



2016/17 Report on the Climate Cent Foundation's Allocation of Resources

for the attention of

the Federal Department of the Environment, Transport, Energy, and Communications
(DETEC)

in compliance with the agreement dated 19 September 2016

27 June 2017

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1 Purpose of this report

The present report details the Climate Cent Foundation (CCF)'s use of its financial resources in conformity with its goal and purpose. This is the first report compiled by the Foundation to comply with its obligation under clause 2 of its agreement with the Swiss Confederation dated 19 September 2016. The report takes stock of the Foundation's activities since 1 July 2016 and explains that and how the Foundation has met its obligations as set out in clause 2 of the aforementioned agreement.

2 Conditions to be met by the Foundation

The Climate Cent Foundation is to use its financial resources solely for greenhouse gas emission reduction schemes carried out abroad. To do so, it is to support projects expected to yield emission reduction certificates that are imputable to the Swiss Confederation's commitments under international law and that, at the time of their purchase, meet the quality requirements set out in the Swiss CO₂ Ordinance. All certificates are to be handed over to the Swiss Confederation.

The CCF may further support activities aimed at substantiating and applying the possibilities set out by article 6 of the Paris Agreement after 2020 ("pilot activities"), to which end the Foundation earmarks a sum of at least CHF 20 million. Pilot activities must meet specific criteria, which have been set down in the agreement signed with the Swiss Confederation on 19 September 2016.

3 Available resources and obligations

In the period under review, the Climate Cent Foundation reported revenues of CHF 7'050'560, which resulted from the sale to the KliK Foundation of 44'066 tonnes of CO₂ emission reductions generated by its Buildings Programme in 2015. The KliK Foundation may impute these emission reductions as a so-called "self-realised project" toward meeting its carbon offset obligation. Until 2021 included, the CCF expects the sale of its Buildings Programme's continuing impact to generate further total revenues of CHF 30 million.

In the reporting period, a total of CHF 5'263'716 were paid out to meet various incurred commitments (see section 5) and to cover the Foundation's operating expenses.

Taking into account investment profits, as per 26 June 2017 the CCF's resources stood at CHF 108'519'153.

The following table summarises commitments incurred by the CCF and payments already made:

	Commitments (in CHF)	Paid out 01.01.2014 to 27.06.2017 (in CHF)	Of which paid out in the period under review (in CHF)
Ci-Dev	23'000'000 (23'000'000 USD)	1'252'050	140'063
PAF	2'358'000 (2'500'000 USD)	2'358'000	-
TCAF	12'500'000 (12'500'000 USD)	247'457	247'457
Purchase of 12 million CER2	6'604'973 (6'152'047 EUR)	6'604'973	3'392'733
Micro Energy Credits	10'800'000 (10'800'000 USD)	1'543'683	1'095'756
South Pole	11'500'000 (10'000'000 EUR)	-	-
First Climate	14'375'000 (12'500'000 EUR)	-	-
Total	81'137'973	12'006'163	4'876'009

4 Collaboration with the IDC Climate's Field of Activity n° 6

At an operational level, the Swiss Confederation's obligations under the agreement dated 19 September 2016 are administered by the Swiss Interdepartmental Committee on Climate (IDC Climate), Field of Activity n° 6 "Emissions Trading and Flexibility Mechanisms" (FA6). Over the course of the period under review, the FA6 held two meetings, which the CCF attended as a guest. Two work sessions were also held by representatives of the FA6 and the CCF to discuss potential pilot activities. Discussions centred mainly on the acquisition and selection of potential pilot activities, on the definition of the requirements placed on pilot activities by the Swiss Confederation, and on the definition and sequence of procedures governing the selection and implementation of pilot activities (see section 5.6).

5 Ongoing and new activities

In the period under review, the CCF carried out a call for tenders to source potential pilot activities. In consultation with the FA6, it assessed and ranked submitted bids and followed up on the three most promising proposals (see section 5.6). No new contractual commitments to purchase emission reduction certificates were entered in the period under review.

