

# The Lab Innovation Summit

20<sup>th</sup> September 2017

## *Participant Pack*

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*A meeting organized by Climate Policy Initiative on behalf of the Lab, and  
generously hosted by Willis Towers Watson at:*

*335 Madison Ave, New York, NY 10017 New York, NY USA*



**Global** Innovation Lab  
for Climate Finance

**India** Innovation Lab  
for Green Finance

**Brasil** Innovation Lab  
for Climate Finance

**Fire Awards** for  
Sustainable Investment

# Summit Overview

As the Lab prepares to launch a new round of transformative investment vehicles, Climate Policy Initiative and Willis Towers Watson are delighted to present and host the Lab's first ever Innovation Summit at 14:30, on 20<sup>th</sup> September 2017 in New York City.

The Summit will convene Lab Members, innovators, and valued investment partners from the greater Lab network to highlight opportunities for sustainable investment and impact in renewable energy, energy efficiency, climate-smart agriculture, and climate resilience projects around the world. It will also celebrate the rapid progress made by the Global Innovation Lab for Climate Finance in its first three cycles, during which endorsed Lab instruments have collectively raised nearly USD 1B in seed funding.

## Summit Agenda

<b>14:30 – 15:00</b>	<b>Arrival &amp; coffee</b>	<b>All</b>
<b>15:00 – 15:15</b>	<b>Welcome &amp; opening key-note</b>	<ul style="list-style-type: none"> <li>• <b>Rowan Douglas CBE (Willis)</b></li> <li>• <b>Dr. Barbara Buchner (CPI)</b></li> </ul>
<b>15:15 – 15:30</b>	<b>Impact Trailblazers</b>	
	Climate Smart Lending Platform	Mark Ellis-Jones (F3 Life)
	Water Financing Facility	Hein Gietema (WFF)
	Proterra Electric Bus Battery Service Agreements	Alan Westenskow (Proterra)
<b>15:30 – 16:00</b>	<b>Launchpad Pitch Series</b>	
	Climate-smart Cattle Ranching	Deborah Froeb (NatureVest)
	Cloud Forest Blue Energy Mechanism	<ul style="list-style-type: none"> <li>• Romas Garbaliuskas (Conservation International)</li> <li>• Justus Raepple (NatureVest)</li> </ul>
	Climate Resilience and Adaptation Finance and Technology Transfer Facility	<ul style="list-style-type: none"> <li>• Jay Koh (Lightsmith Group)</li> <li>• Sanjay Wagle (Lightsmith Group)</li> </ul>
	Green FIDC	Paulo Todaro (Albion Capital)
	Distributed Generation for Cooperatives	Pedro Mallman (Renobrax)
	Renewable Energy Scale-up Facility	<ul style="list-style-type: none"> <li>• Luis Costa (Get2C)</li> <li>• Geoff Sinclair (CAMCO)</li> </ul>
<b>16:00 – 17:00</b>	<b>Innovation Hub Roundtables*</b>	<b>All</b>
<b>17:00 – 18:00</b>	<b>Reception</b>	<b>All</b>

\*See next page for further details.

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# Innovation Hub Roundtables

The Innovation Hub Roundtables aim to build on presentations during the first hour of the Summit by providing participants an opportunity to engage in more targeted discussions surrounding key challenges and opportunities within specific areas of interest, as outlined below.

During this session, Climate Policy Initiative will help moderate two 25-minute discussions among 2-3 innovators and 5-6 Summit participants at each roundtable (with a table rotation at the halfway point), seeking to foster insight and lesson-sharing from all group members.

Following the Innovation Hub Roundtables, we invite participants to continue discussions over hors d'oeuvres and wine, during a more informal networking reception before the close of the Summit.

## Roundtable Themes & Instruments of Focus

### 1 *Investing in Climate-smart Agriculture*

- Climate-smart Lending Platform
- Climate-smart Cattle Ranching

### 2 *Catalyzing Markets for Adaptation & Resilience*

- Climate Resilience & Adaptation Finance & Technology Transfer Facility (CRAFT)
- Oasis Platform for Catastrophe & Climate Change Risk Assessment & Adaptation

### 3 *De-Risking Renewable Energy*

- Climate Investor One
- Renewable Energy Scale-up Facility

### 4 *Advancing Energy Efficiency*

- Energy Efficiency Enabling Initiative
- Energy Savings Insurance

### 5 *Financing Resilient Infrastructure*

- Cloud Forest Blue Energy Mechanism
- Water Financing Facility

### 6 *Capital Market Instruments for Clean Energy*

- Green FIDC
- Sustainable Energy Bonds

### 7 *Leasing Models for Sustainable Generation & Transit*

- Distributed Generation for Cooperatives
- Proterra

### 8 *Platforms for Accelerating Institutional Investment*

- Developing Harmonized Metrics for PAYG Solar
- The Matchmaker Service

### 9 *Scaling Solar through Securitization*

- Rooftop Solar Financing Facility
- SunSHIFT Asset Financing Facility

# Instrument Directory

## ADAPTATION

p.	Name	Lead organization	Type	Status
7	<b>Climate Resilience and Adaptation Finance &amp; Technology Transfer Facility</b>	The Lightsmith Group	Global Fund	Fundraising
8	<b>Cloud Forest Blue Energy Mechanism</b>	Conservation International & NatureVest	Pay for Success	Concept
9	<b>Climate-Smart Lending Platform</b>	F3 Life	Global Platform	Fundraising
10	<b>Oasis Platform for Catastrophe &amp; Climate Change Risk Assessment &amp; Adaptation</b>	Oasis Hub, Oasis Loss Modelling Framework	Global Platform	In Action
11	<b>Water Financing Facility</b>	Water Financing Facility	National Facilities	In Action

