

In partnership with:

Center for Finance and Development, Tsinghua National Institute of Financial Research
清华大学国家金融研究院金融与发展研究中心

Green Finance Committee (GFC) of the China Society for Finance and Banking
中国金融学会绿色金融专业委员会

Bloomberg New Energy Finance 彭博新能源财经

Supporting organizations:

Lujiazui Green Finance Development Committee 陆家嘴金融城理事会绿色金融专业委员会

Shenzhen Green Finance Committee 深圳经济特区金融学会绿色金融专业委员会

Sixth Annual Green Bank Congress

**Green Banks, Green Funds and Green Public-Private Partnerships:
Exploring Effective Tools to Mobilize Private Investment in
Low Carbon Climate Resilient Infrastructure**

November 29, 2018

Ritz-Carlton Pudong in Shanghai, China

Welcome

As co-hosts of the Sixth Annual Green Bank Congress, the Clean Energy Finance Corporation of Australia and the Green Investment Group would like to welcome you to this year's event in Shanghai. It is an exciting time for clean energy financing markets globally, as the Green Bank Network (GBN) members continue to navigate new opportunities, shifting political climates and growing demand for clean energy resources.

The IPCC's fall 2018 report finds that if the 1.5°C goal is to be met, investments in low-carbon energy technology and energy efficiency will need to increase by roughly a factor of five by 2050 compared with 2015 levels. This will require an unprecedented mobilization and redirection of domestic and international capital. The strategies adopted will need to be scalable and are likely to call for new financial instruments that promote and engage the clean energy agenda. Stable and effective enabling environments will have to be put in place that are nevertheless sufficiently flexible to account for rapid change.

Green Banks (sometimes structured as green finance facilities or green development funds) are an important mechanism for facilitating the climate finance imperative and market transformation demanded by the Paris Agreement, while delivering multiple SDG-focused benefits to governments and companies. Against this backdrop, the Sixth Annual Green Bank Congress provides an exciting opportunity to understand the success stories and the lessons learned by the growing collective of Green Banks around the world, which are mobilizing on average more than 3 times public capital invested while generating sufficient profits to sustain and grow their own operations.

As founding members of the Green Bank Network, we are pleased to be at the forefront of global clean energy financing trends, working to expand market opportunities for those who seek promising returns on sustainable investments. The 2018 Green Bank Congress will focus on several themes central to the role of Green Banks in mobilizing resources and increasing climate finance investment including:

- Green Banks in the broader landscape of climate finance players
- Strategies for Green Bank design and capitalization
- Different models used by Green Banks to deploy capital
- Potential regional strategies to aggregate, leverage and accelerate climate finance

On 17 August 2017, the UK Green Investment Bank became part of Macquarie Group, and was renamed as the Green Investment Group (GIG). Over GIG's first year, we mobilized over £1.6 billion of new investment in green energy infrastructure; expanded our global footprint with our first investments in North America, Asia and mainland Europe; and extended our reach into new technologies.

The financial year ended 30 June 2018 marked the CEFC's fifth full year of operations, during which we committed AUD 2.3 billion to 39 projects with a total value of more than AUD \$6 billion. Our commitments included \$1.1 billion in renewable energy, \$939 million in energy efficiency, \$100 million in transport and \$127 million in waste-related projects.

In five years of investing, our commitments have now contributed to clean energy projects Australia-wide, with a total project value of \$19 billion. We have directly invested in more than 110 individual transactions and delivered finance for more than 5,500 smaller-scale clean energy projects that collectively are estimated to deliver lifetime cuts in greenhouse gas emissions of more than 190 million tonnes of CO₂-e.

We'd like to thank each of you for attending the conference and bringing your expertise to our gathering. Throughout this conference, we welcome your participation and engagement as we collectively explore the future of clean energy financing markets in the Asia Pacific region, and around the world.

