

PRESENTATION TO



Building Blocks For A Sustainable Economy: A Financial Perspective

Don Roberts, Vice-Chairman
CIBC World Markets Inc.

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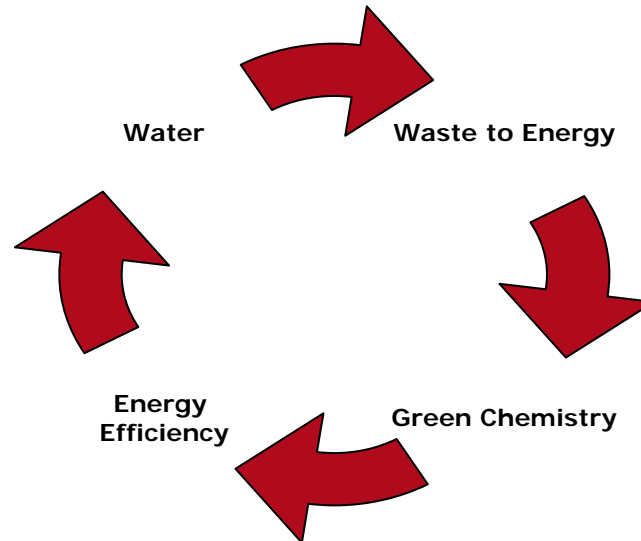
Five questions:

- 1. What is CIBC's focus?**
- 2. Where is the money going?**
- 3. Status of the "Green Stimuli"?**
- 4. How much money is needed?**
- 5. Where will it come from?**



- ▲ For proven technologies, we service all financing needs in most of the industry segments (eg., hydro, wind, solar, geothermal, bio/waste, water).
- ▲ More focused when pricing technological risk – 4 key areas. *Domain expertise is important - cannot be "all things to all people" .*

Strategic Areas of Focus in Clean Technology



▲ **Fundamental Challenge:**

- *Clean Technology has VC risk, but requires more than VC capital.*

CIBC is active in the Renewable Energy/Clean Tech Space

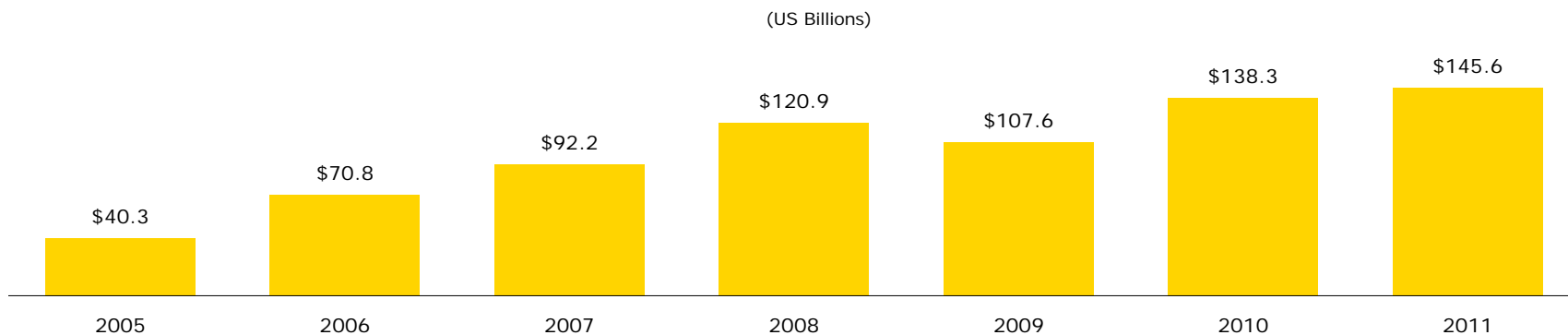
In 2011:

- ▲ Led/Co-led over \$700 million in public & private equity financings
- ▲ Participated in over \$2.2 billion of project finance debt facilities (including \$400 million of our own capital)
 - #1 in Canada
 - #5 in North America
- ▲ Advised on the purchase/sale of over \$8.5 billion in assets

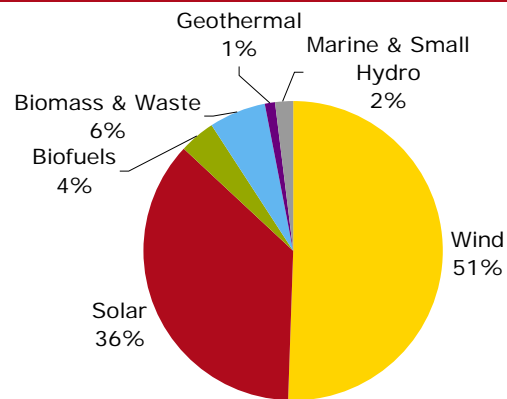


- ▲ Total investments in the Renewable Energy/Clean Tech space in 2011: ~\$260 billion globally, ~\$35 billion in the U.S. and ~\$7 billion in Canada
- ▲ Over 50% is targeted at financing specific assets (and most of this is debt) ~\$145 billion in 2011.

