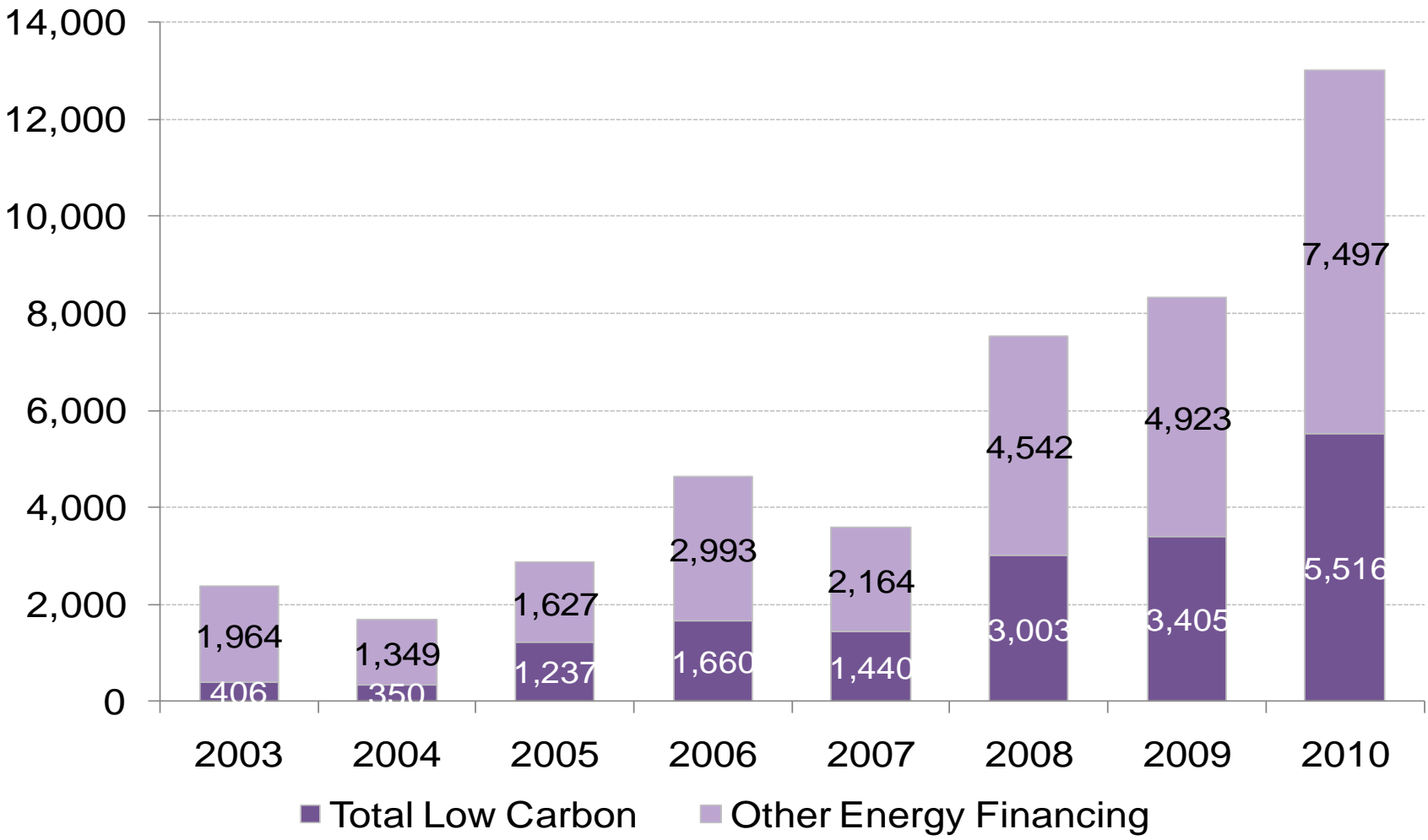
Source: Bloomberg New Energy Finance

CLEAN ENERGY, ENERGY EFFICIENCY AND CCS COMPONENTS OF NATIONAL ECONOMIC STIMULI, \$BN



Source: Government, Bloomberg New Energy Finance

WORLD BANK GROUP'S FINANCING FOR ENERGY SECTOR, FISCAL YEARS 2003-10, (\$M)



