



Technology Fund

GUARANTEES FOR INNOVATIVE CLIMATE PROTECTION

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Input by Simone Riedel Riley, General Manager Technology Fund



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Office for the Environment FOEN

www.technologyfund.ch

Fund manager mandated by the FOEN:

emerald
Technology Ventures



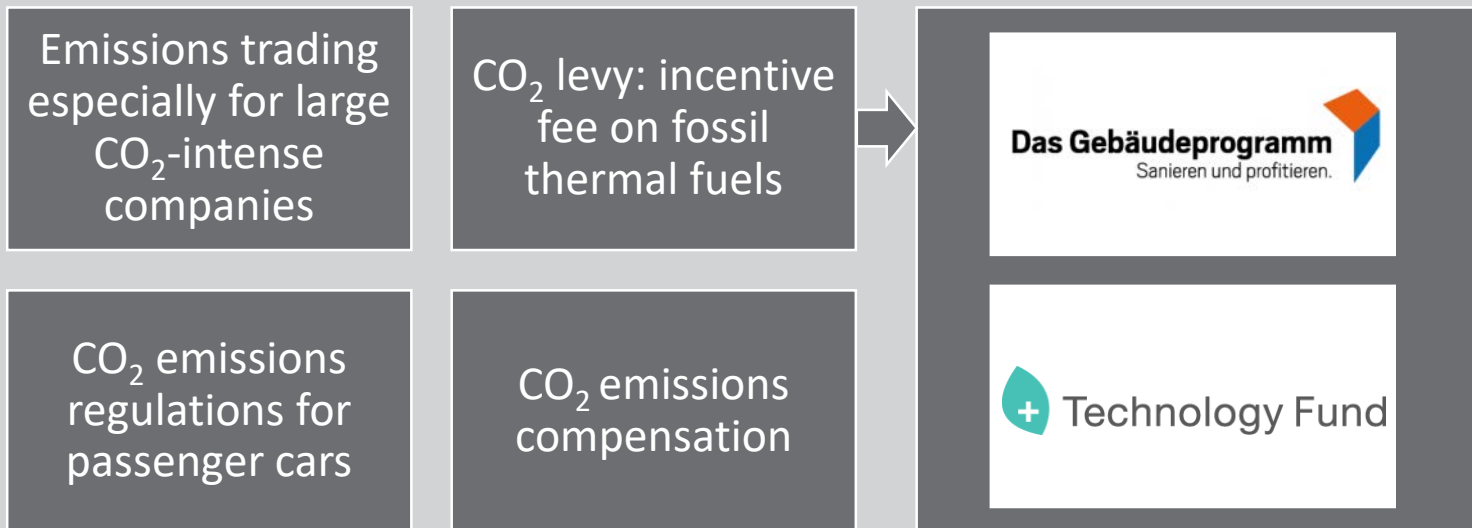
south pole
group

Swiss climate policy

CO₂ Act as basis for reduction measures

Target: reduction of the domestic greenhouse gas emissions of at least 20% until 2020 compared to 1990

Reduction measures:



Fund manager mandated by the FOEN:

Offer

The technology fund provides **loan guarantees** in an amount of up to CHF 3 million to **innovative small and medium entities (SME)** whose products contribute to the **mitigation of climate change.**

Eligible technologies

Climate protection as overall goal



Reduction of greenhouse gas emissions



Efficient utilization of electrical energy



Promotion of renewable energies



Conservation of natural resources

Important:
Positive impact on
greenhouse gas
balance

Conditions

Loan guarantees of up to CHF 3 million

Product

Loan guarantee
(joint simple guarantee)

Cover

Limitation of the guarantee to a portion of the total financing, generally 60 %, but up to 100% of the loan.

Scope and duration

CHF 50'000 to CHF 3 million and
a maximum of 10 years.

Lenders

Banks and other suitable lenders domiciled in Switzerland
Generally, a minimum of 20 % of the loan needs to be repaid after the first half of the duration.

Fees

Preliminary check is free of charge
CHF 1'000 at submission of application
plus CHF 2'000 following a positive decision.
In addition 0.9% of the guaranteed amount annually.

Fund size

Currently CHF 150 million (guaranteed credit)
which can be increased to a maximum of CHF 500 million.

Fund manager mandated by the FOEN:

Targeted companies

Innovative SME with market opportunities

The technology or product falls within the target areas (positive environmental impact) and is **innovative**.