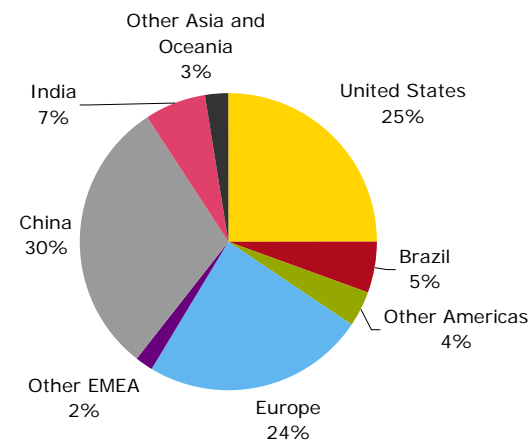
Global Asset Financing in Clean Energy¹ (2005 - 2011)



Global Asset Financing in Clean Energy¹ (2011)



Regional Breakdown of Clean Energy Financing¹ (2011)



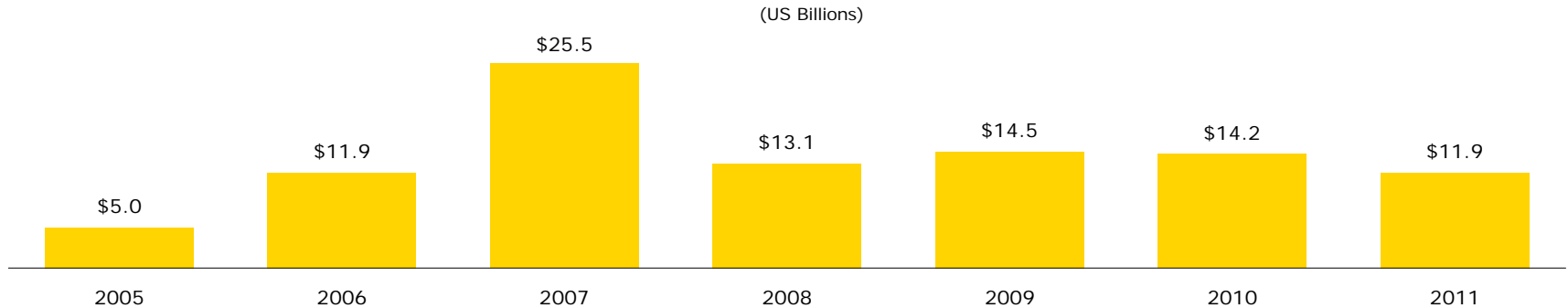
¹ Source: New Energy Finance. Total values include estimates for undisclosed deals.
 Note: Grand total of clean energy investments is \$260 mm, including Asset Financing, Public Market Investments, Corp R&D, Reinvestments, and VC/PE.



Public Market Equity Investments

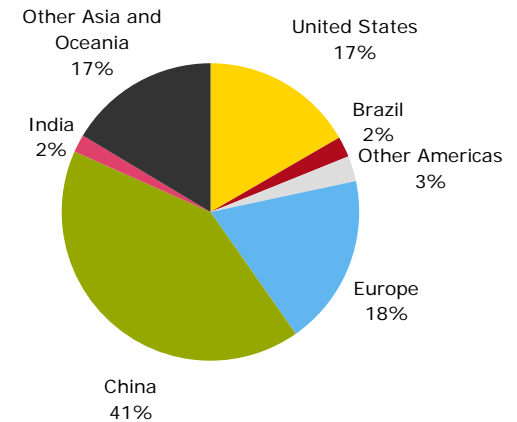
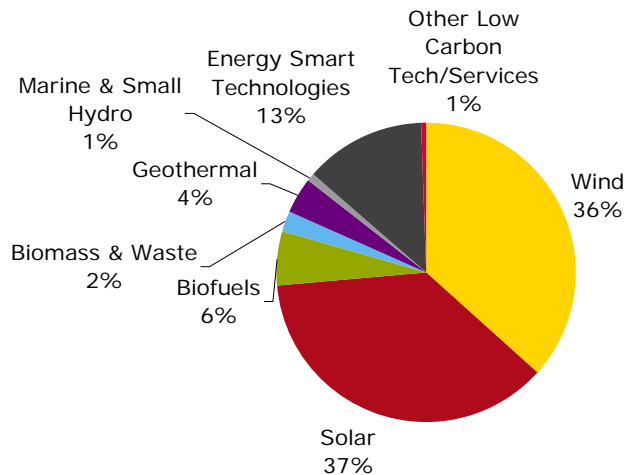
- ▲ ~\$12 billion of public equity financing in 2011.
- ▲ ~2/3 in Solar and Wind, and mostly in China (40%).

