

Fostering Cleantech Innovation Ecosystems: The Global Cleantech Innovation Programme and Network

—Transcript of a webinar offered by the Clean Energy Solutions Center on 24 May 2016—
For more information, see the [clean energy policy trainings](#) offered by the Solutions Center.

Presenters

Pradeep Monga
Gerswynn Mckuur
Kevin Braithwaite
Dave Lello

This Transcript

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Stephanie Bechler

Before we begin, I'll go over some of the webinar features. For audio, you have two options. You can either listen through your computer or over the telephone. If you choose to listen to the computer, please select the mic and speakers option in the audio pane. And, if you choose to dial in by phone, please select the telephone option, and the box to the right will display the number and audio PIN you should use to dial in. If anyone is having technical difficulties with the webinar, you may go to the GoToWebinar help desk and call them at 888-259-3826 for assistance.

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Today's webinar agenda is centered around presentations from our guest panelists, Kevin Braithwaite, Gerswynn Mckuur, Pradeep Monga, and Dave Lello. These journalists have been kind of enough to join us to provide insights drawn from the first two years of operation of Global Cleantech Innovation program, and it's growth to 335 supported Cleantech ventures

around—across the participating countries in four clean technology areas: renewable energy, energy efficiency, waste energy, and water efficiency.

Before our speakers begin, I'll provide a short, informative overview of the Clean Energy Solutions Center initiative, and then following the presentations; we'll have a question and answer session where the panelists will address questions submitted by the audience. We will conclude with some closing remarks and a brief survey.

This next slide provides a bit of background in terms of how the Solutions Center came to be. The Solutions Center is one of 13 initiatives of the Clean Energy Ministerial that was launched in 2011 and is primarily led by Australia, the United States, and other CEM partners. Outcomes of this unique initiative include support of developing countries and emerging economies through enhancement of resources on policies relating to energy access, no cost expert policy assistance, and peer-to-peer learning and training tools, such as the webinar you are attending today.

The Solutions Center has four primary goals. First, it serves as a clearinghouse for clean energy policy _____. It also serves to share policy best practices, data, and analysis tools specific to clean energy policies and programs. And the Solutions Center delivers dynamic services that enable expert assistance, learning, and peer to peer sharing of experiences. And lastly, the center fosters dialogue on emerging policy issues and innovation around the globe.

Our primary audience is energy policy makers and analysts and governments and technical organizations in all countries, but we also strive to engage with the private sector, NGOs, and civil society.

A marquis feature the Solutions Center provides is the no-cost expert policy assistance, known as Ask an Expert. The Ask an Expert program has established a broad team of over 30 experts from around the globe who are available to provide remote policy advice and analysis to countries at no cost. For example, in the area of enterprise development, we are pleased to have Catherine Diam-Valla, founder of Access Energy, serving as one of our experts. If you have a need for policy assistance in enterprise development or in any other clean energy sector, we encourage you to use this valuable service. Again, _____ provided free of charge, and if you have any questions for our experts, please submit them through the simple online form at cleanenergysolutions.org/expert. We encourage you to spread word of the service to those in your networks and other organizations.

I'd like to begin with a brief introduction of today's panelists before we get to the presentations. Our first speaker is Kevin Braithwaite, vice president of global programs for Cleantech Open. He works closely with international agencies, governments, investors, and corporations to launch new cleantech open accelerators and programs around the world.

Following Kevin, we'll hear Gerswynn Mckuur. Gerswynn is the national program manager with Global Cleantech Innovation program for small and

medium enterprises in South Africa. This program is to spur South African innovations in clean technology in order to strengthen the cleantech innovation ecosystem in South Africa.

Following Gerswynn, we will—we have the director of clean energy at UNIDO, Dr. Pradeep Monga. Dr. Monga is an energy expert with over 30 years of working experience in the field of energy policy, strategic planning, and clean energy technology.

And our final speaker today is Mr. Dave Lello, CEO of Ekasi Energy. They started business—he started his business life as an IT specialist, and after starting his first full time venture in 1990 became a serial entrepreneur. Over the last 25 years, he'd started, amongst other things, a software company, a property development company, a wine estate, and a clean energy business.

And with those introductions, I would like to welcome our first speaker, Kevin, to the webinar.

Kevin Braithwaite

Well, thank you very much, Stephanie, and thank you to the opportunity to speak to you all today. This particular topic, fostering cleantech innovation ecosystems, is something that's very, very close to our hearts, something that we're very passionate about, and we feel has a huge impact or potential on developing solutions to some of the greatest energy and environmental challenges that we face. Next slide, please.

So just before we begin, I want to really just sort of highlight why we're focusing this particular topic on entrepreneurs, on fostering innovation, the role that entrepreneurs play. And really, in recent years, there's been a growing realization around the world, the role that entrepreneurs play in developing the economies, in creating jobs, in really helping to create a new type of society.

