

平成26年度グリーン投資促進のための情報開示及び評価の在り方に関する検討会

第2回

議事次第

日時：平成26年7月7日（月）10：00～12：00

会場：TKP大手町カンファレンスセンター16階 ホール16B

1. 開会
2. 第1回検討会の議事概要
3. Climate Bonds Initiative, Sean Kidney 氏講演及びディスカッション
4. 閉会

配付資料

- 資料1 議事次第
- 資料2 委員名簿
- 資料3 第1回検討会議事概要
- 資料4 Sean Kidney 氏講演資料「Climate Bonds」

参考資料1 グリーン投資の評価と情報開示・Climate Bonds Initiativeの概要

参考資料2 Sean Kidney 氏略歴

平成26年度 グリーン投資促進のための情報開示及び評価の在り方に関する検討会

委員名簿

< 検討会委員 >	(: 委員長)	(敬称略・順不同)
池田 誠	野村證券株式会社 IB ビジネス開発部 4 グループ 課長	
大橋 純	マッコーリーキャピタル証券会社 投資銀行本部 マネージング ディレクター インフラストラクチャー・ユーティリティーズ部長	
金森 弘樹	大和証券株式会社 IBソリューション部 課長代理	
白石 幸治	株式会社みずほ銀行 プロジェクトファイナンス営業部長	
田中 秀一郎	三菱UFJ 投信株式会社 業務部 チーフマネジャー	
田中 英隆	株式会社格付投資情報センター 専務執行役員	
徳田 展子	東京海上アセットマネジメント株式会社 運用戦略部 ファンドマ ネージャー	
錦織 雄一	オリックス株式会社 常務執行役 環境エネルギー本部長	
馬場 賢治	株式会社三井住友銀行 成長産業クラスター 第二グループ(環 境・エネルギー・資源担当)グループ長	
藤井 良広	上智大学大学院 地球環境学研究科 教授	
堀江 隆一	CSR デザイン環境投資顧問株式会社 代表取締役	
本多 史裕	株式会社日本格付研究所 ストラクチャード・ファイナンス部 プ ロジェクト&アセット・ファイナンス室長	
松井 博	三井住友信託銀行株式会社 オルタナティブ運用部 次長	
村上 努	株式会社日本政策投資銀行 ストラクチャードファイナンス部 部長	
八木 博一	セコム企業年金基金 常務理事	
若林 泰伸	早稲田大学 法学部 教授	
< オブザーバー >		
齋藤 通雄	金融庁総務企画局市場課長	
片岡 宏一郎	経済産業省資源エネルギー庁省エネルギー・新エネルギー部 部付	
橋本 梢	株式会社東京証券取引所上場推進部 課長	

第一回検討会の議事概要

○再生可能エネルギーファンドの情報開示の在り方について

(1) 評価・投資判断に必要な情報について

【リスク・リターンの重要性】

- 再エネであってもあくまで投資商品なので、第一義的にはリスク・リターンが訴求力である。(徳田委員、金森委員)
- 世銀のグリーンボンドを例にとれば、グリーンであることとともに信用力も重要である。(藤井委員長)
- グリーンな投資商品でも実際のリターンにつながらないと難しい。機関投資家の目線で上場インフラ市場商品への投資を分けるのは、ベンチマークで勝っているか否かではないか。(松井委員)

【環境効果の重要性】

- グリーンの観点は重要。REITでは環境の配慮がない商品をグリーンウォッシュ的に売ろうとしていた時期があった。インフラ投資版のGRESB作成のような海外情勢も意識しながら、「何をもってグリーンか」を測っていくことが大事では。(堀江委員)
- 企業年金の立場として、リターン特性だけを考えれば良いとはいえない。企業の事業活動として、ESGファクターをより認識し、総合評価をすることを考えた時に、グリーンな投資商品の存在価値があるのではないか。(八木委員)
- 再生可能エネルギープロジェクトを考えた場合、環境価値を差別化できるか。(村上委員)

(2) 再生可能エネルギー事業の特徴について

- 再生可能エネルギーは、自然のエネルギーを使った、自然科学的なアプローチになるという点が、社会科学的なアプローチをするREITと大きく異なる。天候に関するリスクの評価が情報開示のポイントになる。(白石委員)
- FIT等の制度によってキャッシュフローが生まれる点もあって、自然の変化と制度によってキャッシュフローが動くことが特徴。(藤井委員長)
- 再生可能エネルギーは、投資対象が政策に依存しており、本質的に国の政策を信用するかどうかという点が特徴。そして、FITが固定価格であるという点で、インフレ発生時に魅力が落ちる可能性がある。(松井委員)
- グリーン分野は政策がないと大きなマーケットにならず、政策が機動的に動けるかも重要(藤井委員長)
- 再エネを対象とする投資商品の特質は、制度依存、自然エネルギー、アップサイドが期待できずダウンサイドはあること、トラックレコードがないこと、オペレーショナルアセットであること。(馬場委員)
- オペレーターやアセットマネージャーがどのような人かというのも重要。(池田委員)
- 海外も視野に入れて、日本のマーケットがコアになって世界中から資金を集める状況にするため、FITに依存するだけではない。(田中(秀)委員)