Global Public Markets New Investment in Clean Energy¹ (2005-2011)



Global Public Market Investments in Clean Energy¹ (2011)

Regional Breakdown of Clean Energy Inv.¹ (2011)

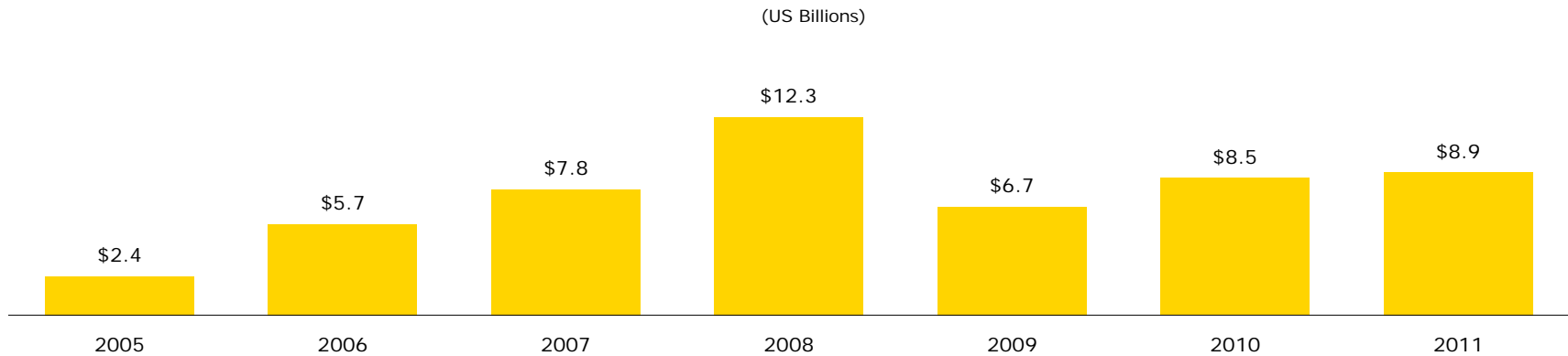


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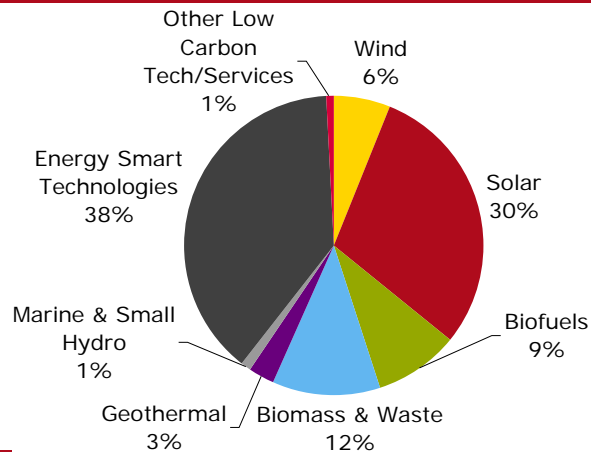
Venture Capital/Private Equity Investments

- ▲ Slow recovery with ~\$9 billion of Venture Capital/Private Equity in 2011 – financing technological risk.
- ▲ Dominated by the U.S., and spread across segments (but Smart technologies & solar biggest)