There's an interesting comment at the bottom of the screen there, from Sir Richard Branson, highlighting that tackling climate change is the single greatest economic opportunity of our generation. It's really accepted that an outstanding entrepreneur finds opportunity in the time of greatest adversity and scarcity. So this whole will focus, the program that we have, the initiative, and the work that we're developing on fostering cleantech innovation ecosystems, is all around how can we create an environment where innovators are really fostered to create breakthrough cleantech solutions that can tackle some of our greatest challenges. Next slide, please.

So really, the Global Cleantech Innovation program is an initiative between the Global Environment Facility, the United Nations Industrial Development Organization, and the Cleantech Open. Next slide, please.

This whole initiative really began back in 2011, tied to COP 17, and the focus has really evolved, so now we're focusing on really identifying cleantech startups through competition. How can we find the most innovative entrepreneurs in order to provide them with the resources and the support that they need? How can we take these entrepreneurs, these startups, and

accelerate them, de-risk them, and scale them up, so they become much bigger, much more funded, much more profitable and successful ventures that are creating the technologies and the solutions that we need.

One of the key focuses that we have is how do we connect these entrepreneurs to international customers, partners, channels, and investors, by really leveraging the global network that we're building. And in addition to focusing on entrepreneurs, we're very much looking at the broader perspective. How can we really enhance the entrepreneur ecosystem by capacity building, developing partnerships, working with all the players in the ecosystem to increase the likelihood of ongoing success, more innovation being supported, and more successful cleantech entrepreneurs? Next slide, please.

So as I mentioned, this really began in 2011 with the South Africa Cleantech competition, which was focused around COP 17, identifying innovative Cleantech entrepreneurs. And I'm very pleased that this has been one of the first GCIP countries going forward, and I'm very excited that we have my colleagues Gerswynn, from GCIP South Africa, and Dave Lello, who was overall winner and our national South Africa winner from 2015. Next slide, please.

So as I mentioned, the Global Environment Facility is really a key partner in this. It's the source of the funding and support. Now I really wanted to highlight this comment from the CEO of the GEF, Dr. Ishii, who's really highlighting how this is a program that's leveraging the Cleantech Open's global platform with UNIDO's extensive international network and resources to really foster innovation for small and medium sized enterprises. Next slide, please.

The next slide, I wanted to really highlight, there's a quote from the Director General of the United Nations, Mr. Li Yong. He's really emphasizing here the importance that SMEs play in catalyzing breakthrough technology innovations. Next slide, please.

And just to perhaps introduce my organization, the Cleantech Open, we're the global knowledge partner for this initiative, and our background is really fostering, supporting, accelerating cleantech entrepreneurs, from the US, from around the world, and obviously, with our partners, the GEF and UNIDO, in an increasing number of developing and emerging countries. So far, we've worked with over 1,100 startups. Eight hundred forty-four are still active, are still growing. The total revenue from those companies is now exceeding \$187 million. And one of the things that we're doing is we're tracking are these companies creating jobs, of which it's over 3,000 thus far, and are they raising external capital? That's one benchmark that we have. And they've raised about \$1.2 billion so far.

And the reason why I wanted to highlight this is over the ten years of growing the Cleantech Open, one of the things that we've realized is the importance of a collaborative, of a supportive ecosystem to grow breakthrough ventures. Next slide, please.

So some of my colleagues will be talking in more detail about the particular areas that we're focused on, but the GCIP Global Cleantech Innovation Program accelerator is focused on solutions in one of five areas, entrepreneurs which fit with one of these broad areas. Next slide, please.

To really give you a perspective of what we've seen in terms of the program globally, in 2014, our first year as a global GCIP program, we saw 555 applicants, 555 startups that matched the requirements of the program and applied, and from that, we selected 159 for training and support. And from that, eight national winners that we brought to Silicon Valley to connect with investors and partners. Next slide, please.

And one of the things that we're seeing by bringing these entrepreneurs, together, both regionally, nationally, and also globally in Silicon Valley, is the importance of the community, the ecosystem, the connectivity, the exchanges and the collaboration between not just the key stakeholders, but the entrepreneurs, the ventures themselves. In 2015, we saw 902 applicants, and from that, we selected 186 teams for training and support, and from that, six national winners. Next slide, please.

When it comes to our work with entrepreneurs, as one of my colleagues will be talking more about some of our broader activities in terms of policy activities, working with stakeholders, capacity development, but our core focus with entrepreneurs is really in four key areas: training, best practices, skill development, mentoring—how do we connect experts? How do we connect experienced serial entrepreneurs, investors, advisors, coaches, to these companies to help them grow?

The third area we're focused on is how do we connect these entrepreneurs to capital, whether it's angel funding, VC funding, government funding? How do we connect them to the right sources of capital at the right time? And the fourth area we're focused on is how do we put these entrepreneurs on the global stage in order that they can find the most appropriate customers, investors, partners, etcetera? Next slide, please.