5.1. Participation in the *Carbon Initiative for Development (Ci-Dev)*

Since early 2014, the CCF has held a share of USD 23 million in the World Bank's *Carbon Initiative for Development (Ci-Dev)*. The fund also numbers among its investors the governments of Great Britain and Sweden, which hold shares of respectively GBP 50 million and USD 23 million. GBP 35 million and USD 40 million are available for the purchase of certificates; the remaining funds go toward activities granting governments, financial institutions, the private sector and civil society improved access to the carbon market.

There are currently 12 projects in the pipeline. A purchase agreement has been signed with ten projects; agreements with the remaining two projects should be concluded by the end of 2017. As things currently stand, prices should average USD 9.00 per certificate. The CCF expects its share to yield around 1.8 million certificates.

Next to the two projects described in last year's report to the DETEC (SimGas – Kenya, Green Development – Madagascar), over the period under review agreements were signed with the following eight projects:

- **Development Bank of Ethiopia, biogas, Ethiopia:** The project covers the subsidised construction of biogas units for rural households in Ethiopia, whose price is reduced by USD 240 to USD 560. The biogas units are built by local biogas companies working with specially trained masons. The local biogas companies receive a yearly bonus of USD 10 per reliably functioning biogas unit, ensuring that the biogas facilities are properly built and serviced.
The biogas units are built underground and topped off with domed masonry work. They have a capacity of 3 to 6 m³ and require dung from at least four heads of cattle to be processed into biogas. The biogas replaces non-sustainably used wood for cooking purposes. The nutrient-rich sludge generated as a by-product can be used as fertiliser. Households are thus able to reduce their fuel and fertiliser expenses, spend less time gathering wood, and improve their health by inhaling fewer pollutants when cooking. Connecting the facility to the latrine makes it possible to further improve biogas yield and hygiene.
The project covers the second phase of Ethiopia's national biogas programme. The first phase, during which over 5'000 biogas units were built and more than 100 masons trained, took place in 2009-2013 and served to market test and technically improve the biogas units. The second phase launched in 2014, but the project has been able to impute emission reductions only since 1 April 2016. The Development Bank of Ethiopia is a specialised financial establishment tasked to implement the

national development strategy. It provides financial and technical support to selected projects of national interest – such as the national biogas programme. Over the duration of the project, around 40'000 biogas units are to be built, reducing greenhouse gas emissions by up to 1.5 million tonnes of CO₂ equivalent. In order to cushion the risk of underdelivery, the Ci-Dev is purchasing only 800'000 of the certificates generated by the project over the period 2016 to 2024 – with an option to redeem a further 350'000 certificates as needed. The project has been registered with the UN as n° 10268.

- **SNV, Burkina Faso:** Burkina Faso operates a national biogas programme in order to foster the use of household biogas units. The programme launched in 2014. By 2016, around 6'000 biogas facilities had been installed. The programme's financial backing will be phased out in 2018. The sale of emission reductions achieved under the programme makes it possible to maintain and reinforce this successful scheme. From 2019 onward, 4'000 new biogas units should be installed yearly, bringing the total figure to 35'000 biogas units by 2025. Greenhouse gas emissions will thus be reduced by 540'000 tonnes of CO₂ equivalent by 2025. These emission reductions are purchased by the Ci-Dev as certificates. The project was registered with the UN in June 2014 as n° 9977.

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The Dutch development organisation SNV has been operating successful biogas programmes in Asia and Africa for many years. SNV is working closely with the national government within the framework of Burkina Faso's national biogas programme.

- **Development Bank of Ethiopia, solar power, Ethiopia:** Over the years 2016-2020, the project covers the sale of 2.8 million solar lamps and 200'000 solar home systems – which provide electricity to operate e.g. televisions and ventilators – to rural households without grid connection. As a result, households do not need to burn kerosene and are thereby able to reduce their CO₂ emissions.