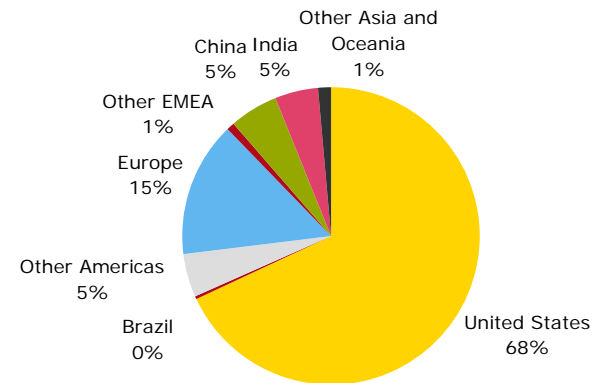
Global VC/PE New Investment in Clean Energy¹ (2005 - 2011)



Global VC/PE Investment in Clean Energy¹ (2011)



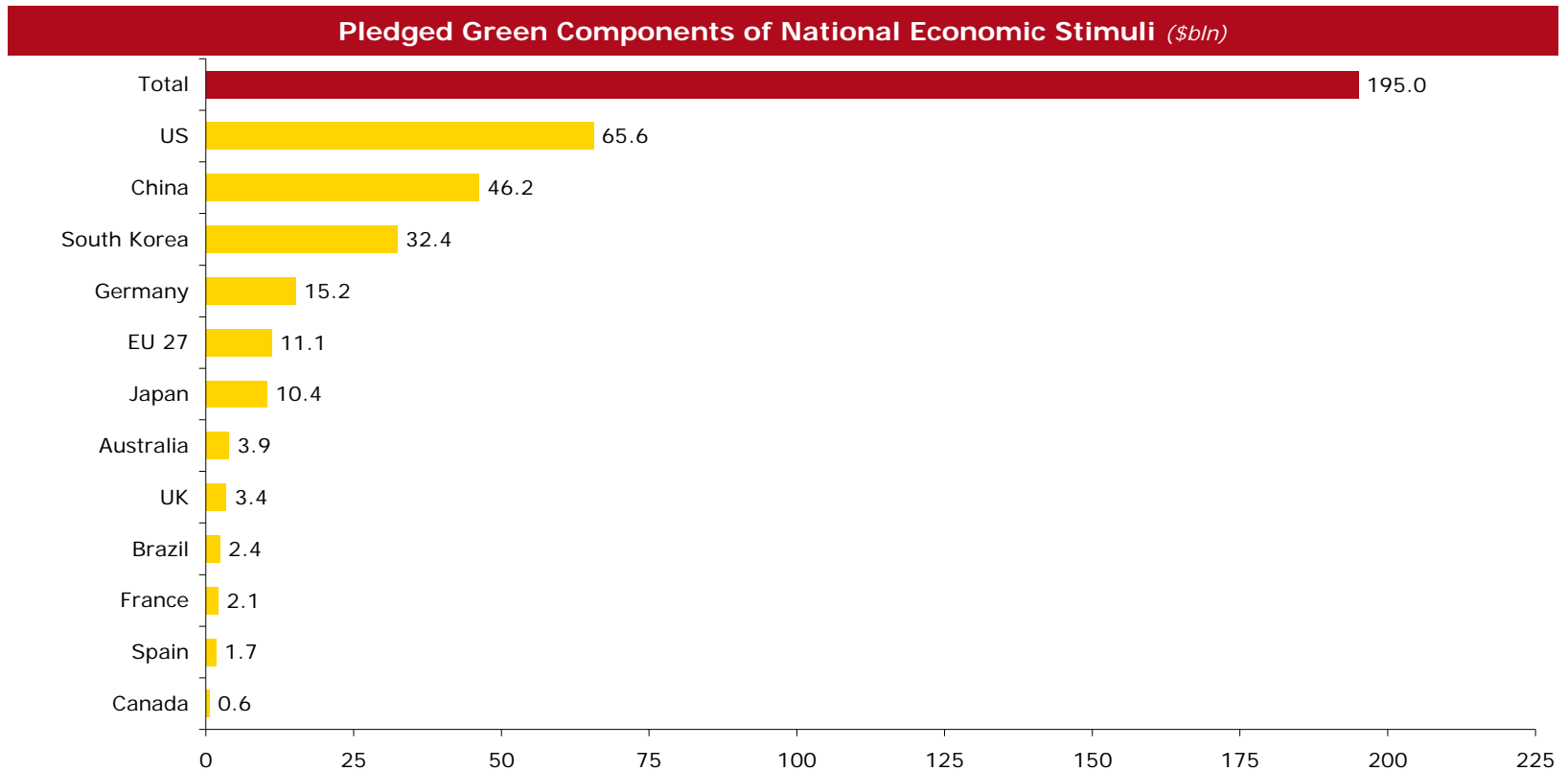
Regional Breakdown of Clean Energy VC/PE¹ (2011)