And really, in addition to working with entrepreneurs, what we're focused on, which is really the key part of making this sustainable, is creating a supportive ecosystem. And in this sort of simplified diagram here, you can see some of the key stakeholders that we work with who all have an interest, have a reason, have a desire to support and to foster cleantech entrepreneurs in their relative countries. And part of our role is how can we foster more collaboration, more support, between these two entities? How can we break down silos? How can we find ways of uniting everybody together with the common aim of fostering these entrepreneurs, particularly when tying it to the timeline, to the sense of urgency that surrounds the competition aspect of what we do? Next slide, please.

And just perhaps maybe to frame in a bit more detail some of the things we're doing when it comes to mapping ecosystems, is really, the first thing that we're trying to do is to really understand who are the key players in the entrepreneur ecosystem, who are the key entities, how are they working

together or not. We're very much focused on breaking down silos and fostering collaboration, not duplicating any of the resources already in country, very much looking to see how can we provide additional support and sustainability.

One of the things that we often see in developing and emerging countries is both scarcity of initiative support entrepreneurs, and also an abundance. There can be a multitude of programs in some areas that are potentially competing. And one of the areas that we're focused on with GCIP is how can we change that. How can we have a much more collaborative activity around supporting cleantech entrepreneurs?

And we tend to use the term of innovation ecosystem development rather than what may be often used is the development of SME clusters. We're seeing across all areas of entrepreneurial research the important of research and benchmarking. And I think this also applies to this area as well. A key thing that we're focused on is really private sector engagement. How can we start to bridge the divide between the public and private sectors? How can we bring in more private capital? How can bring in more corporate partners? And this is really of vital importance. Next slide, please.

So ____ one of my colleagues will be talking in much more detail about some of the specific examples from our work in India and South Africa, but currently, the GCIP is a global platform in eight countries, Turkey, Armenia, India, South Africa, Pakistan, Malaysia, Thailand, and with the recent addition of Morocco, which I'm very pleased that we now have Morocco as part of the global GCIP program and network. Next slide, please.

One of the things that GCIP is also focused on is working with the very best partners in each country, and I'm very proud of the work of UNIDO and our national partners in really developing this. And in Malaysia, for example, where I'm currently located, we work with MIGHT, which is a very innovative agency under the Prime Minister's office, responsible for the developing technology industry and policy in the country. Dr. Monga will be talking a little bit later about our work in India and the great efforts of the Ministry of Micro, Small, and Medium Enterprises. And we will be hearing more about work in South Africa. Next slide, please.

I would be amiss not to also mention that in Turkey, we work with Tubitak, which is really the leading agency for fostering technology research and commercialization in the country. And of course, it's very much working with the ministries and the partners in each country to create a truly global platform. Next slide, please.

I wanted to end I think very briefly with an example of why working with entrepreneurs, why working with high growth entrepreneurs is important. As I mentioned, I'm currently in Malaysia, and I wanted to give an example of a company that we've worked with through GCIP Malaysia, the national winner in 2014, which is a company called Free the Seed.

Now through expanding their business, from having very much an international mindset, expanding to new markets, but particularly focusing on corporate partnerships, Free the Seed is currently in negotiations to raise a substantial amount of corporate funding, and that could provide them with the opportunity to go from one factory and 50 staff in 2015-16 through to 30 factories and in excess of 1,500 staff by 2020. So that type of potential expansion, acceleration impact is one of the things that we're very much focusing on fostering in GCIP. Next slide, please.

And the reason why I've highlighted this is that startups have an opportunity with the right support, with the right supportive entrepreneurial ecosystem, to have some very rapid growth that can have a huge impact on many of the environmental and social challenges that we face. So for example, I've highlighted here with Free the Seed, in terms of carbon mitigation, at the moment, they're looking in the region of 600,000 kilograms of CO2 being abated with the potential to increase that to over 10 million.

The social impact is really going from at the moment impacting the lives by providing additional income to 1,300 small farmholders, to increasing that to upwards of 100,000 with this intended scaling up. So that was really a very rapid example of how the whole focus of this program is finding the most appropriate high growth cleantech startups that can grow and make a major impact on the climate challenges that we face. Thank you. And that is currently the end of my slides. Thank you.

Stephanie Bechler Thank you so much, Kevin. That was a great presentation. Next, we will be changing—turning things over to Gerswynn Mckuur. Gerswynn, the floor is yours.

Gerswynn Mckuur Thank you, Stephanie, and good day to everyone. Thank you for the—to the organizers for giving me the opportunity to share some of the aspects of South African experience on the Global Cleantech Innovation program.

The way I'll do this is to just give a brief background on the South African situation, and our involvement in GCIP, and then I'll focus on the national drivers for this program, and also the importance of an innovation ecosystem to the program, and then to look at the successful approach of the program in South Africa.