Driven by sharply falling prices, solar lamps are experiencing a boom in Africa. However, the products being sold are often of poor quality and do not last long in everyday use. The project aims to enable high-quality solar lamps and solar home systems to break through in Ethiopia. The proceeds from the sale of certificates are therefore used to provide warranty coverage and a battery exchange programme. The Development Bank of Ethiopia is a specialised financial establishment tasked to implement the national development strategy. It provides financial and technical support to selected projects of national interest – such as the solar programme for rural households.

The project is scheduled to reduce at least 1.1 million tonnes of CO₂ equivalent, which the Ci-Dev purchases as certificates. The project is being further supported with advance payments amounting to over USD 1 million. The project was registered with the UN in 2016 as n° 10285.

- **AMADER, Mali:** The project strengthens the Malian Agency for Rural Electrification (AMADER)'s capacity to reconfigure the country's existing 250 stand-alone diesel systems into hybrid diesel/photovoltaic (PV) stand-alone systems. Such a reconfiguration makes it possible to reduce greenhouse gas emissions and electricity generation costs. The price of electricity for connected households can be reduced accordingly. Thanks to the capacity building supported by the project, in future AMADER plans to set up only diesel/PV stand-alone systems. AMADER is in charge of implementing the national strategy that aims to provide 61% of rural households with access to electricity by 2033.
A second aspect of the scheme is the subsidised sale of 750'000 high-quality solar lamps. Combined with awareness-raising measures, the subsidies aim to enable high-quality solar lamps to break through in Mali.
The project is scheduled to reduce 500'000 tonnes of CO₂ equivalent. The Ci-Dev is purchasing 400'000 certificates, with an option to redeem a further 101'000 certificates as needed. The programme application is currently undergoing validation by the UN and first projects are scheduled for implementation by mid-2017. The stand-alone systems and the solar lamps are scheduled to be reconfigured resp. sold until 2021.
- **ASER, Senegal:** The project covers the distribution of vouchers to 300'000 rural households to reduce connection costs to the Senegalese power grid. Each voucher has a value of USD 25, which is equivalent to roughly 85% of the cost of the cheapest grid connection. This approach is currently being tested with a pilot scheme carried out in 5 villages.
For several years, Senegal has been pursuing a national strategy for the electrification of rural areas entrusted to the Senegalese Agency for Rural Electrification (ASER). The strategy aims to provide 100% of rural households with access to electricity by 2025. In order to achieve this objective, concessions have been granted to private electricity companies. However, due to high connection costs, almost no non-electrified households have been connecting to the grid. Thanks to the voucher, all households should now be able to afford a grid connection. The first 100'000 connections are expected by 2019, the remaining 200'000 by 2021. The project is scheduled to reduce 660'000 tonnes of CO₂ equivalent, which are purchased by the Ci-Dev as certificates. The programme application is currently undergoing validation by the UN and first projects are scheduled for implementation by mid-2017.
- **REA, Uganda:** Uganda has set itself the ambitious goal of raising the rural electrification rate from currently 7% to 26% by 2022. Uganda's Rural Electrification Agency (REA) is in charge of implementing this strategy. The government has decided to fully take on grid connection costs incurred by rural households. In-house wiring costs remain the responsibility of individual households. However, studies show that around one quarter of rural households cannot afford this expense.
In order to lower the cost of in-house wiring, the project is developing a so-called «ready board», which combines power outlets, fuses, lamp sockets and electric metres, and thus replaces in-house wiring. Wiring costs can thereby be reduced by almost 50%. The project covers the free distribution of 82'000 «ready boards» to the poorest households.

Overall, more than 300'000 households are to be newly connected to the power grid, reducing over 1 million tonnes of CO₂ equivalent. Installation is scheduled to start in 2017 and all «ready boards» should be installed by 2020. The Ci-Dev is purchasing 990'000 certificates, with an option to redeem a further 420'000 certificates as needed. The project was registered with the UN in December 2015 as n° 10186.

- **DelAgua, Rwanda:** DelAgua, founded in 1985 as a University of Surrey spin-off, has been distributing efficient cookers in Rwanda since 2013 in close collaboration with the national Ministry of Health. To date, DelAgua has distributed over 100'000 efficient cookers free of charge to the poorest households. DelAgua is now amending its business model and is selling the cookers to end customers at a discounted price. Collaboration with local microfinance establishments should ensure that access to the cookers remains open to all.