## MITIGATION

p.	Name	Lead organization	Type	Status
13	<b>Climate-Smart Cattle Ranching</b>	The Nature Conservancy	Platform	Fundraising
14	<b>Developing Harmonized Metrics for PAYG Solar</b>	The World Bank	Enabling Infrastruct.	In Action
15	<b>Distributed Generation fo Cooperatives</b>	Renobrax	Platform	Fundraising

# Instrument Directory

MITIGATION				
p.	Name	Lead organization	Type	Status
16	<b>Energy Efficiency Enabling Initiative</b>	MGM Innova Capital	LatAm. Fund	Fundraising for Fund II
17	<b>Energy Savings Insurance</b>	IDB	Insurance	In Action
18	<b>Foreign Exchange Hedging Facility</b>	RR Corporate	Hedging Facility	Fundraising
 19	<b>Green Receivables Fund</b>	Albion Capital, Get2C	Asset Backed Security	Fundraising
 20	<b>Proterra Electric Bus Battery Service Agreements</b>	Proterra	USA Facility	In Action
 21	<b>Renewable Energy Scale-up Facility</b>	Baker Mckenzie, Get2C	RE Fund	Fundraising
22	<b>Rooftop Solar Private Sector Financing Facility</b>	IFC	Indian Facility	Fundraising
23	<b>SunSHIFT Solar Asset Financing Facility</b>	SunSHIFT	Facility	Fundraising
24	<b>Sustainable Energy Bonds</b>	cKers	Green Bonds	Concept
25	<b>The Matchmaker Service</b>	CDP	Platform	Concept

 2017 Lab Trailblazer

 2017 Expected Global Lab Endorsement

 2017 Expected Brasil Lab Endorsement

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# Adaptation



# Climate Resilience & Adaptation Finance & Technology Transfer Facility (CRAFT)

## Overview

### Type

Private Equity Fund

### Focus

Adaptation

### Geography

Global

### Stage

Fundraising

### Endorsement

Expected Fall 2017

**CRAFT will be the first dedicated commercial investment vehicle to focus on expanding the availability of technologies and solutions for climate adaptation and resilience.**

As a growth equity fund, CRAFT will invest in 10-20 companies which have proven technologies and solutions for climate resilience. They will be located in both developed and developing countries and will have demonstrated market potential. Through its investments, the fund will help companies – like weather analytics, catastrophe risk modeling, drip irrigation, and drought resistant crop companies – expand into new sectors and territories, and transfer technology from developed to developing countries.

## Impact

For every one dollar of concessional financing and technical assistance grants, CRAFT will leverage 3.3 dollars of direct commercial investment to enhance the resilience of communities, businesses, and critical infrastructure.

By making the business case for investment in climate resilience, the Fund will also help catalyze a global market for climate resilient products and services; promote climate resilient development; and contribute to rapidly evolving resilience standards and metrics.

## Summit Team



### Jay Koh

Managing Director  
The Lightsmith Group



### Sanjay Wagle

Managing Director  
The Lightsmith Group

## Investment Opportunities

Type	Role of capital	Amt.
<b>Non-Conc. Equity</b>	Commercial returns-oriented investment into developed & developing countries	\$400M
<b>Conc. equity</b>	De-risk private investment in developing countries	\$100M
<b>Grant</b>	Technical Assistance to help transfer technology in developing countries	\$20M



# Climate-Smart Lending Platform (CSLP)

## Overview

**Type**  
Platform

**Focus**  
Adaptation

**Geography**  
Global

**Stage**  
Fundraising

**Endorsement**  
Fall 2016

The Climate-Smart Lending Platform brings together the tools, actors, and finance to scale up climate-smart agricultural (CSA) lending to smallholders and reduce climate-related default risk.

The Platform works with lenders to design credit products that incentivize smallholders to adopt climate-smart farming methods. Compliance with the loan terms is monitored using a low-cost, mobile-based monitoring system. The Platform's goal is to see CSA metrics widely incorporated into smallholder lending, leading to:

- Agricultural lending portfolios resilient to climate change
- Strong incentives for farmers to adopt CSA practices
- Increased private lending to smallholders

## Impact

Illustrative modelling suggests that farmers who adopt CSA practices could achieve between 2- 4 times higher profits under adverse weather conditions compared to less resilient farmers.

Adoption of CSA practices can considerably increase farmer incomes and reduce losses during climate events, which in turn reduces credit providers' exposure to climate-related default among smallholders.