So I think as Kevin mentioned earlier, the program was piloted in 2011 at COP 17 in Durban in South Africa, and although there were huge successes, it was a huge success, well-received, it highlighted a few challenges that cleantech innovators were experiencing at the time. And some of those challenges were, for example, that the regulatory environment and institutional capacity were not as supportive as possible for those entrepreneurs. They also had a limited access to finance, to limited R&D support, and a lack of public awareness of low carbon technology alternatives.

So in response to this, UNIDO and the Global Environment Facility, in collaboration with the Cleantech Open, designed and proposed this GCIP

program that contributes to the alleviation of these challenges. In South Africa, the program is hosted by the Technology Innovation Agency, which is an agency of government, and acts as a funder and a connector and a facilitator and service provider for tech innovation.

The program is now in its third year, and we've been working well with emerging cleantech startups. So far, we have supported 52 enterprises progressing through the program, and also that the program crucially enjoys the support of the Ministries of Science and Technology, Environmental Affairs, Trade and Industry, and Energy in South Africa.

Over the past number of years in South Africa, the government has recognized that there's value in adopting a greener and more sustainable development path, because green technologies have the potential not only to stimulate economic growth, but they create new job opportunities and mitigate ecological risks. And they can also implement—when implemented, improve living conditions and speed up service delivery.

For our government, for South Africa, job creation and enterprise development and inclusive industrial sustainable development are top priorities, and these feature prominently in our national development plan. And the sector therefore provides _____ opportunities for growth in these areas.

The introduction of GCIP, together with the government and private sector initiatives, translated into stronger institutions and mechanisms that encourage investment in green technology innovation across various stages of development, and provide now financial instruments, greater business support to emerging and established green enterprises, and they build skills and capacity to foster innovation and facilitate a greater uptake of green technologies.

South Africa has also identified areas of opportunities for CO2 mitigation through technological and behavioral interventions, specifically in energy supply and consumption in industrial processes, agricultural, and waste. And coupled with the fact that South Africa is a water scarce country, the technology categories for the program, namely energy efficiency, renewable energy, waste beneficiation, and water efficiency, and now as well green buildings, are well aligned to the national priorities of South Africa.

Kevin just showed us this picture as well, and the efforts by government and other _____ players need to be underpinned by building a strong innovation and entrepreneurship ecosystem, which is a strong focus of this program. What I mean by an ecosystem is that we need active, symbiotic, and supportive relationships to exist between the various stakeholders in the innovation and entrepreneurship community.

Some of the key contributors, as Kevin has also mentioned, to the community are government and the agencies, research institutions, higher education institutions, private sector, and venture capital. The program in South Africa has already built various relationships with intellectual property attorneys and

various events partners to showcase technologies, and also, the technology innovation agency where the program is housed is helping the program by facilitating further relationships with incubators and universities.

At the same time, in this ecosystem of entrepreneurship and innovation, we find that there is more and more proliferation of competitions and exhibitions, which are great tools to showcase this innovative talent that we all have, but too often, we see entrepreneurs and their products at these events stuck in the same place or not moving at all. One of the reasons could be that this ecosystem that we talk about here is not working efficiently or effectively, and it could mean that the stakeholders in this community are not working together well enough to get great innovation to the marketplace and to the customers.

So as ecosystem contributors, the program, and others are challenged to device ways to support innovators and entrepreneurs collectively, to know where to go next in their journey to receive support and to prosper. Let me just touch on the approach of the program, which is very successful, very unique. The success of the program lies in the fact that it brings together a competition and a business accelerator with global linkages.

In the program we emphasize the aspects of training and mentoring, focusing heavily on business model development and business model innovation. Also, finding and linking—excuse me—also finding ways to link entrepreneurs up with experienced local and national mentors to support them through the process and beyond.

The approach also emphasizes that this is not a passive process, but urges participants to continuously work on their businesses throughout the program. And because of the global linkages, top performers have the opportunity to showcase their technologies internationally, and hopefully create global partnerships and get global investment.

As you'll hear from the speakers that have gone before and will come after, the approach provides much needed support and opportunities to set entrepreneurs and innovators on a path to success. Thank you.

Stephanie Bechler Thank you so much, Gerswynn. That was really excellent. Our next presenter will be Dr. Pradeep Monga. Dr. Monga, the floor is yours. And Dr. Monga—oh, there we go. Perfect.

Pradeep Monga Hello? Can you hear me? Hello?

Stephanie Bechler Yes, we can. That sounds great.

Pradeep Monga Okay. Colleagues and friends, thank you very much for this opportunity and for joining this webinar. I'm very happy to be part of this webinar to share our views, our strategy, our reason for promoting innovation ecosystem for clean technology entrepreneurs.