Between 2017 and 2021, 210'000 efficient cookers, which include the post-combustion of fumes, are scheduled to be sold. This improves thermal efficiency and reduces particulate matters immissions. Households benefit from clean air and are able to reduce their firewood needs by a factor of up to three.

The project is scheduled to reduce 1.5 million tonnes of CO₂ equivalent. The Ci-Dev is purchasing 320'000 certificates, with an option to redeem a further 1.1 million certificates as needed. The project was registered with the UN in November 2013 as n° 9626.

- **Inyenyeri, Rwanda:** Inyenyeri is a local social enterprise, which has developed a novel business model to distribute efficient cookers in Rwanda. Households are able to lease the cookers for free; in return, they commit to supplying Inyenyeri with a set monthly quantity of firewood. Inyenyeri uses the wood to produce pellets, which are given to rural households for free and sold to urban households. Thanks to the highly efficient cookers used under the programme, rural households are able to cover their own fuel needs with less firewood as well as covering the needs of urban households. The leased cookers also reduce particle emissions and improve air quality.

Inyenyeri has been testing this business model since 2011 in a pilot project involving 1'500 cookers. Based on the pilot project's encouraging results, Inyenyeri now plans to provide 200'000 rural and urban households with efficient cookers by 2020. The proceeds from the sale of achieved emission reductions will cover the necessary investments for the business model's national rollout, scheduled to start in 2017.

The project is scheduled to reduce around 1 million tonnes of CO₂ equivalent. The Ci-Dev is purchasing 600'000 certificates, with an option to redeem a further 400'000 certificates as needed. The project was registered with the UN in August 2012 as n° 6207.

The two projects in the pipeline still awaiting an agreement are located in Kenya. They are PoAs in the fields of small-scale hydropower and solar power.

5.2. Participation in the *Pilot Auction Facility for Methane and Climate Change Mitigation (PAF)*

For several years now, the prices for market-traded CER2 have been exceptionally low, threatening the launch or the continued operation of many already registered CDM projects. The World Bank's *Pilot Auction Facility for Methane and Climate Change Mitigation (PAF)* is testing a way to determine a price for such projects that is both acceptable from the seller's point of view and efficient from the buyer's point of view.

The CCF and the Swiss State Secretariat for Economic Affairs (SECO) are jointly participating in the PAF with a share of USD 2.5 million each, thereby in total meeting minimal share requirements. The modalities of collaboration have been set out in an MoU. The governments of the United States, Germany and Sweden have also invested in the fund. The fund has a total endowment of USD 55 million. For a more detailed description of the PAF, please refer to last year's report to the DETEC.

Two auctions took place in July 2015 and May 2016 for methane reduction projects in the waste management sector; the total auction sum amounted to USD 45 million. In November 2016, options for the delivery of CER2 stemming from the first auction became due for the first time. Around one quarter of these options were either not exercised or led to the delivery of inadmissible certificates.

In January 2017, a third and last auction was carried out, targeting projects for the reduction of laughing gas emissions in the production of nitric acid. As for the first auction, the option premium was set at USD 0.30 per certificate, with an available auction sum of USD 13 million. The auction was held in two steps: the first was reserved for new projects, the second targeted existing projects that had been interrupted. In the auction's first step, demand did not fully exhaust the available budget of USD 6.3 million; according to the applicable auction rules, this amount was therefore carried over to the auction's second step. 5 bidders carried the day, winning the right to supply the PAF with a total of 6.2 million certificates at a price of USD 2.10 per certificate until 2020. The net price thus amounted to USD 1.80 per tonne and was slightly lower than the price for methane reduction projects targeted in the first two auctions.

A comparative analysis of all three auctions is scheduled for publication in 2017, as is an assessment of the way the minimum price guaranteed by the PAF has impacted projects.