¹ Source: New Energy Finance. Total values include estimates for undisclosed deals.
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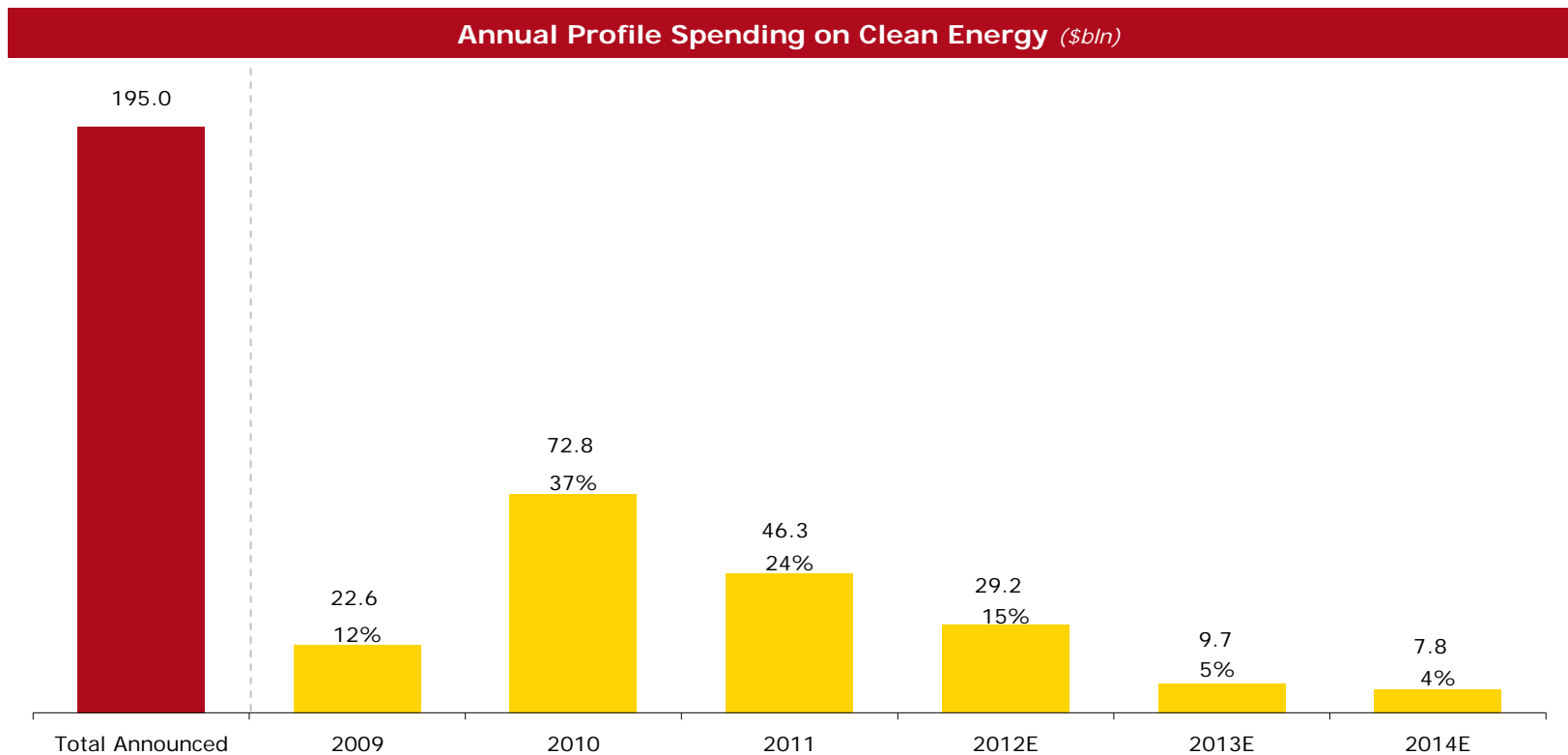
Pledged Green Components of National Economic Stimuli

- ▲ \$195 billion of "Green Stimulus" announced in late 2008/early 2009
- ▲ U.S., China and South Korea were the most aggressive.



Spending spread over 6 years

▲ 27% still to come (~\$53 billion), with the bulk this year.



Source: Bloomberg New Energy Finance.