欢迎致辞

作为第六届绿色银行大会的共同主办方，澳大利亚清洁能源金融公司和绿色投资集团欢迎您参加今年在上海举办的活动。对于全球清洁能源融资市场来说，这是一个激动人心的时刻，因为绿色银行网络（GBN）的成员在继续寻找新的机会，不断改进政治气候和应对持续增长的清洁能源需求。

政府间气候变化专门委员会（IPCC）2018年发布的特别报告表明，如果要想实现全球升温控制在1.5°C的艰巨目标，那么与2015年的水平相比，2050年时全世界低碳能源技术和能源效率的投资需要增加大约五倍。这意味着我们需要前所未有的动员和资本重新定向。在短期内，必须调整和扩展发展战略，部署新的金融工具以使用更加创新的方式分摊风险。同时，我们必须建立稳定有效的扶持环境，这些环境也必须足够灵活，以快速应对变化。

绿色银行（也被定义为绿色金融设施或绿色发展基金）是在《巴黎协定》要求下，实现气候融资雄心和市场转型的重要机制，同时为政府和公司提供多种以针对可持续发展目标的利益。在此背景下，第六届绿色银行大会提供了一个令人振奋的机会，让您了解世界各地不断增长的绿色银行的成功故事和经验教训。这些集团虽然资本基础有限，但是他们运作的资本是公共资本投资的三倍以上，同时产生足够的利润来维持和发展自己的业务。

作为绿色银行网络的创始成员，我们很高兴能够站在全球清洁能源融资趋势的最前沿，致力于为那些寻求可持续投资带来可观回报的人们扩大市场机会。2018年绿色银行大会将重点关注绿色银行在调动资源和增加气候融资投资方面的作用的几个主题，包括：

- 绿色银行在整个气候融资领域中扮演的角色
- 绿色银行设计和资本化的战略
- 绿色银行部署资本的不同模式
- 能够整合、撬动和加速气候融资的潜在区域性合作伙伴关系

我们要感谢参加这次会议每一位嘉宾，因为你们，我们才得以获得这些专业知识。在本次会议期间，我们欢迎您的参与和协助，从而让我们得以共同探索各自地区乃至全球清洁能源融资市场的未来。



Sixth Annual Green Bank Congress

9:00am – 9:10am	Introductory Remarks: Green Bank Network secretariat
9:10am – 9:35am	Keynote presentations: Gavin Templeton, Green Investment Group Andrew Jauncey, Clean Energy Finance Corporation Jun Ma, Tsinghua National Institute of Financial Research Ye Yanfei, Director General, Research Bureau of the CBIRC
9:35am – 9:45am	Setting the Stage: Trends in Green Finance in Asia Pacific Kobad Bhavnagri, Head of APAC Economics & Policy, Bloomberg NEF

Morning Sessions: Green Banks and the Green Finance Landscape

9:45am – 11:00am	Green Bank Tools of the Trade: Leading through demonstration, co-investment, aggregation and risk mitigation Members of the Green Bank Network present and discuss the impacts of the model so far and prospects for the future. <i>panelists:</i> Kevin Holmes, Clean Energy Finance Corporation Gavin Templeton, Green Investment Group Bert Hunter, CT Green Bank Takejiro Sueyoshi, Green Finance Organisation, Japan Syed Ahmad Syed Mustafa, Green Tech Malaysia <i>moderator:</i> Sarah Dougherty, Natural Resources Defense Council
11:00am – 11:15pm	Coffee & Tea/Networking Break
11:15am – 12:30pm	MDBs in the Green Finance “Eco-system”: How development financial institutions and the public and private finance sectors work together to meet green finance goals Global green finance practitioners delve into the issues of capitalization of Green Banks and Green Funds, delivery of technical assistance and effective forms of co-investment and de-risking, while exploring the complementary roles of the public and private sectors in meeting the investment imperative. <i>panelists:</i> Cyrille Bellier, Agence Française de Développement (AFD) Leo Park, Green Climate Fund Christophe de Gouvello, World Bank Enrique Nieto, Inter-American Development Bank Naeeda Crishna Morgado, OECD Sergio Suchodolski, New Development Bank <i>moderator:</i> Douglass Sims, Natural Resources Defense Council
12:30pm – 12:45pm	Afternoon Keynote: Green Bank Design Summit Paul Bodnar, Rocky Mountain Institute: Launch of the Green Bank Design Summit in 2019, a new program to support developing countries interested in forming Green Banks
12:45pm – 2:00pm	Lunch