第一回検討会の議事概要

(3) 第三者評価の必要性について

- 再生可能エネルギーには自然の状況が関係するので、外部の専門家のレポートを一定の基準をもって開示するといった形でないと、投資をする・しないの最終的な判断はできない。(金森委員)
- 第三者評価はあればあったほうが良いが、絶対必要というものではないのでは。再エネを対象とする投資商品は自然が相手なので、事前にそれを評価するというのはなかなか難しいのでは。(徳田委員)
- 年金基金等のニーズ、欧米の事例をみると、初期の段階では第三者評価はあった方がよい。評価に限界があることも事実であり、それを理解した上で利用することが望ましい。機材の品質・オペレータの素質・トラックレコードも開示対象とするべき。(本多委員)
- 詳細なデータを開示しても個人が理解できるかが重要である。多くの投資家を参加させるために、第三者評価は重要である。(三岡氏(錦織委員代理))
- 「グリーン」が濫用されることを防ぐ意味でも第三者評価は重要。誰が第三者として評価するかの規律が必要。基本的に公募を前提として開示の在り方を検討し、私募の場合はプロ向けに開示情報を絞り込むアプローチが良いのではないか。(若林委員)
- 第三者評価は流動性を担保する上でも重要なポイントといえる。(藤井委員長)

(4) その他

【グリーン投資の範囲】

- FIT制度を活用する再生可能エネルギー事業について、「グリーン」であるか否かという観点については、整理が必要ではないか。(馬場委員)

【投資の形態】

- REITは投資法人が中心だが、投資信託の場合の開示は投資法人の場合と異なる。(田中(秀)委員)

Climate Bonds

Tokyo
7 July 2014

An investor-focused NGO, mobilizing debt capital markets for a rapid transition to a low carbon economy



The investment gap

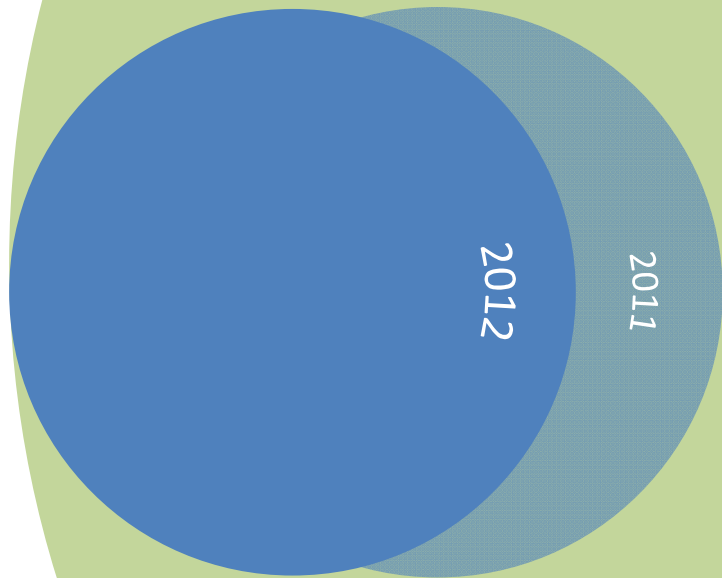
Total climate investment equaled **\$359 billion** in 2012...

That's roughly the same as the year before.

...and **not nearly enough.**

\$5 trillion min
needed
through 2020

We're falling further and further behind globally agreed goals for safe emissions levels.



Re-framing the issue

Enabling government / politicians to act

Political narrative: cost vs investment

20 years of lawyers and carbon pricing

Australia and carbon tax message

Framing – George Lakoff

Pro-Life vs Pro-Choice

Carbon Tax vs Pollution Charge

Green growth / Clean growth

Capital steerage

Sewers of London

USA 1950s: housing & highways

German integration 1990s



The bigger picture



Discovery

Risk-Bridging

Deal flow
generation



The bigger picture – it is possible

- The global institutional investor sector has some \$83 trillion of assets under management which comes with long terms liabilities such as paying pensions.
- The low carbon, resilient economy is being built today – high speed rail, low carbon buildings, electrified road transport, offshore wind farms, solar power stations, new data backbones. It requires capital investment of \$86 trillion for nation building infrastructure with multi-decade financial lifetimes.

The Criticality of Bonds

- Over 60% of assets under management by institutional investors are in bonds.
- Bonds are the largest single pool of capital in the world at \$80 trillion.
- Investments structure as investment grade bonds have the advantage of fitting easily within existing asset allocation requirements of investors.
- Climate Bonds (and Green Bonds more broadly) are simply ordinary bonds where proceeds are directed to assets and projects important to a rapid transition to a low-carbon and climate resilient economy.

IEA/UNEP estimates
to keep climate
change @2 ° C =
\$86tn by 2050

Global equities =
\$53tn

Global bonds
outstanding = \$80tn

Institutional
Investors = \$83tn

US GDP = \$17tn

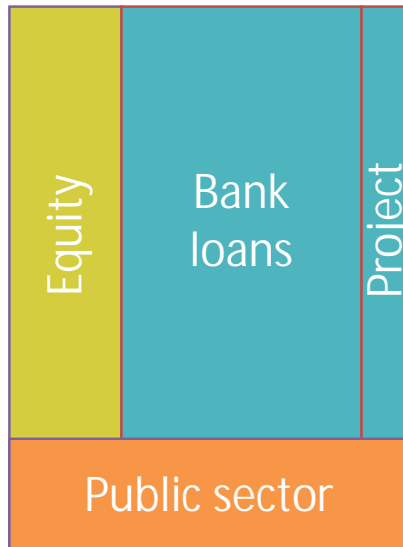
Climate Bonds INITIATIVE



Bonds, re-fi, and the capital pipeline

Development

High risk
Project finance
First 2-5 years



Mature asset, O&M

Low risk, long-term holdings for long-term investors, 15-25 years



The Climate Bonds Family



\$22tn Climate Bond Standards Board



Numerous Technical Working Groups: Green Property, Low-Carbon Transport, Bio-energy, Agriculture, Water