For the _____, this is very important that it is line with our mandate to promote inclusive and sustainable industrial development, and that's where we are working for this program, where we're trying to promote ecosystem—we are trying to promote ecosystems, so far as small and medium scale enterprises are concerned. _____ mandate that is inclusive and sustainable industrial development, there are three thematic areas where we are focusing on: creating shared prosperity, advancing economic competitiveness, and of course, safeguarding the environment. We are trying to make sustainable social and economic environmental growth while mainstreaming jobs and income generation opportunities for women and youth.

So far as UNIDO is concerned, there's a very clear linkage between industry, SE4ALL, Sustainable Energy for All, and sustainable development goals. There's a clear linkage with Sustainable Development Goal 9, which focuses on innovation, industry, and infrastructure, linking the Sustainable Development Goal 7, linking to Sustainable Energy for All, and of course, Sustainable Development Goal 13 for climate action.

And here, _____ innovation and clean technologies, they're focusing on six areas: job creation, business models, women empowerment, Nexus co-benefits, promoting innovation, and of course, sustainability and climate agreement.

So coming to Global Cleantech Innovation Program for SMEs, it has been a journey for us, together with Cleantech Open US, Kevin and his wonderful team, where we try to focus on six countries to begin with, namely South Africa, Turkey, India, Pakistan, Armenia, Malaysia, and now we are focusing on Thailand and other countries. Here, we are focusing on innovation programs mainstreamed into ISID, inclusive and sustainable industrial development, in these countries.

Like other colleagues have mentioned before me, and I briefly heard Kevin, and followed by my old colleague from South Africa, we are promoting innovations in clean technology by using the cross-sectoral and multi-stakeholder approach to build sustainable innovation entrepreneur ecosystems, especially for small businesses. The challenge then is how we can link SMEs, small and medium scale enterprises, to the global value chain, so far as clean energy technologies are concerned.

I will quickly go through this slide, because I understand that Kevin and my colleagues have already covered it, how we are focusing as a part of building blocks _____ policy and regulations, building national capacity, mentoring and training, linking enterprises to private sector financing, and _____, and fostering an innovative cleantech system.

Here, in most of the countries, initially, we started focusing on these five areas, energy efficiency, renewable energy, waste to energy, water efficiency, and now we have added green building in 2016. And of course, we are also thinking very clearly to move into transportation or sustainable transport and ICT.

Why I am mentioning that, that in the original model, what we call _____ model from Silicon Valley, from Cleantech Open Program, they're covering more than ten categories, and we started with four, but now we're building other categories, because we feel that it is very important to go step by step, when we talk about cleantech innovation and SMEs, so that we can do a more focused and strategic initially, and of course, then we can expand to other important areas.

If I can sum up, and I'm sure Kevin has already mentioned that, we _____ talked about in 2015 in these six countries, like I mentioned, South Africa, Turkey, India, Pakistan, Armenia, Malaysia, we had 902 applicants, 480 qualified applicants, 250 mentors identified, trained by mentors, 186 semifinalists, 35 finalists selected, and of course, 6 national winners selected. And of course, six national winners, and also, some of the runner-ups were invited to take part in the Global Cleantech Program, _____ and other competitions, at Silicon Valley last year.

And we're very happy that we have created a very strong network of mentors, and also enterprises that will help these SMEs and innovators to move forward as part of the global value chain.

Now specifically Kevin asked me to focus on India, because India is one of the largest countries where we are working now very closely with many very important partners, such as the Ministry of Small and Medium Scale Enterprises, what we call small, medium scale, and of course micro enterprises. We are working with _____, _____ of Indian Chamber of Commerce and Industry. We are working with CII, _____ Indian Industry, and many other partners. And of course, _____ Global Environment Facility, and the main partnership came up from the _____.

And here, we are mandated and we are focusing on fostering clean energy technology innovations for selected SME clusters in India of _____ and involved in manufacturing of those green technologies. This is in line, what we call GCIP program for India is in line with vision of Ministry of Micro, Small, and Medium Enterprises, which is all SMEs in India to be energy efficient and adopt clean technology by 2025.

And of course, we also are trying to promote low carbon footprint of these SMEs by introduction of new technologies and promoting innovation ecosystems in terms of policies, in terms of incentives, of course, in terms of capacity building, and knowledge management.

What are the major components of GCIP program in India? Like other countries, we have a national platform to promote clean technology innovations and competitiveness of SMEs. We are building national capacity for clean technologies. And of course, we are looking at policy and institutional framework for scaling up and commercialization of innovations across India.

In 2016, as of now, we have invited applications of first of April. 15 May was the closing. We have already gone through semifinalist announcements. And

now we are _____ 23, 24 semifinalists have been selected, and we'll go to the national academy and mentoring process from June onwards. And hopefully, this time the global forum will be held in California in February 2017.

As of now, what I understand, we have 191 applications received so far in India, and 20 semifinalists have been selected. We have a very strong screening committee in India, comprised of six members, four scientists and two experts. And of course, national academy will be held on 11th and 12th June. And we have 25 members shortlisted for the program.