CSLP targets a market with USD 200 billion potential.

## Summit Team



**Mark Ellis-Jones**  
Co-Founder  
F3 Life

## Investment Opportunities

Type	Role of capital	Amt.
<b>Conc. Loans</b>	For first mover credit-providers demonstrating new climate-smart lending methodologies	\$18.7M
<b>Grant</b>	Farmer TA, project development, first loss guarantees and platform management	\$12.7M

# Cloud Forest Blue Energy Mechanism

## Overview

### Type

Pay for Success

### Focus

Adaptation

### Geography

Developing Countries

### Stage

In Development

### Endorsement

Expected Fall 2017

The Cloud Forest Blue Energy Mechanism will engage hydropower operators in Latin America to pay for upstream forest conservation and restoration through a new “pay for success” model.

Cloud Forest Blue Energy Mechanism aims to mobilize commercial finance to reforest and conserve cloud forests in developing countries. It uses an innovative “pay-for-success” financing technique whereby a hydropower company pays for the measurable ecosystem benefits - such as reduced sedimentation, increased water flow, and improved water regulation - that are provided by cloud forests within the plant's catchment area.

## Impact

The Mechanism increases both the profitability and sustainability of hydropower operations as it brings together environmental valuation methods and pay-for-success financing to implement sediment management operations improving water and energy security.

Initially, the Mechanism targets the restoration of 60 million hectares of cloud forest in Latin America: sequestering 2.4 GT of CO<sub>2</sub>, reducing communities' exposure to extreme climate events, and improving water and energy security.

## Summit Team



### Justus Raepple

New Product Development  
NatureVest, TNC



### Romas Garbaliuskas

Senior Director  
Conservation International

## Investment Opportunities

Type	Role of capital	Amt.
Grant	Funding for research and development activities	\$1M
Equity	Investment in three projects at different locations	~\$15M
Debt	Investment in three projects at different locations	~\$15M

# Oasis Platform for Catastrophe & Climate Change Risk Assessment & Adaptation

## Overview

### Type

Platform

### Focus

Adaptation

### Geography

Asia, Global

### Stage

In Action

### Endorsement

Summer 2016

By providing access to transparent and standardized analytics, the Oasis Platform aims to improve understanding and management of climate-related risks, thereby facilitating investments in insurance and/or risk reduction.

The Oasis Platform will achieve its aim through three main elements: a loss modeling framework, an e-market, and capacity building. Together they offer a comprehensive and transparent approach for analyzing and pricing risk, or for understanding costs from extreme events. The Platform could strengthen climate resilience by helping to narrow the gap between insured and uninsured losses, and extending the use of catastrophe risk modelling beyond the insurance industry for risk-informed decision-making.

## Impact

In addition to strengthening climate resilience, the Platform could directly save re/insurers 25-50% in modeling costs, catalyze USD 1-9 million in new risk model development, and indirectly generate an estimated USD 1.4 to 6 billion investment in property insurance coverage.

The Platform launched its E-Market Oasis Hub in June 2017, and already has over 265 global datasets and 370 registrants on-site.

## Summit Team



### Tracy Irvine

Managing Director  
Oasis Hub



### Dickie Whitaker

Chief Executive  
Oasis Loss  
Modeling  
Framework

## Investment Opportunities

Type	Role of capital	Amt.
Grant	Resources for development to enable market uptake in three pilot countries	\$2M-\$6M
Grant	Continued Development of e-Market component into Asia and globally	\$1M
Equity	Investment	\$.65M



# Water Financing Facility (WFF)

## Overview

**Type**  
National Facility

**Focus**  
Adaptation

**Geography**  
Kenya, Indo., S. Af.

**Stage**  
In Action

**Endorsement**  
Summer 2016

**The Water Financing Facility (WFF) mobilizes domestic capital from institutional investors in developing countries to finance the infrastructure of creditworthy water utilities and assist the preservation of scarce water resources.**

The aim is to develop several National Water Financing Facilities (NWFFs), which can issue bonds in their domestic capital markets. These will provide long-term loans to public or private water utilities that have little or no access to commercial finance, or have access at unfavorable terms, such as short tenors. By pooling credit-worthy water utilities and projects, the bonds will have lower risk. This risk can be further reduced through mobilizing credit enhancements.

## Impact

WFF's target is to provide approximately 20 million people with sustainable access to safe water, adequate sanitation and hygiene by setting up NWFFs that lend around €1 billion to water and sanitation companies, enabling them to invest in water projects. These include measures which improve climate resilience in 5-8 countries, requiring €65 million from development partners for direct WFF contributions and credit enhancement services.