Industry Advisory Group



Climate Bond Partners and Advisory Panel Members



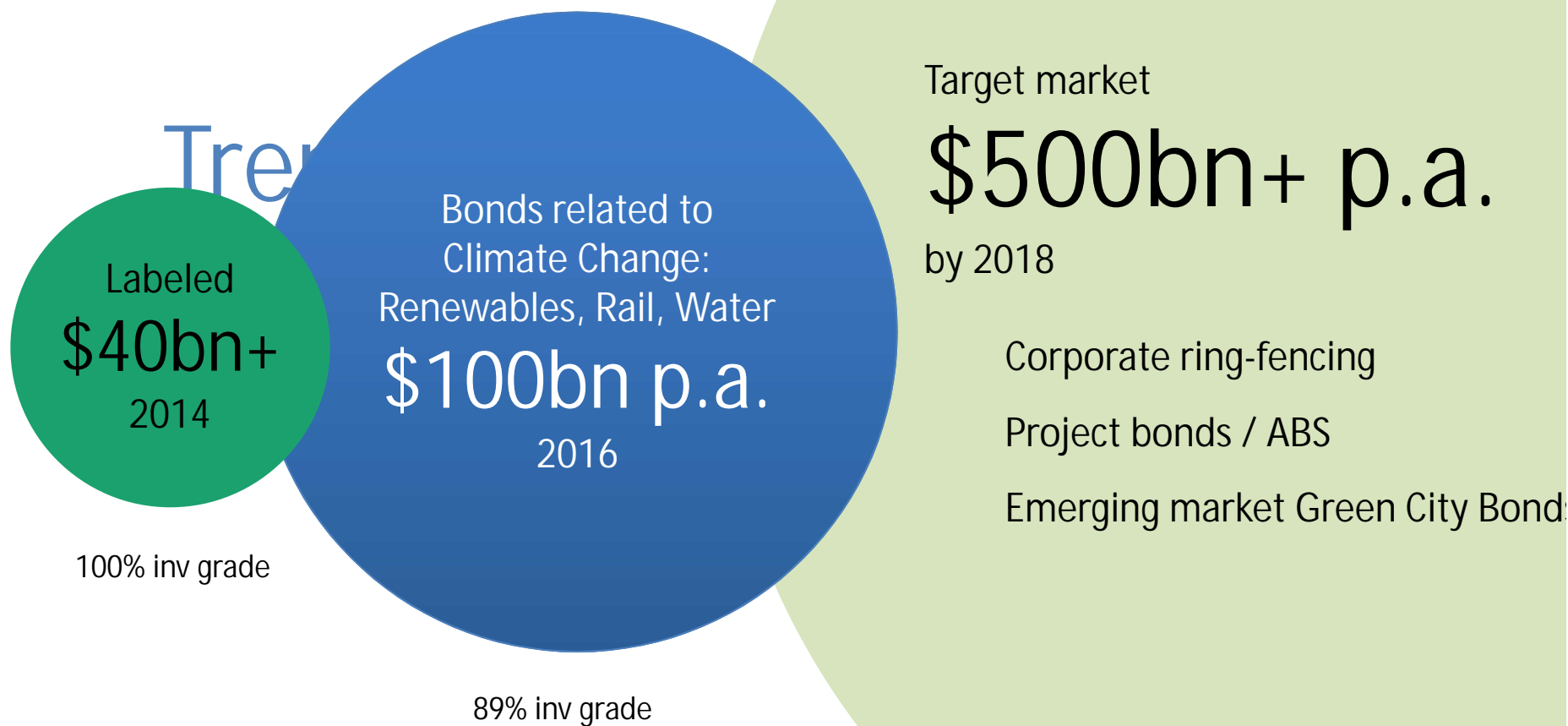
Coalition collaborators



The Basics

Proceeds to Green	<ul style="list-style-type: none">• Proceeds to ring-fenced green projects• Underwriter labelled market• Unlabelled market
Any entity	<ul style="list-style-type: none">• Governments & DFIs• Corporates• Project owners
Ring fenced	<ul style="list-style-type: none">• Corporate, but ring-fenced to assets• Asset-backed
Reporting	<ul style="list-style-type: none">• Green criteria referencing• Reporting on funds allocation• Third party review