What are the success or outcomes so far in last two years in the BCIP program in India? I could see from _____ perspective we could see a very strong interface between the innovators and policy makers. There's a special focus on clean technology innovations, not on marketing and service related innovations. And of course, we could also see a strong impact on SME ecosystem nationwide. we can see a renewed interest by SMEs to invest in R&D, to really get involved with academic institutions in India, and also to really bring on what we call public-private partnerships, so far as innovation ecosystems are concerned in India _____ all those SME _____.

We also feel that top six finalists of 2015 offered to pitch their case to members of the Indian Angel Network through a brief slide deck, and also, we have really seen that Indian innovators, we are doing very well so far. Two of them have been selected to really come to California next week, to— they'll be part of the Clean Energy Ministerial 7 Conference. It's a very good achievement. And this selection was done not by GCIP program. It was done by an independent group who wanted to bring entrepreneurs from all over the world. And under GCIP program, they could select two from India and one from Malaysia. So these Indian entrepreneurs I'm quite sure will be there to be a part of that process.

We believe that once this program is fully scaled up, we'll have actually 150 startups on innovation _____ clean technology is concerned, we would like to support more than 400, 500 SMEs in the capacity building and mentoring, _____ and of course knowledge management side, and promote north to south and south to south technology transfer and exchange of best practices innovation for global collaboration and partnership.

We would like to support women entrepreneurs, especially women startups and youth startups in the clean energy technology space. And that's what I believe will be very, very important.

While closing, I must say that for us, this program is in line with what we call five Ps, people, prosperity, peace, partnership, and planet, which is also _____ for _____ sustainable development goals. And we believe that this six country program will soon become eight countries' program, and then of course move on to _____ up to twenty-five countries, so far as innovation ecosystem is concerned, for small and medium scale enterprises around the world, especially in developing countries. Thank you so much for your kind attention.

Stephanie Bechler Thank you so much for that presentation, Dr. Monga. That was wonderful. And we will now go to our final presentation of the webinar, Mr. Dave Lello. Dave, over to you.

Dave Lello Good afternoon, everyone. I've been asked by Kevin to give some feedback _____ on my experiences during Global Cleantech. In the introduction, it was said that I'm not a first entrepreneur, so I have had experiences in starting other businesses, and so I'm going to give you my experience based on coming to a new business again after a previous winery that I started, and how the Cleantech really provided the support that I wouldn't have had in previous experiences.

We entered the 2015 Cleantech challenge as part of the South African program, and were selected as semifinalists to attend the national academy. During the academy and during the programs after that, there were a number of webinars, a number of interactions, a number of times where we could actually interact with the staff at GCIP, and they were very focused on the fact of us understanding where the business was. As a startup, you really need to understand what do your customers want. There were sessions on what do founders and partners want, and I'll come back to that. What is the technology that you have, and how will those technologies actually drive or change the markets? And I think the last one is probably the most important, is what journey will service the business best?

The business model canvas which we used extensively through the program helps document that journey, because as you are aware with the business model canvas and the models around it is that you often have to change your model, you have to pivot, you have to understand and be quick and nimble on your feet to be able to often make the changes during the formative time of the business. And really, through that program, when we did customer surveys, when we did products pilots, we did a technology review of where we were and what it was going to cost to get to the next level, at each level we found that there were relevant things that helped us change our business model, and really, the GCIP, I do want to stress, is what I learned over the last three or four months during the program last year was not really the end of the road. It really put me in a position that when I got through the competition, win or lose, I was able part of this year to now take those plans, revise them, and look at them, and actually get back to a real world situation, so we could actually build this business for real, and not just in a competition environment.

This is a picture of our final business model canvas. It didn't look like this at the beginning. And obviously, over time, we revisited and revisited it, and I think this is on probably version seven or eight at this point.

The next slide shows a product—the visual product journey. I joined up with my ex-partner, Billy. In 2013 he had a rentable battery model which had won a prize from the South African Breweries Foundation in South Africa. And my role was to help them bring this product to market. We found out very quickly that cooking was also a major issue, and we did a small pilot where we added the cooker as an add-on to the battery. And because of certain

usability issues, we very soon at the end of the pilot decided that we needed to build a combination of plans, where we had a solar system or a battery powered solar system at the bottom of the unit and a stove at the top of the unit.

The unit that you see there in the third picture is what we entered the GCIP competition with, and during the same period, we won an award with the Dutch government, and _____ University helped us do some further pilots, and eventually, we arrived at the current go to market model, which is on the right hand side, and had to add in a pay as you go model, where we will be able to get the customers to pay a deposit and then pay the unit off over time with an electronic model that switches off the device every time a prepaid usage has expired.

So as you can see here, there were many pivots along the way, and there were many enhancements, but we do believe that after a three-year process, we arrived at a product that is now far more usable, and in terms of our usability tests, is now ticking 80 to 90 percent of the boxes.