## Summit Team



**Hein Gietema**  
Funding &  
Structuring  
WFF



**Martin Baker**  
Legal & Org.  
Structuring  
WFF

## Investment Opportunities

Type	Role of capital	Amt.
Grant	Will support:	
	<ul style="list-style-type: none"> <li>WFF business development</li> <li>NWFFs set up &amp; project development</li> <li>Credit enhancement</li> <li>Technical assistance &amp; capacity building</li> <li>Viability gap funding</li> </ul>	\$65M

*\*In addition to the above de-risking capital in the form of first loss reserves and guarantees will be required.*

# Mitigation



# Climate Smart Cattle Ranching (CSCR)

## Overview

### Type

Platform

### Focus

Mitigation

### Geography

Brazil

### Stage

Fundraising

### Endorsement

Expected Fall 2017

**Climate Smart Cattle Ranching (CSCR) will increase the supply of deforestation-free beef from the Amazon by providing financial and technical assistance to ranchers that comply with the Brazilian Forest Code.**

CSCR is an innovative business model for cattle ranchers to adopt more sustainable and efficient practices. The initiative will establish a "New Company" to provide loans and technical assistance to ranchers on the condition that they adopt Embrapa's Good Agricultural Practices and comply with Brazil's Forest Code. Rather than land titles, traceable livestock will serve as guarantees to secure loans, using the newest monitoring technology to trace animal ownership. The company will also work collectively with beef producers to ensure consistent and standardized supply of meat.

## Impact

The Nature Conservancy has already implemented a similar sustainable cattle project by working with local producers in the state of Pará, which has some of the highest deforestation rates in Brazil. Restored pastures using sustainable techniques could see a 95% reduction in emissions intensity.

The New Company is planned to formally launch in March 2018, and aims to co-invest in 30 rural properties in the next two years, with scale up to 100 properties by 2022, covering potentially 300 thousand hectares and mobilizing USD 205 million in the state of Pará alone.

## Summit Team



### Deborah Froeb

Product Development Director  
NatureVest

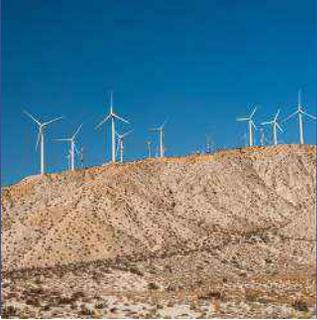


### Anna Lucia Horta

Senior Finance Manager  
The Nature Conservancy

## Investment Opportunities

Type	Role of capital	Amt.
<b>Grant</b>	Pre-development funds for legal & planning to establish NewCo & develop initial contracts	\$500k
<b>DFI Equity</b>	Initial working capital to support company operations (i.e. contract development and implementation)	\$10M
<b>Conc. Equity</b>	Partial first loss capital to reduce for long term lenders to NewCo	\$15M
<b>Conc. Loans</b>	Long-term funding for NewCo commitments under sustainable intensification contracts	\$40M



# Climate Investor One (CIO)

## Overview

<b>Type</b>	<b>Climate Investor One (CIO) fast-tracks renewable energy projects in developing countries by combining three innovative investment facilities into a single, 'whole-of-life' financing solution for early-stage development, construction, and refinancing of assets.</b>
Fund	
<b>Focus</b>	
Mitigation	
<b>Geography</b>	
Developing Countries	
<b>Stage</b>	
In Action	
<b>Endorsement</b>	
Fall 2015	

## Impact

In June 2017, CIO announced first close at USD 412 million. It will direct this capital into approximately 20 renewable energy projects in the 25MW – 75MW range, usually considered too small for DFI's, but too large for local financial institutions to finance. By proxy of its investments, CIO will deliver ~1133MW of additional capacity and avoid the equivalent of 1.8 million tCO2 per annum. These projects will also be built with a significant reduction in costs, translating into a cheaper tariff for the end beneficiaries in developing countries. At full scale & when fully deployed, CIO will mobilize at least USD 2 billion in new private finance.

## Summit Team



**Andrew Johnstone**  
CEO  
Climate Investor One



**Georges Beukering**  
Director – Capital Raising & Bus. Development  
Climate Investor One

## Investment Opportunities

Type	Role of capital	Amt.
<b>Returnable Grant</b>	Funding for early-stage project development & junior equity at construction.	\$40M
<b>Mezz. Equity</b>	To finance the construction of assets. (3) x USD 25 million tickets available.	\$75M



# Developing Harmonized Metrics for PAYG Solar

## Overview

### Type

Enabling Infrastructure

### Focus

Mitigation

### Geography

Africa, Asia, LatAm

### Stage

In Action

### Fire Award

Spring 2016

**Developing Harmonized Metrics for PAYG Solar is an initiative to unlock access to commercial finance at scale for pay-as-you-go (PAYG) solar by developing industry-wide key performance indicators (KPIs) and standardized reporting.**

The project has established and rolled-out company and industry level KPIs to help unlock commercial finance for PAYG solar, a leading business model for distributed off-grid energy systems. Harmonized KPIs will enable (1) companies to better understand and manage portfolio health and business model performance, (2) financiers to identify investment opportunities and increase transparency on perceived and actual portfolio risk, (3) sector stakeholder to share and make better use of data for advanced analytics, and (4) public actors to improve enabling policy environments.

## Impact

By lowering transaction costs for investors assessing structured deals in the sector, harmonized metrics have the potential to enable the rapid scale of structured vehicles and unlock finance from untraditional investors

The finalized reporting framework of KPIs, including harmonized data management, was released by GOGLA and Lighting Global in February 2017. The team is currently finalizing an industry taxonomy and a DataPlaybook for PAYG companies, as well as several data research partnerships using machine learning and advanced analytics to surface industry trends.