Growth Prospects



Green Bond Principles

Global capability and support

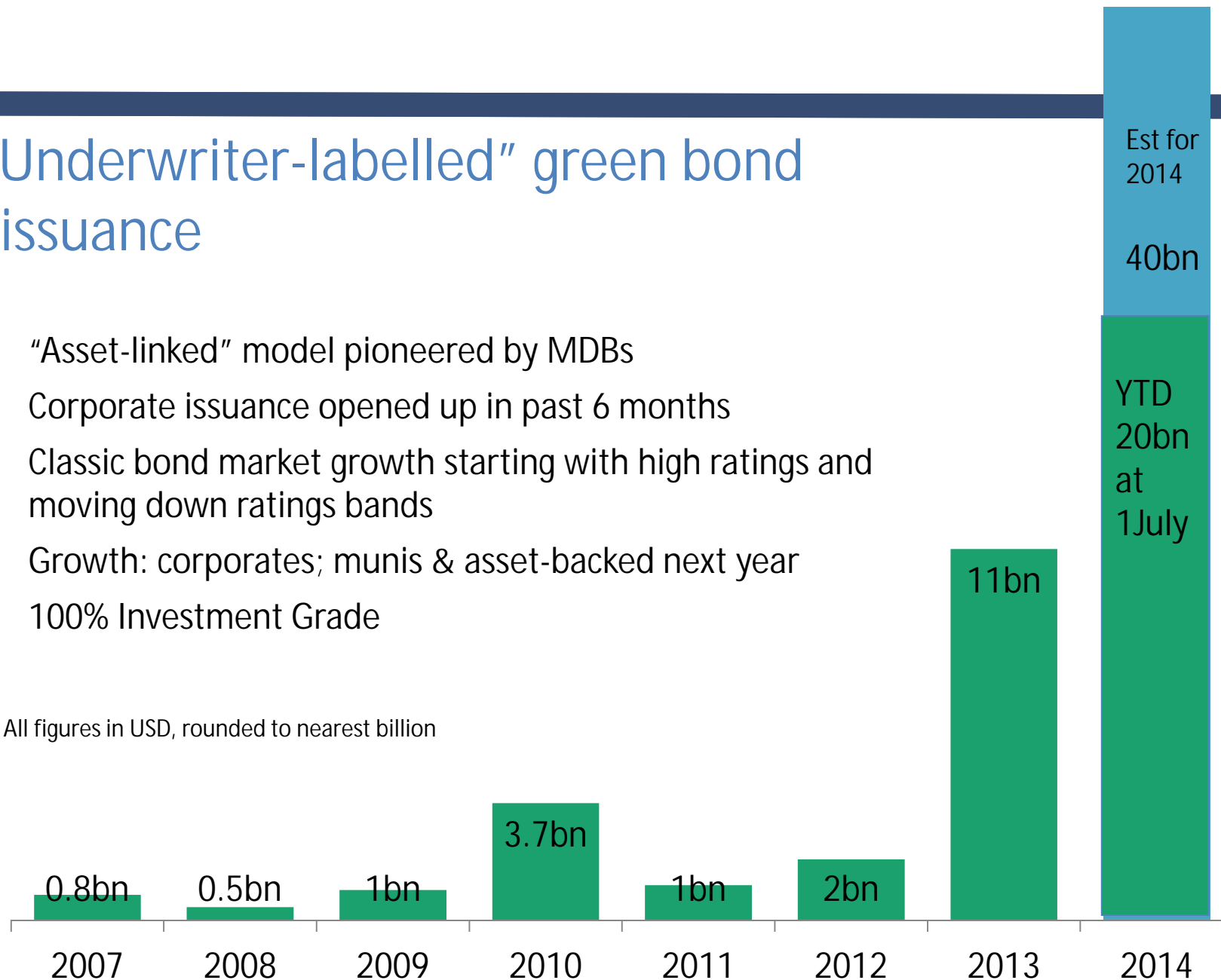
- Assets not companies
- Transparency & reporting



“Underwriter-labelled” green bond issuance

- “Asset-linked” model pioneered by MDBs
- Corporate issuance opened up in past 6 months
- Classic bond market growth starting with high ratings and moving down ratings bands
- Growth: corporates; munis & asset-backed next year
- 100% Investment Grade

All figures in USD, rounded to nearest billion



Recent Green Bonds

Government, ring-fenced

- Canadian Export Bank: \$500m orders on \$300m bond in 15 min
- World Bank, EIB, EBRD, IFC, KfW, NRW, AfDB
- Ile de France (Paris)
- Massachusetts \$100m
- Gothenburg
- Johannesburg
- Ontario \$3-500m
- California \$1bn

Corporate, ring-fenced

- GDF-Suez \$3.5bn. 3x oversubscribed
- Iberdrola = \$830m in one hour
- EDF = \$1.9bn. 3x oversub
- Unilever = \$380. 3x oversub
- BoA ML \$500m

Project or ABD

- Toyota with an ABS linked to electric+hybrids. Upsized from \$1.25bn to \$1.75bn
- Hannon Armstrong \$100m
- SolarCity \$120m
- Andromeda \$300m
- Mid-American \$2bn