Afternoon Sessions: Two Parallel Tracks

Track 1: Green Banks and their Role in Financing Low-Carbon Technology

Track 2: Bringing the Green Bank model to New Countries

TRACK 1: GREEN BANKS AND THEIR ROLE IN FINANCING LOW-CARBON TECHNOLOGY

2:00pm – 3:30pm

Session 1.1: Green Banks and Financing Energy Efficiency and Renewables in Industry and Buildings

Green Banks and other practitioners unpack strategies for scaling financing of energy efficiency and renewables in industrial applications and buildings

panelists:

Jeff Diehl, Rhode Island Infrastructure Bank

Carolyn Szum, Lawrence Berkeley National Laboratory

Teimour Bagirov, Ukrgasbank

Dr. An Guojun, Green Finance Committee of China Society for Finance and Banking

Bettina Bergöö, Natural Resources Defense Council

Jianxun Zhao, Industrial Bank

moderator: Bert Hunter, Connecticut Green Bank

3:30pm – 4:00pm

Coffee & Tea/Networking Break

4:00pm – 5:30pm

Session 1.2: Green Banks and Financing Mobility, Storage and other Emerging Technologies

Green Banks and other practitioners report out on progress launching key emerging low-carbon technologies such as EVs, storage and micro-grids.

panelists:

Andrew Jauncey, Clean Energy Finance Corporation

Syed Ahmad Syed Mustafa, Green Tech Malaysia

Annie Zhou, U.S.-China Green Fund

Leitian Chen, Shanghai Anyo Energy Efficiency Technology Co., Ltd.

Yvonne Yujing Liu, Bloomberg NEF

moderator: Rob Youngs, Coalition for Green Capital

TRACK 2: BRINGING THE GREEN BANK MODEL TO NEW COUNTRIES

2:00pm – 3:30pm

Session 2.1: Adapting the Green Bank Model to New Countries

Practitioners from Africa, Asia, Europe and Latin America highlight their strategies, challenges and progress in launching new Green Banks.

panelists:

Muhammed Sayed, Development Bank of Southern Africa

Victor Edward, PT-SMI Indonesia

Carlos Berner, CORFO Chile

Juan Carlos Martinez, Banobras Mexico

Naidalaa Badrakh, Mongolian Sustainable Finance Association

Pankaj Sindwani, Tata Cleantech Capital Limited

special remarks: Ilmi Granoff, ClimateWorks Foundation

moderator: Andres Colnes, Coalition for Green Capital

3:30pm – 4:00pm

Coffee & Tea/Networking Break

4:00pm – 5:30pm

Session 2.2: The Emergence of Green Zones and Green Funds in China

Green finance practitioners spotlight sub-national innovation in green finance in China.

panelists:

Dr. Lan, Hong, Green Finance Port in Guiyang New Area, Renming University

Sun Xiao, Chairman, Maanshan Rural Bank

Wang Xue, Agricultural Bank of China and Xiongan Green Fund

Alexandra Tracey, Hoiping Ventures

Helen He, International Finance Corporation

moderator: Gavin Templeton, Green Investment Group

5:30pm – 6:30pm

Cocktail Reception

欢迎致辞和主题演讲

9:00am – 9:10am	欢迎致辞： 绿色银行网络秘书长
9:10am – 9:35am	主题演讲： Gavin Templeton, 英国绿色投资集团 (GIG) Andrew Jauncey, 澳大利亚清洁能源金融公司 (CEFC) 马骏, 清华大学国家金融研究院金融与发展研究中心 叶燕斐, 中国银行保险监督管理委员会政策研究局巡视员
9:35am – 9:45am	亚太地区绿色金融趋势 Kobad Bhavnagri, 彭博新能源财经亚太区经济与政策负责人