## Summit Team



### Anna Lerner

Energy and ICT Specialist  
World Bank

## Investment Opportunities

Type	Role of capital	Amt.
To be announced.		

# Distributed Generation for Cooperatives (DGC)

## Overview

**Type**  
Platform

**Distributed Generation for Cooperatives (DGC) aims to scale up distributed renewable energy by partnering with cooperatives.**

**Focus**  
Mitigation

**Geography**  
Brazil

**Stage**  
Fundraising

**Endorsement**  
Expected Fall 2017

The instrument will combine a “Pay-per-use contract” with a “Two-part performance structure” – two elements that are absent in distributed energy financing in Brazil. The “Pay-per-use contract” will enable projects through a discounting arrangement, in which payments will match the energy savings from DG, thereby allowing cooperatives to reap the benefits of distributed generation systems without upfront costs or additional monthly expenses. The “Two-part performance structure” will link generation performance to payments, shifting generation risk from cooperatives to the fund without overstepping Brazilian regulatory restrictions.

## Impact

A pilot instrument is being developed in the state of Rio Grande do Sul in the south of Brazil, mobilizing USD 62 million and providing 23 MW of wind generation for 9 cooperatives.

The pilot, which is expected to be operational by mid-2018, will provide 10-20% savings for cooperatives compared with existing energy bills, and a 8-12% real return for commercial investors while reducing 470 thousand tons of CO<sub>2</sub>e.

## Summit Team



**Pedro Mallmann**  
Partner  
Renobrax



**Otávio Marshall**  
Director  
Renobrax

## Investment Opportunities

Type	Role of capital	Amt.
<b>Sponsor</b>	Start-up costs + alignment of interests	\$10M
<b>Non-Conc. Finance</b>	Permanent capital at market-level returns	\$25M
<b>Conc. Finance</b>	Climate impact + leveraging commercial capital returns	\$10M



# Energy Efficiency Enabling Initiative (E3I)

## Overview

**Type**  
Fund

**Focus**  
Mitigation

**Geography**  
Lat Am. & Caribb.

**Stage**  
Fundraising for Fund II

**Endorsement**  
Fall 2016

The Energy Efficiency Enabling Initiative (E3I) will mobilize equity finance and deploy technical assistance for energy efficiency projects in Latin America and the Caribbean.

E3I aims to address the equity financing gap for investment in energy efficiency as the leading source of equity financing for commercial, industrial, municipal and residential energy efficiency. Specifically, it will increase the supply of capital by involving new investors via an energy efficiency equity fund, the MGM Sustainable Energy Fund (MSEF)II.

## Impact

E3I aims to make triple climate investments by improving proven business models, exporting solutions to selected projects in South East Asia, and sharing success stories to crowd-in equity investors from the private and public sectors.

The pre-pilot phase, MSEF I, is ending its investment period, successfully deploying USD 75 million in 25 diverse projects, located in 7 countries in the region. The Fund I model shows a gross IRR of 17-18%, generation of green jobs, and a vast amount of GHG emissions reductions. It has generated a large pipeline of follow on, replicable, and new investments.

## Summit Team



**Marco Monroy**  
CEO  
MGM Innova  
Capital

## Investment Opportunities

Type	Role of capital	Amt.
<b>Non-Conc. Equity</b>	Investment primarily in EE projects & a few small-scale RE projects in Latin America	\$200M
<b>Debt</b>	Projects debt: concessional and/or in local currency to support project compliance with investment criteria	\$300M
<b>Liquid Gaurts.</b>	Support local lending at best possible conditions	\$100M
<b>Grant</b>	Technical assistance	\$2M

# Energy Savings Insurance (ESI)

## Overview

<b>Type</b> Insurance	<b>Energy Savings Insurance overcomes investment barriers to energy efficiency by providing an insurance product for projected energy savings for efficiency projects undertaken by small and medium sized enterprises. ESI now has projects in seven countries that will target thousands of businesses.</b>
<b>Focus</b> Mitigation	
<b>Geography</b> Developing countries	ESI aims to address investment barriers by paying out if the projected value of energy savings is not met. The Lab's analysis shows that the instrument can absorb up to 80% of this underperformance risk. Energy Savings Insurance has been developed and led by the Inter-American Development Bank (IDB), with ongoing projects in seven countries. If implemented in all relevant developing countries, ESI will drive USD 10-100 billion in investment and provide annual emissions reductions of 27-234 MtCO <sub>2</sub> by 2030.
<b>Stage</b> In Action	
<b>Endorsement</b> Endorsed 2015	

## Impact

ESI now has projects in Colombia, Mexico, El Salvador, Nicaragua, Brazil, and Peru and is raising interest in other regions across the globe. In Mexico, ESI is aiming to stimulate USD 25 million of investment in 190 energy efficiency projects in the agro-industry sector through 2020. In Colombia, ESI is targeting investments in energy efficiency in the hospital and healthcare sectors, and is expected to support 104 firms to reduce 13,977 tCO<sub>2</sub>e/year. In El Salvador, ESI will target 500 firms investing in energy efficient projects and reducing about 37,500 tCO<sub>2</sub>e/year.