Benefits

Reputation

Investor Diversification

SRI investors \$7tn global

\$60tn pension + insurance funds

Corporates

Tenor

Price? Cost vs illiquidity premium battle

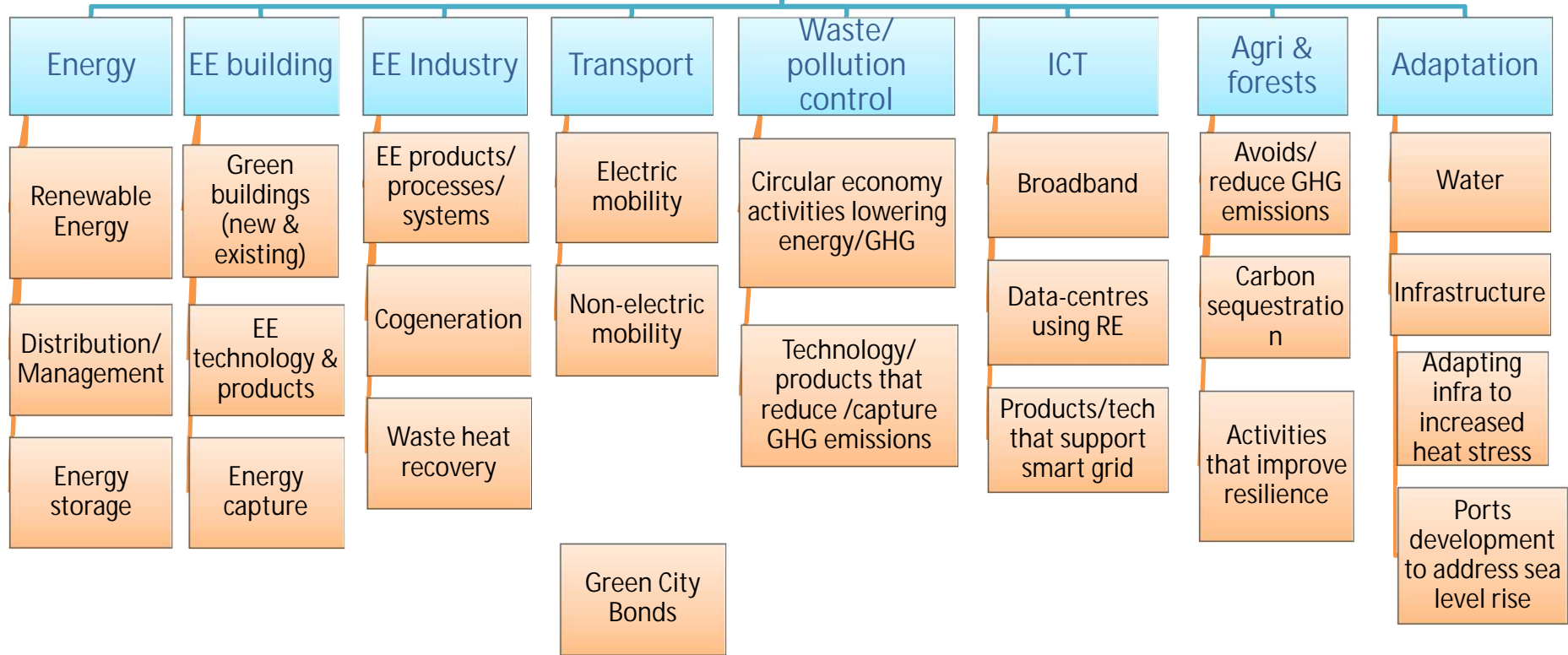
Tightening?



Mix & match allows larger bonds



Low Carbon and Climate Resilience Economy



Standards Board, representing \$22tn



Investor Network on
CLIMATE RISK

CALSTRS
HOW WILL YOU SPEND YOUR FUTURE?



Investor Group on
Climate Change

IIGCC
Institutional Investors Group on Climate Change



Confidence



Climate
Bond
Certified

Over 50 organizations involved in Standards development



**STANDARD
& POOR'S**
RATINGS SERVICES

SIEMENS



SNS Asset Management



Bloomberg
NEW ENERGY FINANCE

“Joining the Climate Bond Standards Board reinforces California’s leadership role in combating climate change.”