The product offers a sizeable **market opportunity**.

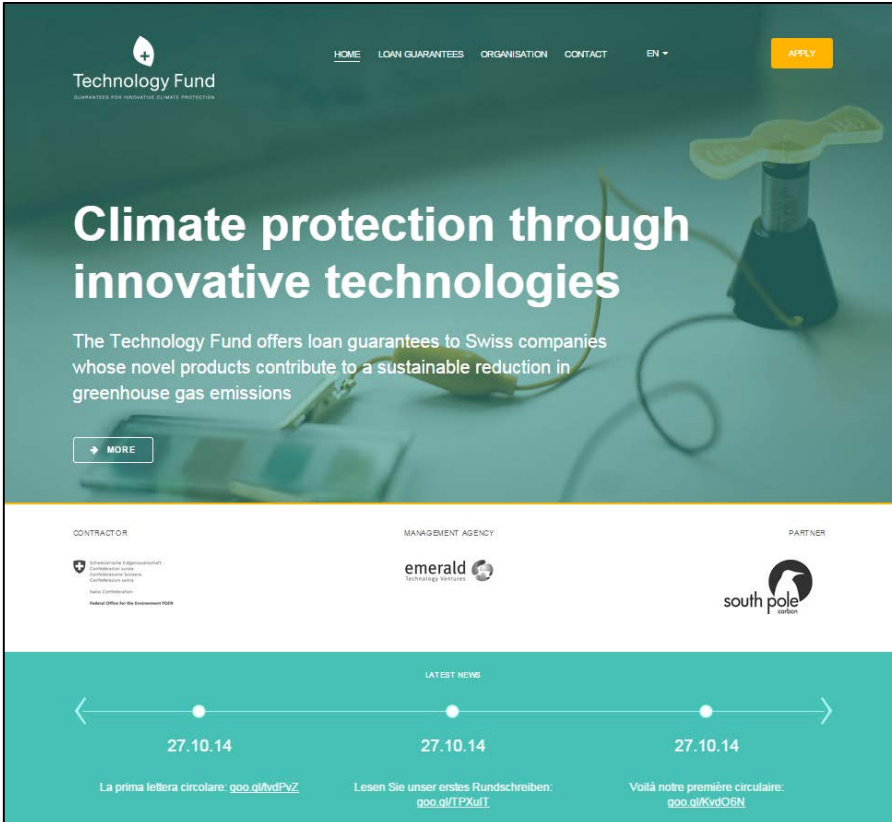
The applicant is **creditworthy**.

The project is not feasible without the guarantee.

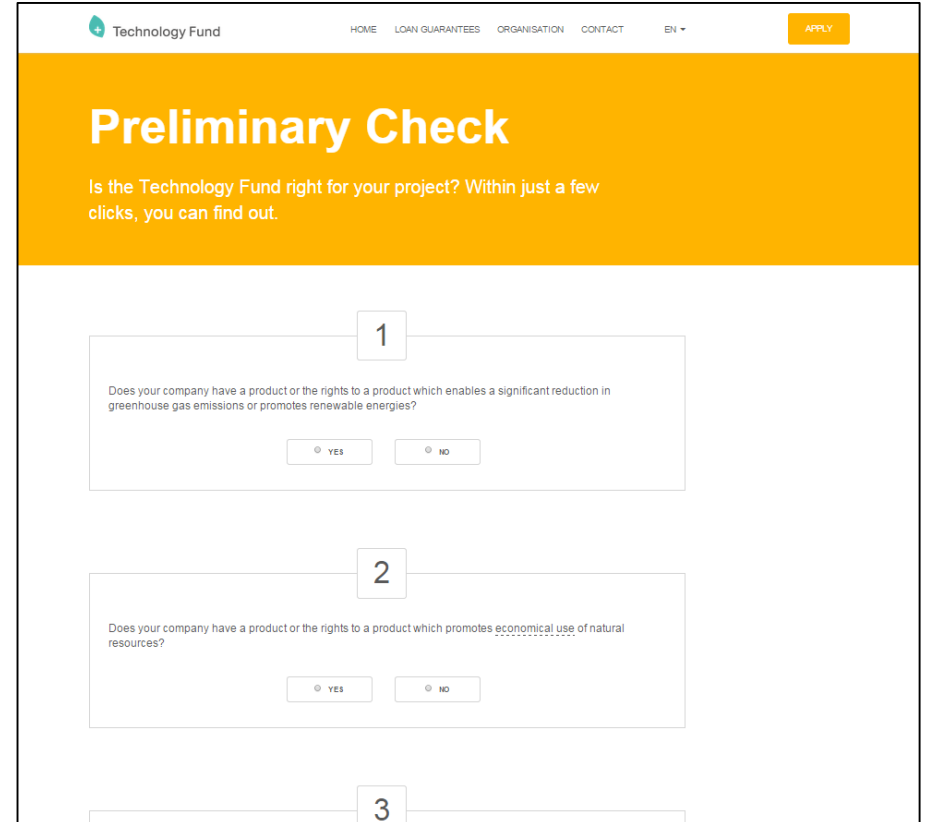
Both the applicant and the lender are **domiciled in Switzerland**.