## Summit Team



**Alex Vasa**  
Green Finance  
Operations  
IDB



**Maria Netto**  
Lead Specialist in  
Capital Markets &  
Financial Institutions  
IDB

## Investment Opportunities

Type	Role of capital	Amt.
<b>DFI Loans</b>	Enable credit lines through local financial institutions that are reluctant to enter the energy efficiency market	TBA
<b>Grant</b>	Developing the program in other countries and/or support initial subsidies for verification and insurance premium	TBA

# Foreign Exchange Risk Hedging Facility (FXHF)



## Overview

**Type**  
Facility

**Focus**  
Mitigation

**Geography**  
India

**Stage**  
Fundraising

**Endorsement**  
Fall 2016

**FXHF is a customizable currency hedging product that lowers currency hedging costs by slicing the risk of adverse currency fluctuation into different tranches and allocating them to different stakeholders.**

The FXHF, developed by the India Lab in collaboration with RR Corporate Ltd., will offer a more efficient FX hedging mechanism than currently available in the Indian market. By allocating risks to the entities involved, pricing via upfront premium payment, and providing longer tenor (10-12 years) hedging, the facility will significantly lower credit risks. In addition, it allows for more efficient use of public capital than direct subsidies for existing market instruments.

## Impact

For every dollar of public investment, FXHF will mobilize a minimum of \$10 of foreign debt investment. For a transaction of \$500 million in foreign investment under certain capital structures, a solar PV capacity of ~1.8 GW could be supported.

This instrument could reduce the total cost of hedging for users when compared to the cost of a commercial cross currency swap by efficiently utilizing public capital. It may also set a precedent for longer term hedging for future foreign debt investments in the Indian renewable energy sector.

## Summit Team



**Ravindra Rathee**  
Principal  
RR Corporate Ltd

## Investment Opportunities

Type	Role of capital	Amt.
Grant	To subsidize the cost of FX risk hedging, so that the landed cost of foreign debt can be lowered To provide the upfront capital required to pay the premium cost of the series of 10 years call-spread option	\$50M

*\* This number is subject to change depending upon the cost of call options prevailing at the date of actual transaction*



# Green Receivables Fund (Green FIDC)

## Overview

### Type

Asset-backed security

### Focus

Mitigation

### Geography

Brazil

### Stage

Fundraising

### Endorsement

Expected Fall 2017

The Green FIDC will package and securitize the cashflows of renewable energy and energy efficiency projects and sell shares in local capital markets, providing long-term finance.

The Green FIDC builds on an existing, regulated instrument in Brazil – Fundo de Investimento em Direitos Creditórios (FIDC) – used to securitize receivables from business and consumer loans. This instrument aims to be the first securitization of renewable and energy efficient project receivables using a FIDC. By securitizing, the Green FIDC can reduce transaction costs, and increase liquidity and diversification. In doing so, it will open up the market to much wider range of private investors; in particular Brazilian institutional investors who can provide long-term capital in local currency.

## Impact

The Green FIDC is a promising solution to increase private participation in the financing of renewable energy, and other types of green infrastructure. The proponents are exploring two pilots and an investment program to invest in several FIDCs over a ten year time horizon that will raise USD 300m in mezzanine finance and could leverage up to USD 1 billion in investment. If all of this was invested in renewable energy, 1 GW of renewable energy projects could be deployed - leading to 10 million tons of CO<sub>2</sub> avoided and the creation of 12,000 jobs.

## Summit Team



**Paulo Todaro**  
Managing Partner  
Albion Capital



**Luis Costa**  
Board Member  
Get2C

## Investment Opportunities

Type	Role of capital	Amt.
Grant	Philanthropic support for pipeline development, financial and legal structuring and CVM registration	\$350K
Mezz. Equity	Anchor funding to mobilize private finance	\$20M
Senior Debt	Commercial investment in renewable and energy efficiency projects	\$80M



# Proterra Electric Bus Battery Services Agreements

## Overview

- Type**  
Facility
- Focus**  
Mitigation
- Geography**  
USA
- Stage**  
In Action
- Fire Award**  
Spring 2017

**Proterra Electric Bus Battery Services Agreements (BSAs) will lower the up-front costs and technology risk of zero-emission, electric buses to enable wider commercialization.**

Proterra will be able to offer its award-winning, electric buses for the cost of a conventional diesel bus by offering customers 12-year BSAs in order to pay for the use of bus batteries. By converting a capital cost to an operating cost, BSAs enable customers to use the savings from cheaper-to-operate electric buses to pay the cost of BSAs. BSAs will also provide a warranty on the batteries through the 12-year life of the bus, helping hedge customers against the costs of a replacement battery. As a result, customers can have a cost break even point on or near day one.

## Impact

When compared to diesel buses, Proterra buses reduce the noise and pollution of buses dramatically. In particular, Proterra buses achieve close to 100% reduction in local particulate and other local emissions. GHG emissions reduction during their 12 year life is approximately 3,600,000 lbs. of CO<sub>2</sub>.