Bill Lockyer, California State Treasurer

Climate Bonds INITIATIVE



Certification is straightforward



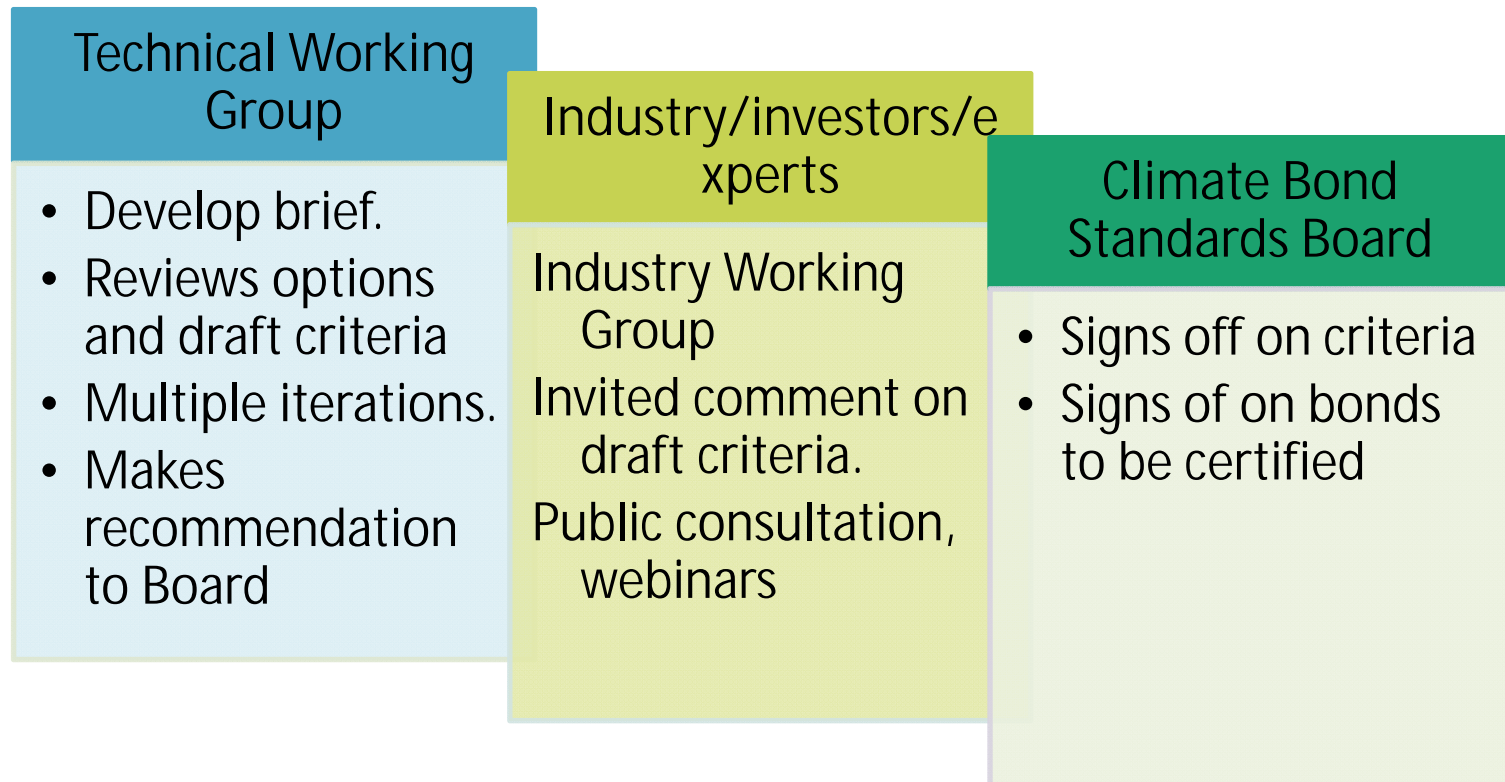
Costs: \$5,000-\$50,000

Can be used for any asset (i.e. for equity as well)

Lesson: rate everything

Process for Technical Working Group

Expert Technical Working convened for each focus area: e.g. low-carbon transport, green property, water.



Green Property Technical Working Group

Europe

Yamina Saheb, European Commission

Oliver Rapf, Buildings Performance Institute Europe

Peter Sweatman, Climate Strategies, Madrid

Asari Efiang, European bank of Reconstruction & Development

Tatiana Bosteels, Hermes Real Estate / IIGCC, Brussels

James Wilde, UK Carbon Trust, London

Bart Adams, Consultant, DNV Environmental Services, Antwerp

Hilary Elliott, UK National Physical Laboratory, London

Robert Tromop, Sustainable Buildings, International Energy Agency, Paris

Thomas Boermans, Unit Manager, Buildings, Ecofys, Amsterdam

Jacob Halcomb, Ecofys, Amsterdam

Australia

Ché Wall, Flux, Australia

Cath Bremner, ANZ Bank, Sydney

Matthew Deegan, Consultant, Sydney

Niall McCarthy, Executive Director, Eureka Funds

Management / IGCC, Sydney

Simon Brooker, Clean Energy

Finance Corporation, Sydney
USA

Chris Pyke, Vice-President Research, US Green Building Council, Washington DC

Maggie Comstock, US Green Building Council, Washington DC

Bettina Redway, Deputy Treasurer, California State Treasurer's Office

Brian Rice, Investment Manager, CalSTRS, Sacramento

Tooraj Arvajeh, Arup, New York

Jonathan Pressman, Environmental Markets, Markit, New York



Low Carbon Transport

USA

Lewis Fulton, University of California's Davis Institute of Transportation Studies, Davis CA

Michael Replogle, Institute for Transportation and Development Policy, Washington DC

Gary Hoffman, Consultant, GM Hoffman Consulting, Washington D.C.

Elizabeth Deakin, University of California's Berkeley Institute for Environment Design, Berkeley CA

Benoit Lefevre, World Resources Institute, Washington DC

Carol Lee, Director Transportation Program, Ceres, Boston

Canada

Patrick Fancott, Ontario Ministry of Environment, Toronto

Europe

Heather Allen, Transport Research Laboratory, London

Karl-Josef Kuhn, Siemens, Munich

Rupert Faussett, Green Cities program, Forum for the Future, London

Nick Owen, Principle Consultant, E4 Tech Consulting, London

Arie Bleijenberg, TNO, the Netherlands Organisation for Applied Scientific Research, Delft

Nina Renshaw, Transport & Environment, Brussels

China

Cornie Huizenga, SLoCaT - partnership for sustainable low carbon transport, Shanghai

He Dongquan, China Sustainable Transportation Centre, China Energy Foundation, Beijing

Indonesia

Danang Parikesit, Prof. Transportation, Univ. Gadjah Mada, president Indonesia Transportation Society



Next



Green Property

Commercial

- Top 15% of each market
- Kgs per square meter, ratchets down to 2050

Residential

- Same 15% rule
- Use building code proxys

EE upgrades

- 30-50% emission improvements

CLIMATE BONDS VERIFIED PROPERTY

Verified Property	Deemed Property	Upgrade Finance
Primary mechanism relies on full M+V of performance for highest integrity of abatement accounting	Methodology provides for deeming of abatement where ongoing verification is impractical	Requires ongoing monitoring and verification where financing is commercial. Provides deeming for residential

INVESTMENT GRADE ASSETS



55.2m m²

California
Washington State



490m m²

New York City
Austin
Boston
Chicago
Minneapolis
Philadelphia
San Francisco
Seattle