My experiences with GCIP were that I found a lot of people who had great ideas. In fact, at the national academy it was quite daunting, because you suddenly realize that there are 40 or 50 people with ideas that are probably as good or better than yours. But I think at the end of the day, you realize through the program that no matter how good those ideas are, unless they get a customer fit, unless you go through the program and understand those customer surveys, unless you go through the market analysis, you're not going to be able to make sure that your bright idea actually meets what the customer is willing to pay for.

Under things that I did learn through the multiple pictures that we went through is that an idea is great, but if you can't simplify the message, unless you can crystallize its unique selling point, you—it's very difficult to create the right takeaway. With renewable energy, there are often a number of boxes to tick, and you will see in subsequent slides that although you can tick all the boxes, there are the ones that are very important, and those are the ones that change whether a customer buys or doesn't buy your product.

The ability to move from concept to business plan is important. So the GCIP certainly helped us through some of the webinars and through some of the exercises to make sure that we understand our business and funding model. And at the end of the day, the funding model needs to win over people with funds and resources, whether they are loan funds, whether they are venture capitalists, whether they are people loaning you—on a loan and payback—whatever that model is, you need to make sure that your pitch is not only crisp and clear in terms of the customer benefits, but it provides a very clear choice to the investor of what he's going to get.

So this next slide shows here that in terms of our little energy device, which provides electricity and cooking ability, we wanted to achieve three major goals, and all of those goals are really in support of Sustainable Development Goal 7, which is sustainable energy, and to a smaller degree at the bottom

Sustainable Development Goal 13, which is climate change, and there are six messages there that we have that will hopefully make sure that a person who uses our product has a better experience for energy.

We quickly found out that the greener aspect at the bottom of the slide, although it is important, but for poor people, most definitely safer and cheaper were the primary drivers in the customer's mind. So if we're wanting the customer to pay for it, then safer and cheaper is more important. If we were getting an aid organization providing it for us, maybe we could focus on greener. But as we were wanting the customer to pay for the device, safer and cheaper was most important.

In looking at those qualities, we came to the idea, as I've shown earlier, is that we had a device that harnessed natural energy. We're using solar energy. We're using biomass for the cooking. We're combining them into a power appliance that provides both.

Now this slide here, again, is probably the tenth iteration, and it is only after many pictures, many checks, visits to California, that we understand on every slide that we maybe haven't presented it in the right way, and I have to thank GCIP for helping the program to be able to crystallize our message.

So in essence, that is our final look and our simple message to people is a fabulous device which provides two in one home power, both electricity and heating, that is safer, cheaper, and greener.

We have found that subsequent to the GCIP, that unless we crystallize our facts further, that we will not be able to win in the marketplace. This is a model that is used by Procter & Gamble, and for us to be able to crystallize and, again, win the customer over, we have decided on that list of six to focus on two key elements, and the first element is reducing smoke and indoor air pollution, and secondly, providing a pay as you go solution which lowers the upfront cost.

So out of that list of six, we have downgraded four and highlighted two, because we believe those two are the most important ones that will—that will grab the customer's attention. Number one, that you can cook indoors, light indoors without any smoke, and number two, you don't have to pay an exorbitant amount up front. You can actually acquire the device and pay for it over time with the savings that you've made on fuel.

I thank you, and I hope that gave you an insight of some of the journey that we have made over the last eight months, four of those with GCIP, and another four afterwards, and how GCIP has helped us crystallize our business plans.

Stephanie Bechler Thank you so much, Dave. And that is the end of the presentations. We will now go into some questions from the audience. Our first question that came in is—it's a general question. Have you noticed some key differences between countries in regards to the key challenges that cleantech entrepreneurs have to face?

Kevin Braithwaite Hi, Stephanie. Thanks for the question. I'd probably like to maybe not directly answer that question, but I think I'm more excited not so much by the differences between countries and the problems that they face, but the similarities. What we're seeing is between the different countries, when the entrepreneurs come together, when the partners come together, when the ecosystems' stakeholders come together, they have a lot in common. There's a lot to learn.

And I think we're very excited at the potential for these entrepreneurs to make connections, find common solutions to the challenges that they face. Yes, there are particular challenges that vary from country to country, but in many cases there's much more that these entrepreneurs face that are in common, both in terms of challenges and opportunities.

Stephanie Bechler Thank you. And we have sort of a follow-up to that. Someone would like to know how can a country like Bangladesh, with a high ambition towards how carbon development can get—how a country like that can get access to these offshore venture capital groups to implement green energy projects. Would anyone like to offer some advice for a country a little bit more remote who's still ramping up?

Kevin Braithwaite Well, I think, Stephanie, to jump into that question, I think very much what we're trying to do here with this program is provide solutions, connectivity to investors, to countries such as Bangladesh that are ramping up. That's really the whole aim of this—of this program here. I would say that even before perhaps a country even goes to the step of joining the G7 initiatives, the key thing that we need to focus on here is understanding what are some of the challenges that the entrepreneurs are facing.