上午环节：绿色银行和绿色金融概况

9:45am – 11:00am	绿色银行的贸易工具：示范、共同投资、聚合和风险缓解 绿色银行网络成员介绍并讨论当前模式的成果和未来发展。 讨论嘉宾： Kevin Holmes, 澳大利亚清洁能源金融公司 (CEFC) Gavin Templeton, 英国绿色投资集团 Bert Hunter, 康涅狄格州绿色银行 Takejiro Sueyoshi, 日本绿色金融组织 Syed Ahmad Syed Mustafa, 马来西亚绿色科技公司 主持人：Sarah Dougherty, 保护协会 (NRDC)
11:00am – 11:15pm	茶歇/交流
11:15am – 12:30pm	绿色金融“生态系统”中的多边开发银行：发展金融机构以及公共和私人金融部门如何共同努力实现绿色金融目标 全球绿色金融从业者深入研究绿色银行和绿色基金的资本化问题，提供技术援助和有效的共同投资并降低风险，同时探索公共和私营部门在满足投资需求方面的互补作用。 讨论嘉宾： Cyrille Bellier, 法国开发署 Leo Park, 绿色气候基金 Christophe de Gouvello, 世界银行 Enrique Nieto, 美洲开发银行 Naeeda Crishna Morgado, 经济合作与发展组织 主持人：Douglass Sims, 自然资源保护协会 (NRDC)
12:30pm – 12:45pm	下午主题演讲：绿色银行设计峰会 Paul Bodnar, 落基山研究所 (RMI)：2019年启动绿色银行设计峰会，这是一项支持发展中国家绿色银行发展的新计划。
12:45pm – 2:00pm	午餐

下午：平行分论坛

分论坛 1: 绿色银行及其在低碳技术融资中的作用

2:00pm – 3:30pm	<p>主题 1.1: 绿色银行与工业和建筑业的能效提升和可再生能源融资 绿色银行和其他从业者解决工业和建筑节能和可再生能源融资的战略</p> <p>讨论嘉宾： Jeff Diehl, 美国罗德岛基础设施银行 Carolyn Szum, 劳伦斯伯克利国家实验室（受邀） Teimour Bagirov, Ukrgasbank 安国俊, 中国金融学会绿色金融专业委员会 Bettina Bergoo, 自然资源保护协会 (NRDC) 赵建勋, 兴业银行绿色金融部 主持人: Bert Hunter</p>
3:30pm – 4:00pm	茶歇/交流
4:00pm – 5:30pm	<p>主题 1.2: 绿色银行和电动汽车、清洁能源、储能和其他新兴技术发展 绿色银行和其他从业者分享支持低碳科技成果，如电动汽车、储能以及微电网。</p> <p>讨论嘉宾： Andrew Jauncey, 清洁能源金融集团 Syed Ahmad Syed Mustafa, 马来西亚绿色科技 梁周洋, 中美绿色基金 陈雷田, 上海安悦节能技术有限公司 刘雨菁, 彭博新能源财经 (BNEF) 主持人: Rob Youngs, 绿色资本联盟 (CGC)</p>

分论坛2: 如何将绿色银行模式引入新兴国家和地区

2:00pm – 3:30pm	<p>主题 2.1: 发展中国家绿色银行的模式与经验 来自非洲、亚洲、欧洲和拉丁美洲的从业者分享他们在发展绿色银行方面的战略、挑战和成绩。</p> <p>讨论嘉宾： Muhammed Sayed, 南非发展银行 Victor Edward, 印度尼西亚PT-SMI Carlos Berner, 智利经济发展局 Juan Carlos Martinez, 墨西哥国家公共工程和服务银行 Naidalaa Badrakh, 蒙古国可持续金融协会 Pankaj Sindwani, 塔塔清洁技术资本有限公司 特别嘉宾： Ilmi Granoff, 气候工作基金会 主持人: Andres Colnes, 绿色资本联盟 (CGC)</p>
3:30pm – 4:00pm	茶歇/交流
4:00pm – 5:30pm	<p>主题 2.2: 中国绿色区域和绿色基金的兴起 绿色金融从业者聚焦中国各地方绿色金融的创新实践。</p> <p>小组讨论成员： 蓝虹, 贵阳新区绿色金融港副主任, 人民大学教授 孙晓, 马鞍山农商银行董事长 王雪, 中国农业银行副行长兼雄安分行副行长 Alexandra Tracey, 海平创业 (Hoiping Ventures) Helen He, 国际金融集团 (IFC) 主持人: Gavin Templeton, 英国绿色投资集团</p>

5:30pm – 6:30pm	招待酒会
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About the Green Bank Network

GREEN BANK NETWORK

Green Bank Network (GBN) is a membership organization formed to foster collaboration and knowledge exchange among existing Green Banks, enabling them to share best practices and lessons learned. The GBN also serves as a source of knowledge and a network for jurisdictions that seek to establish a Green Bank.