23m m²

Australia
3,500m m²
EU countries
47m m²
Singapore



64m m²

Tokyo MG

Eligibility Criteria

Low-carbon transport

Evs + hybrids

Rail

Bioenergy

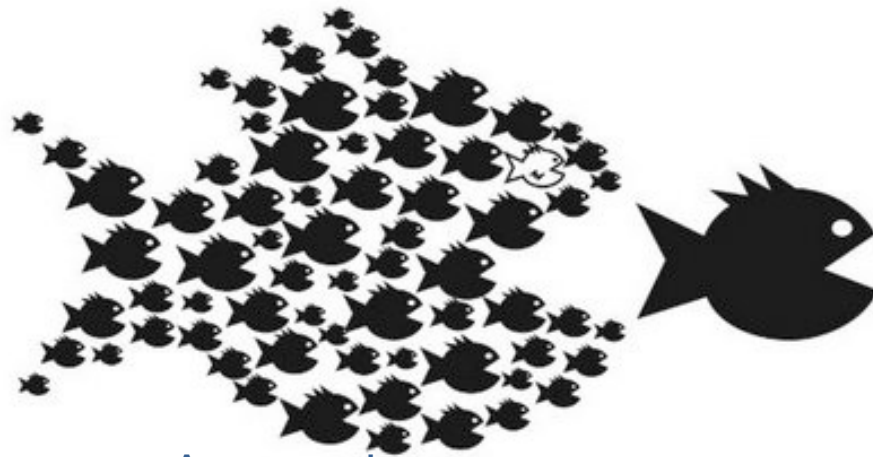
Water

Sustainable Agriculture

Hydro

Broadband/IT

Additionality



Aggregation
-EIB / IBD



Deal flow
- Financial skills, etc



Risk-bridging

10 tweaks

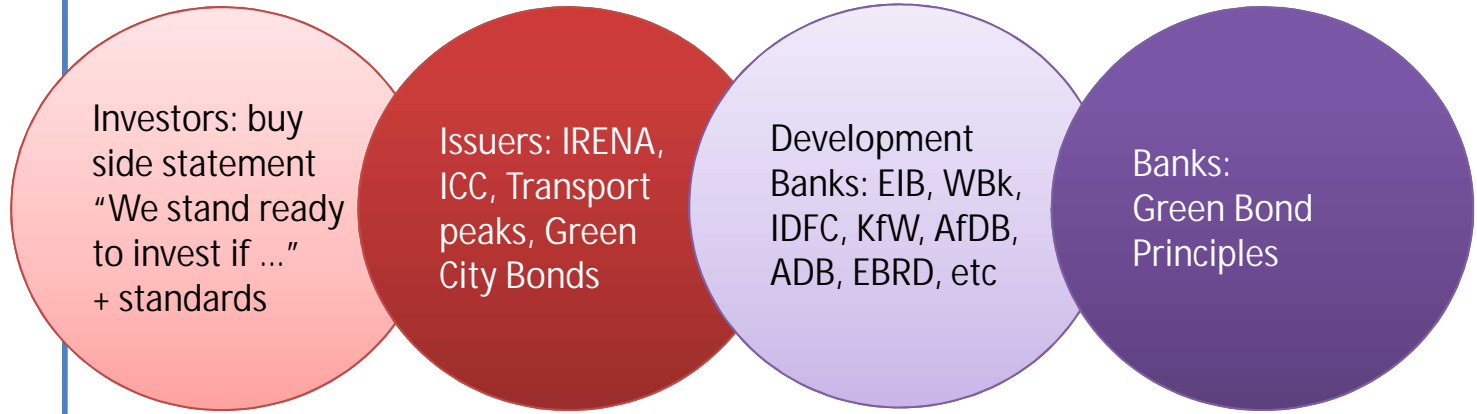
1. Green mortgages and loans: These are mortgages against real estate with very high energy efficiency specifications, or loans into low carbon economy. The tweak is to reduce the risk-weighting of green mortgage backed securities either through Basel III or through credit risk definitions. This is supported by evidence that these are indeed less risky than conventional mortgages, for a number of reasons.
2. Green securitisation: These are securities backed by green economy assets. Facilitate the growth of this market through favourable legislation and providing first loss provision or mezzanine finance for qualifying investments.
3. Covered bonds: These are an existing instrument issued by a bank with an underlying portfolio of assets, with low capital requirements for the issuing banks. The tweak is to allow clean energy lending to be an allowed category within the existing covered bonds market.
4. Green monoline: Credit ratings can be enhanced by government guarantee, making clean energy infrastructure or asset backed securities allowable under Tier 1 capital. A green monoline would be a government (or multi-government) supported enterprise that insured green securities.
5. Tax benefits: Investment into clean technologies would benefit from favourable tax treatment, which is economically justifiable due to the positive externalities generated. Favourable tax treatment could be introduced for R&D, green savings accounts, VC funds, REITS and muni-bonds



10 tweaks

6. Basel III: currently Basel III introduces adverse incentives for long-term investment. This should be removed for clean energy investment.
7. Government guarantees: Credit ratings can be enhanced by government guarantee, making green corporate or municipal securities allowable under Tier 1 capital.
8. Green development banks: existing institutions should follow government policy towards a low carbon economy, for example should not be investing in coal.
9. Introduce a policy risk insurance facility for clean energy: some clean energy requires policy support, which in itself introduces risk that this will be removed. Regional or national facilities can be set up to insure this risk and hence de-risk these investments.
10. Green quantitative easing: direct quantitative easing into green infrastructure bonds.

UN Climate Summit: Green Climate Bonds Coalition



Investors: buy side statement
"We stand ready to invest if ..."
+ standards

Issuers: IRENA, ICC, Transport peaks, Green City Bonds

Development Banks: EIB, WBk, IDFC, KfW, AfDB, ADB, EBRD, etc

Banks: Green Bond Principles

Aim:
demonstrate to governments that there is capital available in the low carbon market if they develop the pipeline of projects.