So I would say to the particular question that came from the participants regarding Bangladesh, it's important to understand more about the challenges that entrepreneurs in Bangladesh are facing, but we also need to have case studies, success stories, examples. These are really some of the initial building blocks.

Stephanie Bechler Great. And another question for everyone is have you been surprised by some of the results from participating countries?

Kevin Braithwaite Well, I'm very keen to perhaps hear, Stephanie, from our colleagues in South Africa, due to all their great work, but I would probably just comment on one thing that I've been very pleasantly surprised by is the number of female entrepreneurs we're seeing, the level of female participation. For example, in our program in Pakistan, 22 of the teams were led by females last year. That's a figure that I think is quite surprising, in a very positive way that reflects the potential for these entrepreneurs to really have a major role.

Gerswynn Mckuur Yeah, Stephanie, Gerswynn here. I also—I agree with Kevin. We're not surprised so much in that there are so many entrepreneurs, innovators, in South Africa, and some of the other countries I've been in contact with. I think there's a great potential that has been untapped over a long period of

time, and such a program like GCIP is giving people opportunity to bring the—showcase what they can do.

In South Africa as well, we focus on the youth entrepreneurs as well, and we see quite a significant interest from the youth in participating in this program. So not so much surprise at the response, but really quite happy that we are bringing out the talent that has been latent for so long.

Stephanie Bechler That's excellent. We have—

[Crosstalk]

Stephanie Bechler Yeah?

Dave Lello Could I just add there that I was certainly—when I had the trip to California, was—it was very interesting to see some of the other solutions. And I will add to what Kevin said earlier, is that between the entrepreneurs, while we traveled and had informal time with each other, it was really important for us to understand that the problems across the countries are very common. So I wouldn't go to differences, but there were certainly solutions that I saw from India or Pakistan that would be very relevant in South Africa as well. So there were certainly common touch points in our interactions helped us share ideas of how we could maybe move those technologies from one country to another country.

Stephanie Bechler That's great. And we have one last question before we go over to the survey. So if there's any other questions that anyone in the audience would like to ask, please type them into the question pane now. Our final question is what are the future aims and plans for Global Cleantech Innovation Program and Network?

Kevin Braithwaite Well, thank you, Stephanie. I can certainly comment on that. I think in Dr. Monga's presentation earlier, I think you heard the—sort of the vision to expand the program from the current 8 countries up to 25 or more. I think that's very much a major focus, adding new countries, adding to the network, but at the same time also really increasing the depth and the breadth of what we do in terms of more extensive support in the next phase, more work perhaps with investors and stakeholders, and other ways to perhaps stimulate innovation in underserved areas.

And for example, there may be aspects of manufacturing or industry in particular countries that need more stimulation to perhaps have entrepreneurs become aware of the gaps or the opportunities for technological innovation. Those are some of the things we're working on, but at the same time, also fostering much more collaboration and connectivity between the participating countries, and in addition, connectivity to developed countries. So how can we foster connections with France, with the US, with Spain, with Germany, to make this a truly global initiative?

Gerswynn Mckuur And Stephanie, if I may, Gerswynn here, the—some of the future plans from a South African perspective is that we are looking to expand into the SADC

region, which are the countries, the 14 countries that surround South Africa, the southern half of Africa, and to expand this initiative into these countries to see how we can expose the talent that lies and the innovations that lie in these countries in Africa, with African solutions. So that's also a key thing that's coming up, too, for future expansion.

Stephanie Bechler Wonderful. Well, that is all we have for questions. If anyone on the line has another question that they'd like to ask, please submit it now, and we can always send it to the panelists after the webinar has concluded.

We will now go into a brief attendee survey, that if you are on the line we'd like you to participate in. Our first question is please answer if the webinar content provided me with useful information and insights. Excellent. Thank you very much.

Our next question, the webinars presenters were effective. Great. Thank you. Our third question, overall, the webinar met my expectations. Thank you. Our fourth question, do you anticipate using the information presented in this webinar directly in your work and/or organization? Great. Thank you very much. And our final question, do you anticipate applying the information presented to develop or revise policies or programs in your country of focus? Great.

Thank you all so much for participating in our survey. We now—on behalf of the Clean Energy Solutions Center, I'd like to extend a thank you to all of our expert panelists and to our attendees for participating in today's webinar. Do check the Solutions Center website if you would like to view the slides and listen to a recording of today's presentation, as well as any previously held webinars. Additionally, you will find information on upcoming webinars and other training events. And we are now posting webinar recordings to the [Clean Energy Solutions Center YouTube Channel](#), and we also invite you to inform your colleagues and those in your networks about the Solutions Center resources and services, including no cost policy support.

Please, everyone have a great rest of your day, and we hope to see you again on future Clean Energy Solutions Center events. This concludes our webinar.