By lowering the up-front costs of zero-emission buses, Proterra BSAs will help accelerate the replacement of conventional buses, promoting sustainable development and transportation.

## Summit Team



**Alan Westenskow**  
Director, Business Development  
Proterra

## Investment Opportunities

Type	Role of capital	Amt.
Equity	Investment in batteries for first 50 buses in first 12-18 months	\$10M*

*\*Larger amount to follow as program scales.*

# Renewable Energy Scale-Up Facility (RESF)



## Overview

**Type**  
Equity Fund

**Focus**  
Mitigation

**Geography**  
Latin America, SE Asia, MENA

**Stage**  
Concept

**Endorsement**  
Expected Fall 2017

**The Renewable Energy Scale-Up Facility (RESF) is a solution to drive private institutional equity into earlier stages of renewable energy projects in emerging markets.**

RESF will deliver financing to projects in increments as they achieve key development milestones in exchange for the option to buy equity at financial close at better-than-market rate terms. RESF's innovative approach to reducing investment risk is to buy options in multiple projects, which may be exercised if and when projects meet pre-determined milestones. In addition, by aggregating and de-risking medium-scale solar and wind projects, the Facility intends to address institutional investment requirements while channeling finance to build robust project pipelines.

## Impact

Illustrative modeling suggests RESF could increase investors' returns over the status quo while leveraging an estimated 25 dollars of commercial investment for every one of public investment. In a first fund, RESF could help finance 370 MW of solar and wind energy. Electricity generated from these projects could be more than 1,230 GWh each year – roughly the annual electricity consumption of more than 850 thousand people in Vietnam – over their 25-year estimated lifespan. RESF's first fund will target developing countries that have strong investment environments and significant renewable energy potential in Latin America and the Caribbean, Middle East North Africa, and Southeast Asia.

## Summit Team



**Luis Costa**  
Board Member  
Get2C



**Paul Curnow**  
Partner  
Baker & McKenzie

## Investment Opportunities

Type	Role of capital	Amt.
<b>Non-Conc. Equity</b>	Investment in first fund	\$80M
<b>Conc. equity</b>	Concessional equity for investment in first fund	\$20M
<b>Grants</b>	Recyclable grant funding to test options mechanism	\$10M



# Rooftop Solar Private Sector Financing Facility

## Overview

**Type**  
Warehouse Financing Facility

**Focus**  
Mitigation

**Geography**  
India

**Stage**  
Fundraising

**Endorsement**  
Fall 2016

The Rooftop Solar Private Sector Financing Facility provides long-term, low-cost debt to developers, aiming to demonstrate the commercial viability of asset-backed securities for the Indian rooftop solar PV sector.

The Facility bundles many small projects together into one structured investment so that the aggregate deal is large enough and of sufficient credit quality to attract institutional and other investors. It has two key phases:

- (1) The aggregation phase, through which a warehouse line of credit is built to provide loans to rooftop solar projects
- (2) The securitization phase, which will enable the facility to issue asset backed securities to investors by refinancing the warehouse line of credit.

## Impact

The Facility could attract an additional USD 500 million of capital to the rooftop solar sector, reduce the cost of debt by up to 3%, and create an additional 20,000 jobs over 2017-2022.

The impact of this facility is based on the assumption that this facility would garner 5% of the market share of the targeted commercial and industrial rooftop solar capacity by 2022.

## Summit Team



**Steven Baillie**  
Principal Financial Officer  
IFC



**Vikram Widge**  
Head, Climate Finance & Policy  
IFC

## Investment Opportunities

Type	Role of capital	Amt.
<b>Conc. Loan</b>	To reduce the cost of funding and tenor of the facility to increase protection for and thereby attract commercial investment	\$30M
<b>Non-Conc. Debt</b>	Capital from commercial investors such as banks, DFIs, and MDBs to fund pilot phase	\$70M

# SunSHIFT Solar Asset Financing Facility (SAFF)

## Overview

**Type**  
Facility

**Focus**  
Mitigation

**Geography**  
Frontier & Emerging Markets

**Stage**  
In Action

**Fire Award**  
Spring 2017

The SAFF is a SunSHIFT initiative that aims to launch a facility that will back a global fleet of modular, moveable megawatt-scale solar assets, as either stand-alone, on-grid systems, or integrated hybrid, off-grid power plants in frontier and emerging markets.

The SAFF will enable SunSHIFT to deliver the world's first pre-fabricated modular and moveable solar plants into markets currently locked out of solar due to barriers such as stranded asset risk, creditworthiness, and contract duration. SunSHIFT is a subsidiary of Laing O'Rourke, an international engineering enterprise, and has been developed in collaboration with technology partners SunPower and ABB, with the support of the Australian Renewable Energy Agency (ARENA).

## Impact

SunSHIFT aims to unlock capital into new markets and start diverting some of the >USD100bn annual diesel power bill towards solar assets while reducing the 300 million tonnes of CO2 currently produced by diesel every year. The initial focus is the hybridization of existing diesel infrastructure, used by emerging nation utilities, off-grid industry and remote communities.