For a list of the most important criteria please refer to the **preliminary check** at **www.technologyfund.ch**

Information, preliminary check and application



The screenshot shows the homepage of the Technology Fund. At the top, there is a navigation menu with links for HOME, LOAN GUARANTEES, ORGANISATION, CONTACT, and EN. An 'APPLY' button is located in the top right corner. The main heading reads 'Climate protection through innovative technologies'. Below this, a sub-heading states: 'The Technology Fund offers loan guarantees to Swiss companies whose novel products contribute to a sustainable reduction in greenhouse gas emissions'. A 'MORE' button is positioned below the text. The footer section is divided into three columns: 'CONTRACTOR' (listing the Swiss Confederation and Federal Office for the Environment), 'MANAGEMENT AGENCY' (listing Emerald Technology Ventures), and 'PARTNER' (listing South Pole Group). A 'LATEST NEWS' section at the bottom features a timeline with three entries dated 27.10.14, each with a link to a circular letter in Italian, German, and French.



The screenshot shows the 'Preliminary Check' page. The page has a yellow header with the 'Technology Fund' logo and navigation links. The main heading is 'Preliminary Check'. Below the heading, a sub-heading asks: 'Is the Technology Fund right for your project? Within just a few clicks, you can find out.' The page contains three numbered steps for the check:

- 1**
Does your company have a product or the rights to a product which enables a significant reduction in greenhouse gas emissions or promotes renewable energies?
 YES NO
- 2**
Does your company have a product or the rights to a product which promotes economic use of natural resources?
 YES NO
- 3**

Procedure

Staged Due Diligence; Decision by guarantee committee



Preliminary check and application form

Queries regarding the most important criteria (for free).

Preselection / Due Diligence light

A review of the eligibility of the technology and the applicant's creditworthiness.

Due Diligence

The applicant's management presentation and a thorough review of its legal and financial situation.

Positive decision

The applicant receives a confirmation for a guarantee. A loan agreement and a guarantee agreement are then concluded. Quarterly monitoring.