5.3. Participation in the *Transformative Carbon Asset Facility (TCAF)*

The *Transformative Carbon Asset Facility (TCAF)* is a new climate protection scheme set up by the World Bank, in which the CCF and the Swiss State Secretariat for Economic Affairs (SECO) are jointly participating with a share of USD 12.5 million each, thereby in total meeting minimal share requirements for having a say in the selection of funded activities. The modalities of collaboration have been set out in an MoU. Other investors include the governments of Germany (USD 2 million), Great

Britain (GBP 60 million), Canada (CAD 3 million), Norway (USD 80 million) and Sweden (USD 25 million). The fund has a total endowment of around USD 210 million.

The World Bank and countries involved in the TCAF share the conviction that the possibility stipulated in article 6 of the Paris Agreement for signatory states to cooperate on a voluntary basis provides an important way to achieve greater overall emission reductions and thereby meet the agreement's targets. TCAF funds are to be deployed so as to bring about the implementation of greenhouse gas reduction schemes in countries with low or medium income levels. More specifically, this covers the introduction of political instruments making it possible to put a price on the emission of greenhouse gases or to influence the greenhouse gas emissions of an entire sector.

This ties in with the objective of developing innovative methods for quantifying and crediting effected greenhouse gas reductions, focussing mainly on two aspects: the verifiability of certified emission reductions and ways of ensuring their environmental soundness. In particular, the TCAF also aims to contribute to establishing the international set of rules required to implement article 6 of the Paris Agreement. Some TCAF investors, including the CCF, intend to impute quantified and possibly certified emission reductions toward meeting their national emission targets.

The TCAF has been operational since March 2017. Recent months saw the definition of processes governing the selection and acquisition of a portfolio of suitable activities. Individual activities should each receive around CHF 50 million in funding. A first selection of four activities in Morocco, India, Vietnam and Indonesia has been approved for further assessment.

5.4. Purchase of 12 million CER2

In June 2014 and in March 2015, the CCF carried out standard-modality public calls for tenders to purchase 4 resp. 1 million CER2. Only CER2 stemming from projects featured on the Swiss Confederation's "White List" were admitted. In total, four bidders won. The average price per certificate was EUR 0.51 in the first and EUR 0.49 in the second call for tenders.

In addition, in another competitive call for tenders, the three suppliers who had submitted the most competitive bids in the two previous calls for tenders were specifically invited to procure CER2 up to a maximum limit defined in terms of quantity and price. The certificates were to meet the requirements set out in the Swiss CO₂ Ordinance. A further 7 million CER2 were thus purchased at an average price of EUR 0.52 per certificate.

Overall, 12 million CER2 were purchased at an average cost of EUR 0.51 per certificate. In view of the certificates' high quality, this may be viewed as an excellent result. All CER2 have now been delivered, of which 6.2 million in the period under review. The certificates stem from 162 projects in nine countries (see table below).

Egypt	37'720	0.3%	Wind	7'788'938	64.9%
Brazil	554'342	4.6%	Hydro	1'629'937	13.6%
China	10'071'429	83.9%	Biogas	531'671	4.4%
India	482'944	4.0%	Biomass	416'422	3.5%
Colombia	685'205	5.7%	Landfill gas	1'237'945	10.3%
Mexico	73'117	0.6%	Solar	10'958	0.1%
South Korea	8'417	0.1%	Tidal	7'944	0.1%
Thailand	77'826	0.6%	Energy efficiency	337'162	2.8%
Vietnam	9'000	0.1%	Fuel switch	37'720	0.3%
Total	12'000'000	100%	Waste management	1'303	0.0%
			Total	12'000'000	100%

5.5. Direct purchase agreements with project owners

Micro Energy Credits

The CCF is buying 2 million CER2 from US company Micro Energy Credits Corp. (MEC), to be delivered by 2021. MEC operates a programme that was registered with the UN as n° 9181 and supports microloans for greenhouse gas reducing household devices in India. Microloans for efficient cookers, solar lamps and water purification devices are subsidised with the proceeds from the sale of CER2.

The programme is being operated by MEC with great success. To date, 11 CPAs have been admitted to the programme and 185'000 cookers, 550'000 solar lamps and 90'000 water purification devices have been installed. 143'876 CER2 have already been delivered to the CCF, of which 102'200 in the period under review.