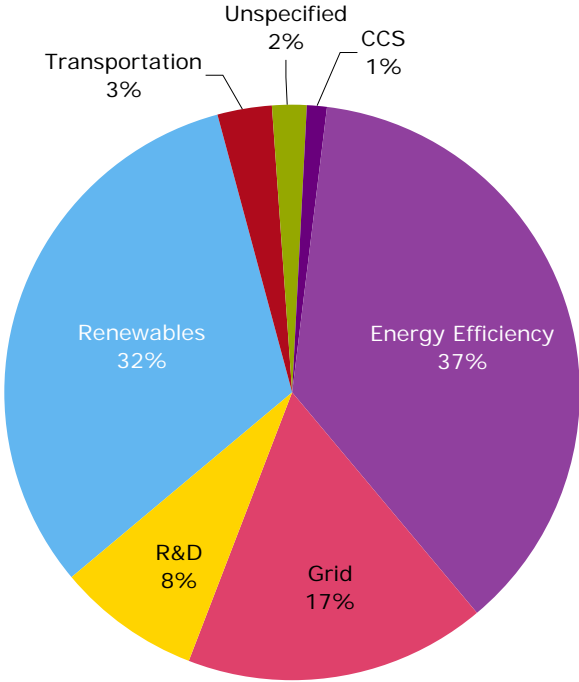
Note: Some \$6bn is likely not to be disturbed from the announced programs, hence the spending profile only adds up to \$189bn.

Government Response to the Great Recession

Sector breakdown is roughly the same going forward:

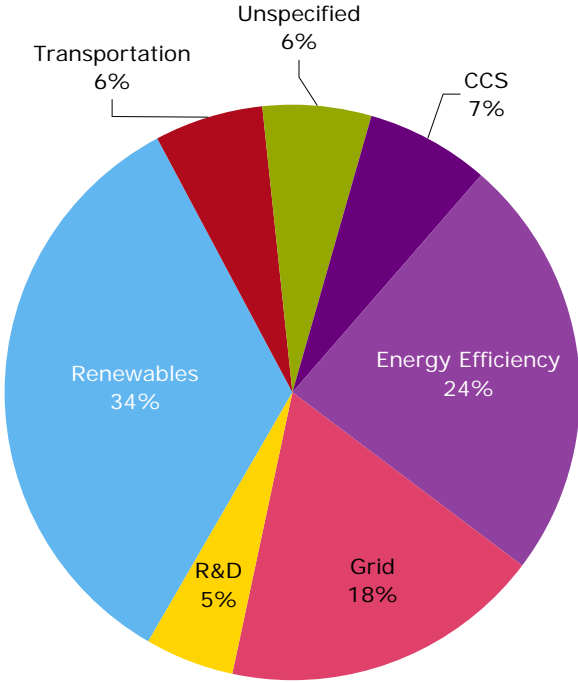
- ▲ Focus on Renewable Energy, Energy Efficiency, Improving the Grid – in that order.