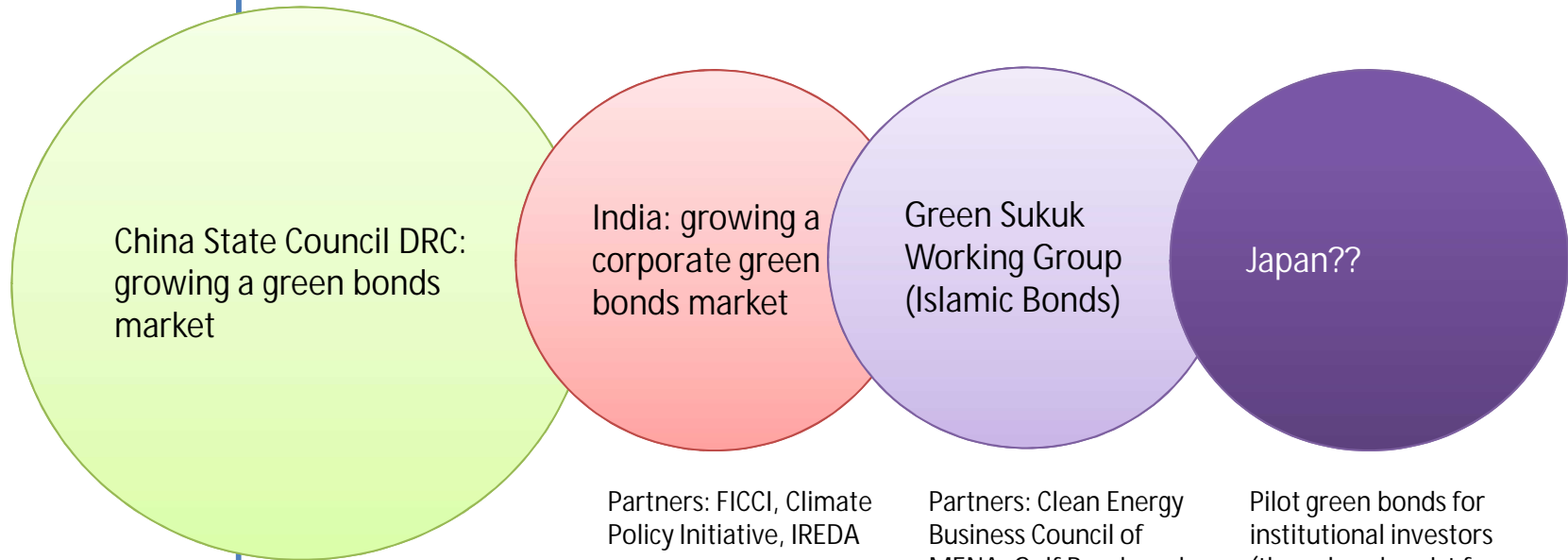
UNEP FI
Global Investor Council on Climate Change: IIGCC, INCR, IGCC, AIGCC
Investors Leadership Group
PRI, CDP, ISFWF
ClimateWise insurers
Zurich Insurance
Allianz Insurance
+ L&G, Ontario Teachers, SNS AM, Natixis Mirova, CNP Assurances

Countries
Sub-national governments
Cities – C40, etc
International Chamber Commerce
Utility associations
Low-carbon transport
LEDS & CDKN
"Here is a pipeline of deals over next 2-10 years." \$\$\$\$

+ Nat. Dev. Banks
"We stand ready to help."
Issuer capacity development
Deal flow projections.
Credit enhancing and other support

Target: 100 banks

Regional projects



China State Council DRC:
growing a green bonds
market

India: growing a
corporate green
bonds market

Green Sukuk
Working Group
(Islamic Bonds)

Japan??

Partners: China State
Council Development
Research Centre; IISD;
China Banking
Regulatory Commission
and other regulators;
various others

Stage 1 complete

Stage 2 begins July 2014

Objectives: development
agenda for growing the
market in China + 3 pilot
green bonds

Partners: FICCI, Climate
Policy Initiative, IREDA

Objective: Govt active
support for corporate
green bonds

Partners: Clean Energy
Business Council of
MENA; Gulf Bonds and
Sukuk Association

Focusing on Sovereign
Wealth Funds and
renewable energy
projects.

Pilot green bonds for
institutional investors
(they already exist for
retail market)

Start with high grade
issuance, slowly
broadening out





Green City Bonds

USA Green Munis

USA Green Munis

The home of the muni market, full of models to be adapted for other cities.

This project will promote guidelines for US Green Muni issuance and educate prospective issuers about the opportunity.

Partner: C40 Cities, CA State Governor and Treasurer; MA Treasurer; Band of America, Citi

Possible partners: US States: OR, NY; Rockefeller Foundation.

EU Green City Bonds

EU Green City Bonds

This project will promote EU take-up of the Green City Bond model, as demonstrated by three French provinces and Gothenburg in Sweden.

Partner: C40 Cities

Possible partners: DG Klima and DG Regio at European Commission, EIB, CDC Climat, EuroCities, EU Covenant of Mayors

China Green City Bonds

Emerging Market Green City Bonds

The first emerging markets Green City Bond will be issued by Johannesburg in May 2014. Rio could be second.

This project will work with interested cities to generate Green Bond issuance in the lead up to the Paris COP 2015.

Partners: C40 Cities

Possible partners: ICLEI, UN Habitat, World Bank/IFC, IDB, AfDB,

Emerging Market Green City Bonds

China Green City Bonds

This project will support the development of a demonstration Green City Bond program in selected Chinese cities.

It will build on work done for the State Council DRC on 'How to grow a green bonds market in China'.

Partner: UNDP, C40, IISD

Possible partners: State Council DRC, China Banking Regulation Commission.

Aim:
demonstrate to city leaderships that there is capital available in the low carbon market if they develop a pipeline of projects.



www.climatebonds.net

 @ClimateBonds