By 2020, SunSHIFT aims to have at least 100MW of SunSHIFT Systems held within at least 4 leasing pools and an identified pipeline to grow this to 500MW by 2030.

## Summit Team



**Will Rayward-Smith**  
General Manager  
Sunshift



**Lori Kerr**  
Senior Director  
Climate Finance  
Advisors

## Investment Opportunities

Type	Role of capital	Amt.
<b>Grant</b>	Support final structuring & 1 <sup>st</sup> adopter tech. deployments	\$5M
<b>Dev. Fin.</b>	De-risk emerging markets investments & demonstrate viability of SunSHIFT Systems and associated AB financing	\$25M
<b>Conc.</b>	Further de-risk and rebalance risk-reward profile to catalyze private capital in EMs	\$50M
<b>Non-Conc.</b>	Deliver commercial terms, conditions, and returns	\$25M

# Sustainable Energy Bonds (SEBs)

## Overview

### Type

Green bonds

### Focus

Mitigation

### Geography

India

### Stage

In Development

### Endorsement

Expected Fall 2017

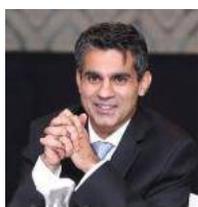
**Sustainable Energy Bonds (SEBs) aim to drive impact investment to sustainable energy in India by offering debt exposure, sufficient returns, and standardized impact measures.**

SEBs are a class of debt instrument, floated by cKers Finance, targeting impact investors looking for exposure in debt issuances financing sustainable energy assets and tracking the impact of investments. SEBs also aim to help establish a track record for mainstream debt investors to invest at a later stage, by channeling impact investments and raising the confidence of other classes of investors.

## Impact

cKers Finance estimates that SEBs can mobilize USD 3 billion in the industrial segments of decentralized renewable energy and energy efficiency, and USD 1 billion in the energy access segment. SEBs also provide an aggregation model that can streamline investment into small-scale projects, which will lower transaction costs.

## Summit Team



**Pawan Mehra**

Director  
cKers Finance



**Jayant Prasad**

Executive Director  
cKers Finance

## Investment Opportunities

Type	Role of capital	Amt.
Grant	Provide credit enhancements and cover costs of setting up measurement and verification systems	\$2M
Conc. Debt	Build a track record for newer segments in which bonds are being invested	\$15M
Non-Conc. Debt	Long-term sustainability	\$30M

# The Matchmaker Service

## Overview

### Type

Platform

### Focus

Mitigation

### Geography

India

### Stage

In Development

### Endorsement

Expected Fall 2017

**The Matchmaker Service developed by CDP will highlight a pipeline of climate-related investment opportunities from cities in India to investors across multiple asset classes.**

According to the IFC, India's climate-smart, urban infrastructure investment potential is \$1.7 trillion by 2020. However, cities struggle to raise capital to meet the funding needs of infrastructure projects, including climate-related projects. The 'Matchmaker' is a platform to provide investors with reliable and sustainable infrastructure pipeline data from participating cities, disclosing information, while at the same time providing cities with access to the capital markets.

## Impact

The Matchmaker Service can help connect climate-smart, commercially viable, urban infrastructure projects with private capital, thereby helping Indian cities attract a new set of investors that are not typically active in the municipal bonds market. In particular, Matchmaker will target socially responsible investing (SRI) firms and individuals looking to mitigate exposure to climate risk.

## Summit Team



### Katie Walsh

Senior Manager,  
Cities NA  
CDP



### Adam Krop

Sustainable Infrast.  
Advisor  
CDP

## Investment Opportunities

Type	Role of capital	Amt.
Various	Cities in India require different types of capital for undertaking green infrastructure projects. The types of capital required include:	TBA
	<ul style="list-style-type: none"><li>• Development finance</li><li>• Guarantees / credit enhancement</li><li>• Impact investments</li><li>• Commercial capital</li></ul>	

# Other Lab endorsed instruments not represented at the Summit

# Instrument Directory

## ADAPTATION

<i>Lab</i>	<i>Name</i>	<i>Lead organization</i>	<i>Type</i>	<i>Status</i>
Global	<b>Agricultural Supply Chain Adaptation Facility</b>	Inter-American Development Bank	Facility	Fundraising

## MITIGATION

<i>Lab</i>	<i>Name</i>	<i>Lead organization</i>	<i>Type</i>	<i>Status</i>
Fire Awards	<b>Affordable Green Homes</b>	International Housing Solutions	Private Equity Fund	In Action
Fire Awards	<b>Global Renewable Independant Power Supplier (Grips)</b>	Grips Energy AG	Private Equity Fund	Fundraising
Fire Awards	<b>Investor Confidence Project</b>	Environmental Defence Fund	Enabling infrastruct.	In Action
India	<b>Loans4SME</b>	Aurus Lending Solutions	Lending Platform	Fundraising
Global	<b>Long-Term FX Risk Management</b>	The Currency Exchange Fund (TCX)	Tailored loans with currency & interest hedging	In Action