Pure Water

The CCF is buying 2 million CER2 from Pure Water Ltd, a 100% subsidiary of Swiss company South Pole Group, to be delivered by 2021. The certificates stem from the "International Water Purification Programme" registered with the UN as n° 5962. Together with implementation partner Evidence Action, the plan is to set up drinking water purification schemes over a large territory in Malawi, Kenya and Uganda. 27'000 wells and springs have been fitted with chlorine dispensers, enabling around 4.5 million people to purify their drinking water in a safe and simple manner.

To date, 17 CPAs have been admitted to the programme. The first delivery of CER2 is expected in 2017.

First Climate

The issuance of CERs originating from registered CDM projects aimed at collecting and destroying landfill gas is in sharp decline. Due to low market prices, it is no longer economically viable to operate, service and develop torches and collection systems. Small and medium-sized landfills are particularly affected because they lack access to adequate funding.

In order to make it possible to keep operating such stranded projects in Latin America, the CCF signed a framework agreement with First Climate (Switzerland) AG with a cost ceiling of EUR 12.5 million. An innovative pricing structure, which follows the marginal cost of methane destruction, lowers risk for project owners and sets incentives to maximise emission reductions. Around 3.1 million CER2 are expected to be delivered by 2021.

First Climate has received numerous project offers from all over Latin America. To date, a purchase agreement has been signed with 10 projects, of which 3 each in Brazil and in Mexico, and the rest in Colombia; overall, they are expected to deliver 2.2 million CER2. Negotiations are currently underway with two further projects located in Brazil.

5.6. Pilot activities

In December 2016, the CCF launched a targeted call for tenders to source potential pilot activities in the areas of “landfill gas”, “efficient cookers” and “grid-connected renewable power”. An application form (Project Idea Note, PIN) was devised with a view to making it possible to assess a pilot activity's suitability with regard to the requirements established jointly with the FA6. 17 PINs were submitted; in January 2017, they were analysed and discussed with the FA6. The selection was based on the following criteria:

1 – NDC: Is the activity covered by the national emission target (NDC)? Is the activity included in the NDC as a necessary measure? (exclusion criterion)

2 – Results-based financing (RBF): Does the activity follow the principle of RBF? (exclusion criterion)

3 – Implementation potential: Are the implementation risks acceptable in scope?

4 – Value for money: Are CCF contributions used efficiently to achieve substantial emission reductions?

5 – Political context: Is the pilot activity locally well anchored? Is it possible to rely on existing relations between Switzerland and the host country? Can Switzerland become directly involved in the pilot activity?

Based on the assessment conducted, the following proposals are currently being followed up on:

- **Peru, cookers:** The country's poorest households are to be enabled to purchase an efficient cooker that reduces the hitherto non-sustainable use of wood for cooking purposes.
- **Thailand, renewable power:** By expanding feed-in tariffs for renewable power, the aim is to increase the nationwide installed PV capacity by 1.2 GW_p compared with today's target.

- **Mexico / Colombia, landfill gas:** The aim is to provide the landfill gas sector with an incentive not only to collect and flare landfill gas, but to also use it to generate electricity.

Project owners are or will presumably be invited to compile a so-called PA-DD (Pilot Activity Design Document), which allows for the detailed analysis of a project's suitability as a pilot activity and can be submitted to the Swiss Confederation's decision-making body and to the Foundation Council as a basis for decision.

In the event of a positive assessment, the next steps would be twofold. On the one hand, negotiations would be started between Switzerland and the relevant host country to conclude a *Memorandum of Understanding* (MoU), which would settle the details of the pilot activity's imputability under article 6 of the Paris Agreement. On the other hand, the CCF would start to negotiate the terms governing the purchase of emission reductions with the project owner.

6 Outlook

Over the coming 12 months, the CCF will focus on pilot activities. The aim is to reach an agreement with at least one of the projects currently under review, which will require Switzerland to negotiate and initial an MoU with a host country.