The Green Bank Network was launched in Paris at COP21 in December 2015, by the UK Green Investment Bank, the Australian Clean Energy Finance Corporation, the Japan Green Finance Organisation, Malaysia Green Technology Corporation the Connecticut Green Bank and New York Green Bank. The Green Bank Network is supported by two non-profit organizations, the Natural Resource Defense Council (NRDC) and the Coalition for Green Capital (CGC), with funding from ClimateWorks Foundation.

The Green Bank Network collects, organizes and shares Green Bank know-how through virtual and in-person platforms to facilitate the exchange of information. Over time, the GBN seeks to increase the flow of capital to low carbon, climate resilient infrastructure by helping private sector investors and developers partner with Green Banks; driving standardization of deal structures, contracts and metrics; increasing visibility and transparency of Green Banks; and tracking progress made with key indicators. In conjunction with the ongoing progress within individual Green Banks, these activities will increase the scale, scope and efficiency of low carbon, climate resilient infrastructure finance.

关于绿色银行网络：

绿色银行网络（GBN）是一家面向绿色银行的国际会员制平台组织，旨在促进现有绿色银行之间的合作和知识交流，分享最佳实践和经验教训，并为建立新的绿色银行提供知识和支持网络。

GBN于2015年12月在巴黎COP21期间成立，发起单位包括英国绿色投资银行，澳大利亚清洁能源金融公司，日本绿色金融组织，马来西亚绿色科技公司，美国康涅狄格绿色银行和纽约绿色银行。GBN由自然资源保护协会（NRDC）和绿色资本联盟（CGC）两个非营利组织支持，并作为秘书单位。气候工作基金会为GBN的资助方。

GBN通过收集、组织和分享绿色银行的专有技术促进信息交流，通过帮助私营部门投资者和开发商与绿色银行合作，增加资金流向低碳和气候适应性基础设施，推动交易结构、合同和指标的标准化，提高绿色银行的知名度和透明度，并跟踪关键指标的进展情况。结合各个绿色银行的持续发展，这些活动将增加低碳、气候适应性基础设施的融资规模、范围和效率。

Green Bank Network Secretariat



CGC

The Coalition for Green Capital's (CGC) mission is to drive greater clean energy and low-carbon investment into existing and new markets with the goal of creating low-carbon economies and a 100% clean energy platform. CGC, a 501c3 non-profit, is a leading expert and implementer of Green Banks, with a decade of work around the world that has led to over \$2 billion of clean energy investment.

There is an enormous opportunity and need to increase climate-related investment by connecting abundant capital with untapped and underserved markets and technologies. To realize this opportunity, CGC incubates local clean energy finance institutions – often called Green Banks – and structures public, private and mission-driven capital for investment through those organizations. A large network of local clean energy finance organizations, such as Green Banks, can access hard-to-reach projects, expand clean energy equity, and provide a scalable model for a thriving network for clean energy and low-carbon investment.



NRDC

The Natural Resources Defense Council (NRDC) works to safeguard the earth—its people, its plants and animals, and the natural systems on which all life depends. NRDC combines the power of more than two million members and online activists with the expertise of some 500 scientists, lawyers, and policy advocates across the globe to ensure the rights of all people to the air, the water, and the wild.

Within NRDC, the Center for Market Innovation (CMI) is accelerating the shift to a greener, more prosperous economy that benefits everyone. We aim to implement new approaches to finance and investment that offer strong profit potential and increased opportunity for people of all income levels. Our experts collaborate with private- and public-sector leaders to accelerate the adoption of more resilient, inclusive, and efficient investment models.

Green Bank Network Members



Established by the Clean Energy Finance Corporation Act of 2012, the Australian Clean Energy Finance Corporation (CEFC) invests commercially to increase the flow of funds into renewable energy, energy efficiency, and low-emissions technologies. It is an independently managed government institution that operates like a traditional financier. The CEFC's mission is to accelerate Australia's transformation toward a more competitive economy by acting as a catalyst to increase investment in emissions reduction.



The first Green Bank in the U.S., the Connecticut Green Bank (CGB) is a quasi-public corporation established in 2011 as part of the Connecticut Legislature's Public Act 11-80, an act concerning the establishment of the Department of Energy and Environmental Protection and Planning for Connecticut's clean energy future. The CGB was established to develop and implement strategies to lower the cost of clean energy in order to make it more accessible and affordable to consumers in the residential, commercial, and industrial sectors.