Source: World Bank energy portfolio data

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Investment overview

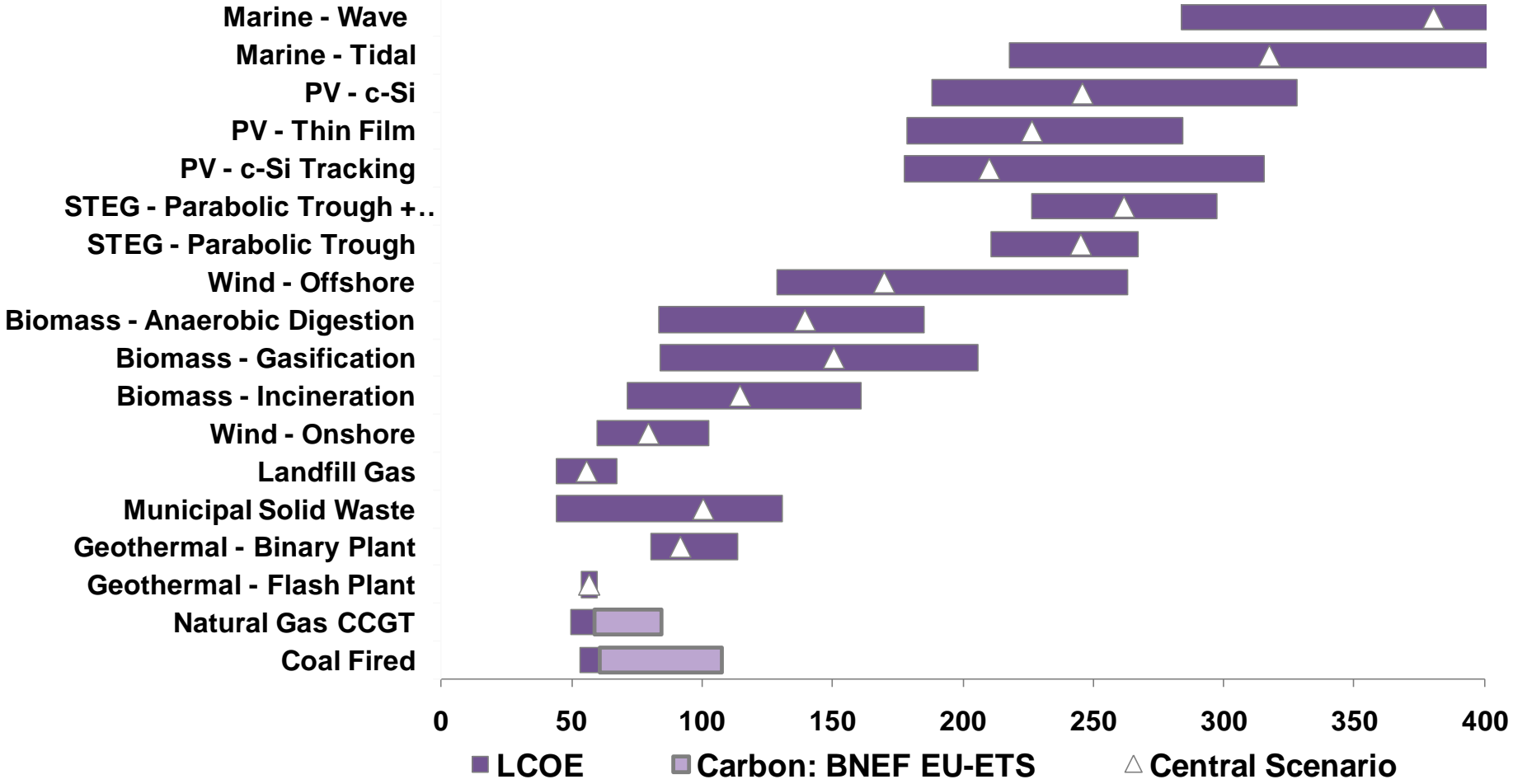


Levelized cost of energy



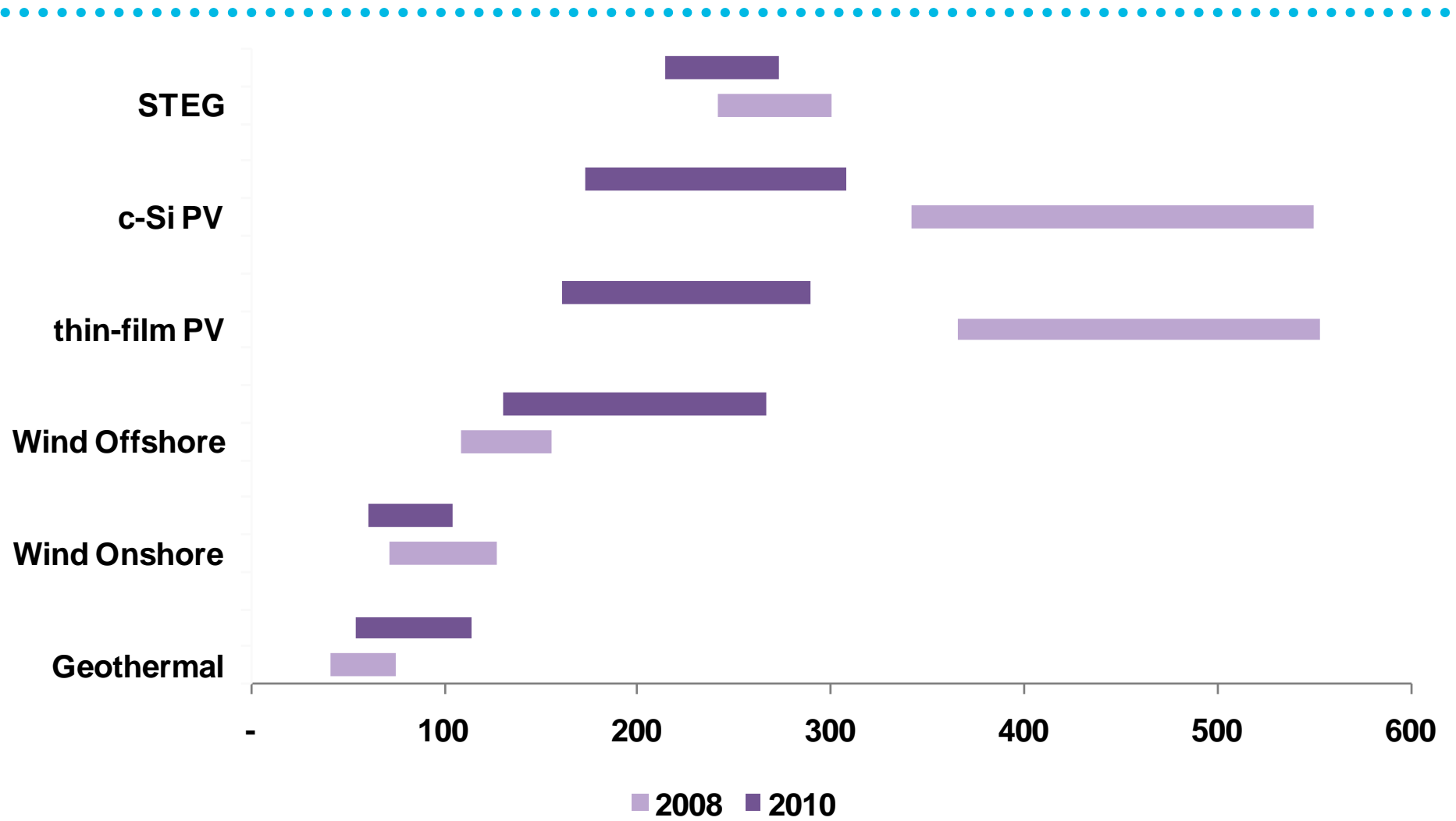
Final thoughts on policy

LEVELISED COST OF ENERGY Q3 2010: \$/MWH



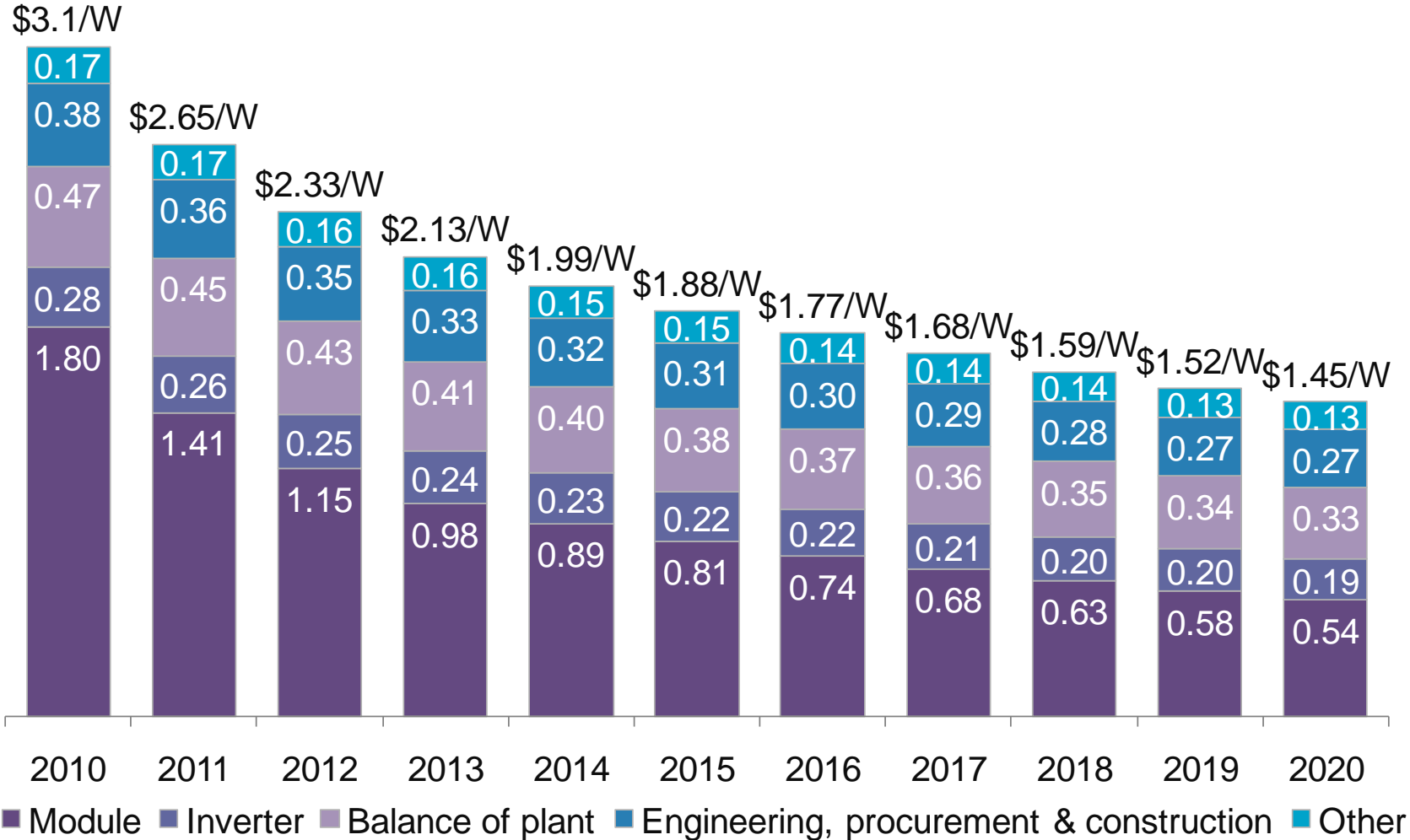
Source: Bloomberg New Energy Finance

LCOE CHANGE 2008-2010: \$/MWH

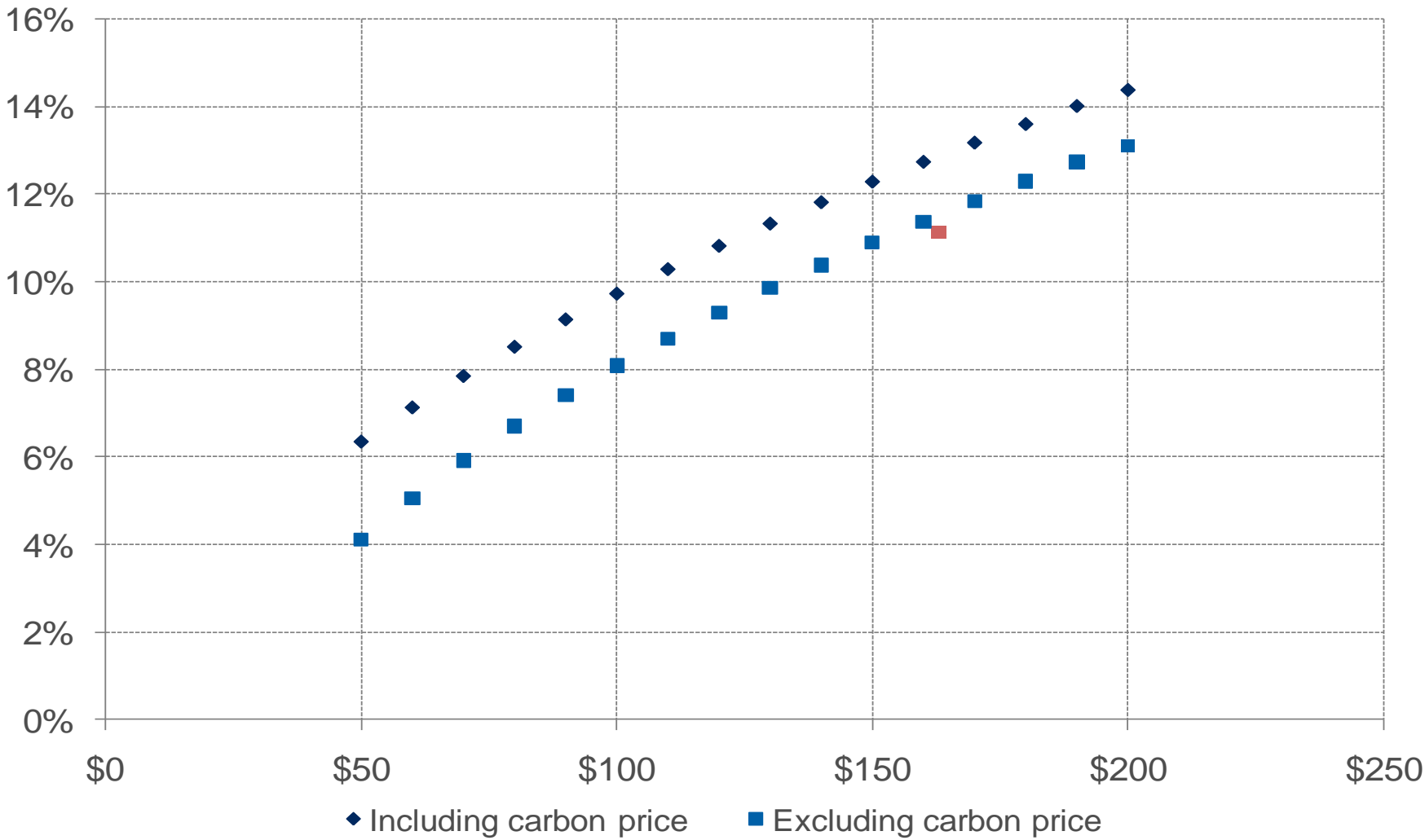