Stimulus Spent Through 2011, by Sector



Total = \$141.8bn

Stimulus Unspent Through 2011, by Sector

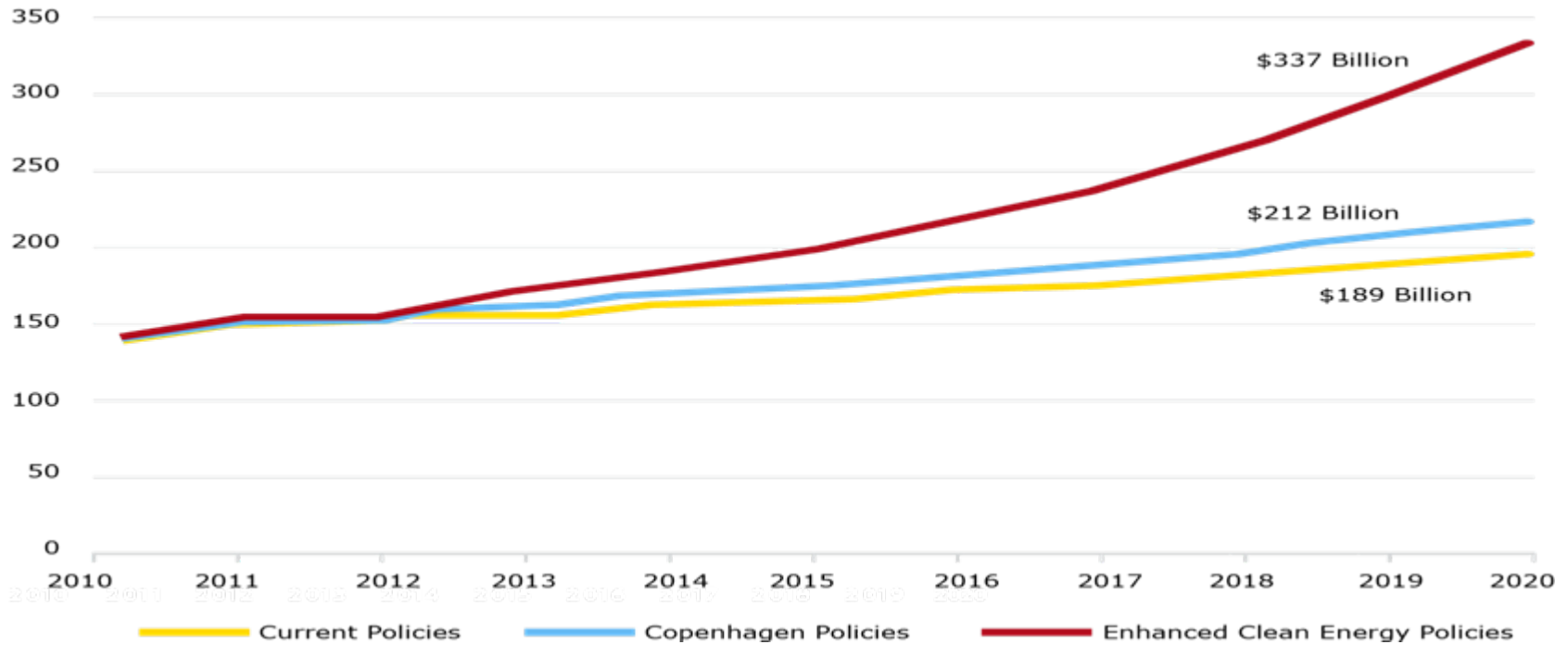


Total = \$53.2bn



Source: Bloomberg New Energy Finance, governments.

Investment in Renewable Energy Projects in G-20 Countries, 2010-20 (billions of \$)



Source: Pew Charitable Trust

Current Policies call for ~45% increase in annual investments by 2020;

Pledges at Copenhagen call for ~65% increase; and

Aggressive Policies (ie, thought to be required to limit global warming to the target 2 Degrees Celsius) call for an increase of ~160%.

The cumulative investment over the next ten years rises from \$1.7 T under Current Policies to \$2.3 T with Aggressive Policies – **WHERE WILL THE MONEY COME FROM?**