Japan's Green Fund commenced operations in July 2013 after the Environment Minister announced the Finance Initiative to Build a Low-Carbon Society, which highlighted the need for using private capital for measures tackling global warming, in January of that year. The Green Fund is governed by the Green Finance Organization, and its objective is to solidify the business case of small-to large-scale clean energy projects by making equity and mezzanine investments that attract further capital from private sources.



The Malaysian Green Technology Corporation (GreenTech Malaysia) is an organization under the purview of the Ministry of Energy, Green Technology and Water, Malaysia (KeTTHA), charged with catalyzing green technology deployment as a strategic engine for socio-economic growth in Malaysia in line with the National Green Technology Policy 2009.



NY Green Bank (NYGB) is a state-sponsored specialized financial entity whose mission is to accelerate clean energy deployment in New York State by working with the private sector to transform financing markets. The US\$1.0 billion fund was launched in 2014 and works with the private sector to alleviate financing gaps and barriers in New York's clean energy markets. NYGB is one of the main pillars of Governor Andrew M. Cuomo's Reforming the Energy Vision (REV) strategy to enable the development of new energy products and services, protect the environment and create new jobs and economic opportunity throughout New York State.



Green Investment Group was launched initially by the UK Government in 2012 as the first institution of its type in the world. The organization was acquired by Macquarie Group in 2017, creating one of Europe's largest teams of dedicated green infrastructure investors, and now operates under the name Green Investment Group (GIG).

GIG is a specialist in green infrastructure principal investment, project delivery and the management of portfolio assets, and related services. Its track record, expertise and capability make it a global leader in green investment, dedicated to supporting the growth of the global green economy.

绿色银行网络成员：



澳大利亚清洁能源金融公司（CEFC）根据2012年清洁能源金融公司法案建立，进行商业投资，以增加资金流入可再生能源、能源效率和低排放技术领域。它是一个独立管理的政府机构，与传统的金融体运作相似。CEFC的使命是通过充当促进减排投资的催化剂，加速澳大利亚向更具竞争力的经济转型。



美国第一家绿色银行，康涅狄格州绿色银行（CGB），是一家准公立公司，成立于2011年，是康涅狄格州立法机关公共法案11-80的一部分。该法案涉及建立能源和环境保护部以及规划康涅狄格州的清洁能源未来。CGB旨在制定和实施降低清洁能源成本战略，以使住宅、商业和工业部门的消费者更容易获得可负担的清洁能源。



在2013年日本环境部长宣布了建设低碳社会的金融倡议之后，日本绿色基金于同年7月开始运作。该倡议强调需要使用私人资本来应对全球变暖的措施。日本绿色基金由绿色金融组织管理，其目标是通过公平和夹层投资来巩固小型到大型清洁能源项目的商业案例，从而吸引私人部门的进一步投资。



马来西亚绿色技术公司（GreenTech Malaysia）是马来西亚能源部、绿色技术和水务部（KeTTHA）下的一个组织，响应2009年国家绿色技术政策，作为马来西亚社会经济增长的战略引擎，以推动绿色技术部署。



纽约绿色银行（NYGB）是一家由国家资助的专业金融机构，其任务是通过与私营部门合作改善融资市场，加速纽约州的清洁能源部署。这项耗资10亿美元的基金于2014年启动，与私营部门合作，以缓解纽约清洁能源市场的资本缺口和障碍。NYGB是州长Andrew M. Cuomo改革能源愿景（REV）战略的主要支柱之一，该战略旨在促进新能源产品和服务的开发，保护环境并在纽约州创造新的就业机会和经济机会。



英国绿色投资银行（GIB）于2012年在英国成立，作为其标志性的公私融资实体或“绿色银行”。GIB是绿色银行网络的创始成员，直至2017年4月由英国政府全资拥有。私有化后更名为绿色投资集团（GIG）。GIG资助了在英国建立新的、现代化的绿色基础设施。GIG的盈利能力是向其他投资者发出的重要信号，有助于吸引新投资者和更高水平的投资到英国绿色基础设施。