Source: Bloomberg New Energy Finance

PROJECTED PV COSTS, UTILITY SCALE PROJECTS



IRR DEPENDING ON THE REAL PRICE OF OIL IN 2030 WITH INITIAL PV CAPITAL COST OF \$3.14/W



Source: Bloomberg New Energy Finance

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Investment overview



Levelized cost of energy



Final thoughts on policy

DOMESTIC CONTENT RULES: VIRTUOUS COMPETITION OR PERNICIOUS IMPOSITION ON FREE TRADE?

- With international climate talks generally stalled, individual countries are acting to put in place feed-in-tariffs, national targets, and other policies.
- “Virtuous competition” but economic development is a major political driver.
- The upshot: explicit or implicit domestic content policies in China, Brazil, India, Ontario, and the US.
- Conflicts growing. Recent headlines:
 - US Senator vents at stimulus pay outs to foreign-owned wind firms
 - *US Files WTO Complaint Against China Over Wind-Power Aid*
 - *China Says Obama Seeking ‘Votes’ With Clean Energy Case*
 - *Japan Files WTO Case on Canada’s Renewable Energy Subsidy*
 - *UNICA Calls for WTO Action Against the US on Ethanol Tariff*
 - *GE Asks Court to Rule Mitsubishi Violates Two Patents*
- Conflicts unlikely to abate anytime soon.

THANKS!

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Carbon Markets

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