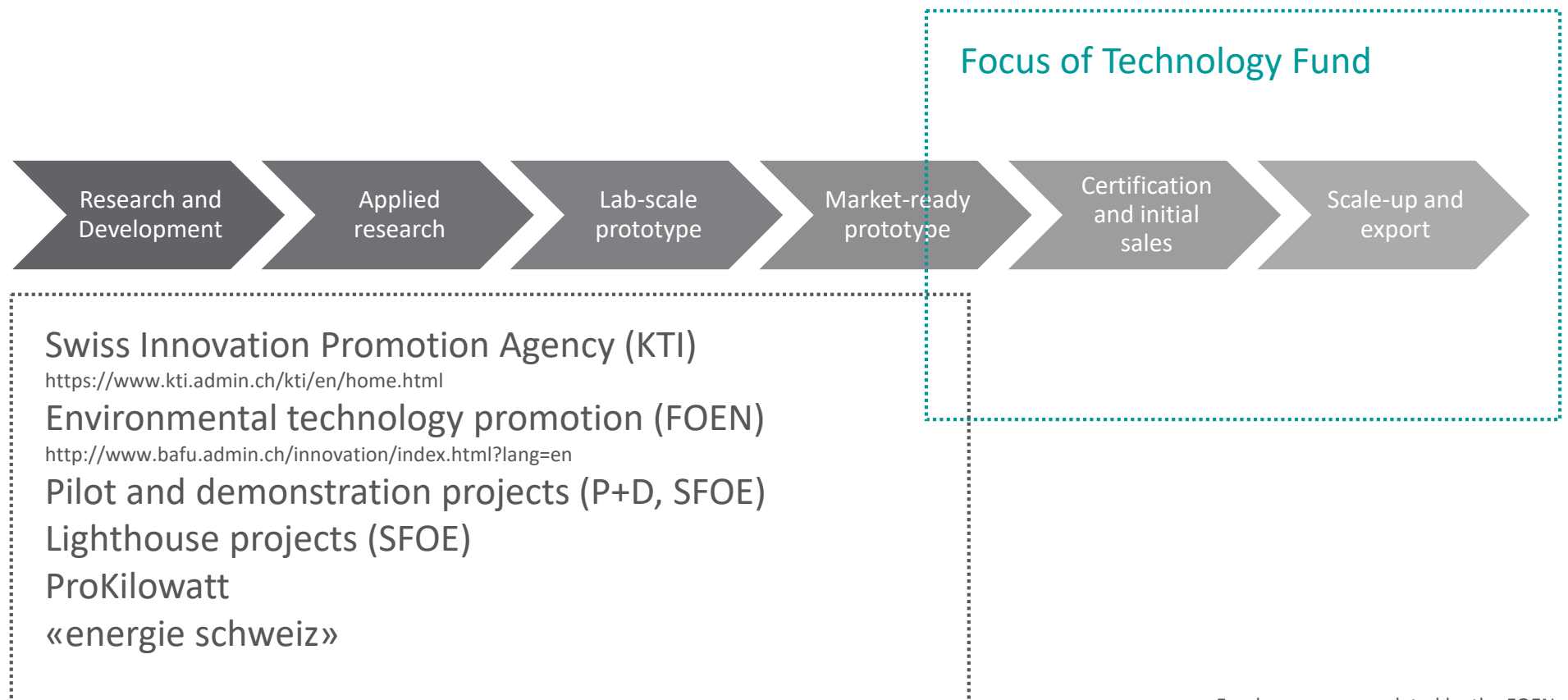
Negative decision

Possible at any time in the application process if the eligibility or creditworthiness criteria are not met. The applicant receives written notification.

Fund manager mandated by the FOEN:

Life cycle

Technology Fund for commercialization phase



Summary of applications

139 applications in various industries

Average requested
guarantee amount

CHF 1.5 m

Average number of employees at
applicant companies

14 employees

Average requested
duration of guarantees

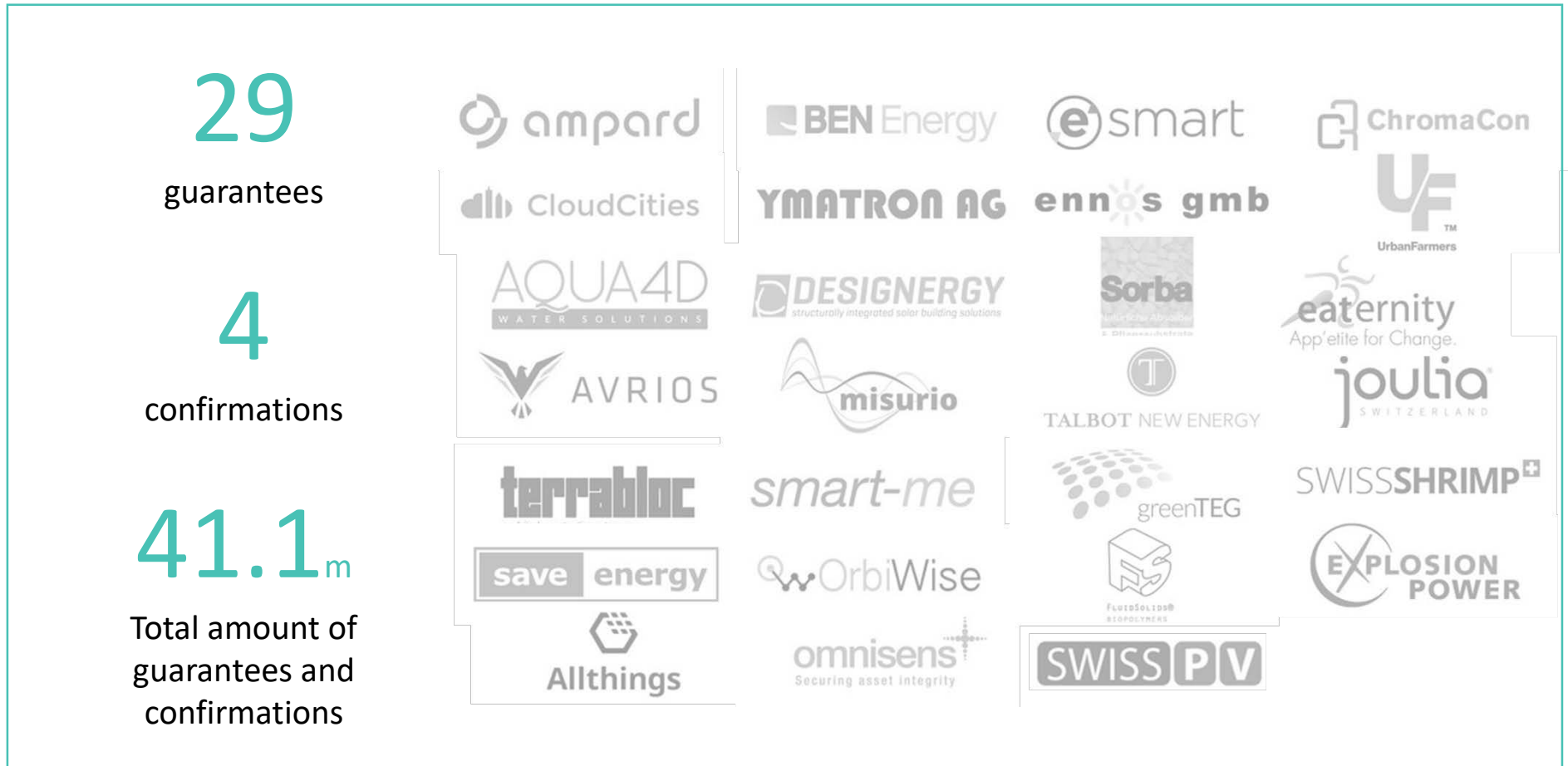
7 years

Companies founded
less than 5 years ago

>50%

Current portfolio

Innovative Swiss companies which have received a guarantee



Fund manager mandated by the FOEN:

Annex

Eligible technologies in more detail



Reduction of greenhouse gas emissions

Examples for eligible technologies/products:

Current production out of fossil fuels : micro turbines, Stirling engines, steam engines, Carbon Capture and Storage (CCS)

Heater, Ventilation, Air Conditioning (HVAC): Combined heat and power, improved conventional, fossil heating equipment, heat pumps, improved HVAC solutions

Mobility: infrastructure and logistics for electric vehicles, logistics solutions (such as rail traffic), bikes and e-bikes, car-pooling and related services, vehicles of lightweight construction, combustion engines, cleaning of waste gas

Smart Buildings: building insulation, smart windows

Energy retrieval: waste energy (waste-to-energy), waste heat recovery



Efficient utilization of electrical energy

Examples for eligible technologies/products:

Smart Buildings: Home Energy Management, LED's, innovative illuminating

Smart Grid: Components and software for the supervision, regulation and management of the grid, integration of renewable energy

Energy storage: Stationary batteries, systems of batterie management, hydrogen storage

Current transformation: inverters, electrical motors, components for electric hybrid vehicles, fuel cells



Promotion of renewable energies

Examples for eligible technologies/products:

Solar	Photovoltaic, solar thermal (systems, maintenance, optimization)
Bio-energy	Bioethanol, biogas, pellets
Hydro	Small hydro
Wind	Wind turbines (systems, maintenance, optimization)
Geothermal	Combined heat and power, Heat pumps



Conservation of natural resources

Examples for eligible technologies/products:

Industrial products / production processes: Innovations for lower usage of primary materials (e.g., building materials, «green cement»), avoidance or reduction of harmful emissions (e.g., alternatives for solvents, CFC-free refrigerators, exhaust gas filters), improved process efficiency (e.g., lean manufacturing)

Recycling: Processes for recycling and refining of resources, cradle-to-cradle design, raw material management

Agriculture and forestry: Reduction of fertilizer use, fertilizer-/crop rotation management, improvement of soil, intelligent watering, plant-health management, urban farming, sustainable agriculture and forestry, forestation

Organization

Fund managed by external agency