Governments are generally broke

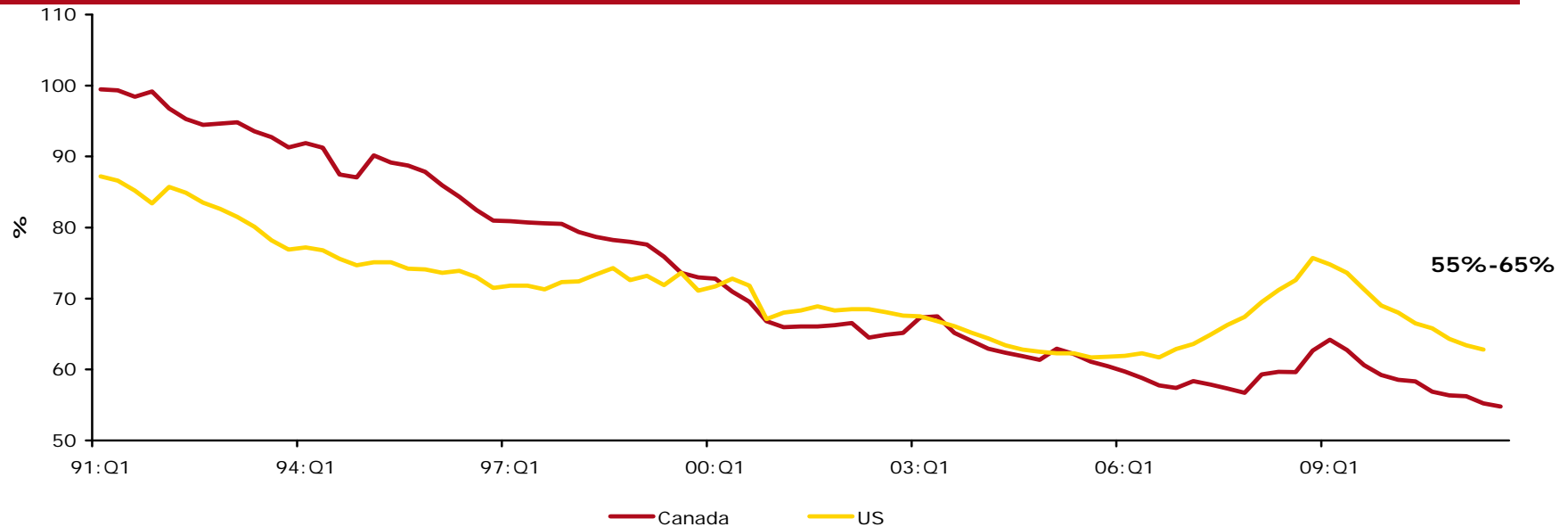
- ▲ Europe, U.S., Japan, India

Other “pools of capital”?

- ▲ China
 - China Development Bank has extended credit lines of ~\$35 billion to the clean energy and other “green sectors”
- ▲ Corporate balance sheets
- ▲ Sovereign Wealth Funds (~\$20 trillion)
- ▲ Bond market (~\$95 trillion)

- ▲ Balance sheets in the private sector are the strongest in years
- ▲ Companies have lots of financial capital to invest, and they have the “human capital” to roll-out technologies.
- ▲but they are worried.

Debt-to-Equity Ratios, Non-financial Sector, Canada vs US



We expect a bifurcation in the debt market for renewable energy/clean tech projects

1. Traditional project finance

- True investment grade with long-term off-take and low risk profile.
- Accepts zero technology risk, and minimal market risk

2. Leverage finance model

- High yield/junk bonds
- Mezzanine debt (quasi equity)
 - Eg., Energy Capital; Carlyle Group

A larger slice of the overall “project finance market” may move from banks to institutional investors over time.

Significant opportunity for the provision of non-traditional debt finance to the renewable energy and clean tech sector?

Five key reasons:

1. High government debt
 - Development Banks will have less capital
2. Weak European banking system
 - Retreat of the largest project financiers
3. Basil 3 requirements
 - More conservative capital ratios for all banks
4. Rapid reductions in the Levelised Cost of Renewable Energy
 - Driven by technological change.
5. Selected environmental regulations
 - Eg., RFS-2 in the United States – creates a market for products with technological risk.

1. Clean Tech Fund sponsored by a coalition of Sovereign Wealth Funds

- ▲ Emphasis on debt (mezzanine) for first commercial scale projects.

2. Global OPIC

- ▲ Modelled on the U.S.'s Overseas Private Investment Corp.
- ▲ Conducts due diligence on projects in developing countries
- ▲ Provides guarantees on the projects
- ▲ Facilitates the packaging of these loans into asset-backed securities that could be sold to international investors.
- ▲ Initially capitalized by governments

3. High Yield Bond Funds with a focus on technology risk

- ▲ First step already taken in the semi-conductor industry?
- ▲ MidAmerican Energy's \$1.2 billion bond financing of the 550MW Topaz solar PV project last month was over subscribed.
 - First major US solar project financed without a government guarantee (but it was investment grade)

Bio of Don Roberts



- ▲ Mr. Roberts is a Vice-Chairman of Wholesale Banking, and Managing Director in Investment Banking with CIBC World Markets Inc.. He leads the Bank's Renewable Energy & Clean Technology Team, and also provides senior coverage for companies in the global forest products industry.
- ▲ In 2011, Mr. Roberts was chosen by Corporate Knights Magazine as the individual in the Financial Services sector who contributed the most to sustainable development in Canada.
- ▲ In addition to his work with CIBC World Markets Inc., Mr. Roberts is also
 - An Adjunct Professor in the Department of Forest Resource Management at the University of British Columbia (Vancouver);
 - On the Board of Directors, Rights and Resources Institute (Washington, D.C.); and,
 - Serves in an advisory capacity for a range of government, industry, and NGO groups.
- ▲ Mr. Roberts has a Bachelor's degree in Agricultural Economics from the University of British Columbia, a Master's degree in Forestry Economics from the University of California at Berkeley, and both an MBA and doctoral studies in International Finance and Economics from the University of Chicago. He is also a certified Board Director with the Institute of Corporate Directors.