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SOLAR IMPULSE
An example for a Cleantech application: a solar-powered aeroplane capable of flying day and night without the usage of any fuel.

Solar Impulse is an exemplary project in which innovative solutions from the fields of photovoltaics, battery technology, lightweight design and high-tech materials have formed a winning combination. At the same time, Solar Impulse typifies the quintessential Cleantech systems solution: every detail is designed to enhance functionality and to minimize energy consumption.
Preface

Today’s challenges such as climate change, increasing shortage of resources and pollution of the environment demonstrate unequivocally that the paradigm change towards a sustainable economy – towards Cleantech, in a word – is inevitable.

How is Switzerland to position itself within the changing paradigm? Is Switzerland to be among the winners or losers in a dramatically altered global economy?

Decisions of utmost importance are ahead of us, among them are the revision of the Swiss CO2 law (the bill is currently in the Swiss parliament), the United Nation’s climate negotiations for the succession plan of the Kyoto protocol (December 2010), and the electricity and energy agreement between Switzerland and the EU (ongoing).

If we want Switzerland to remain competitive while sporting a superior quality of life in the future, we have to recognize today’s challenges as opportunities. Our country should take the lead and approach the upcoming decisions in the spirit of sustainability, in order to position itself as an international front-runner of Cleantech. The odds are in our favour. We benefit from a great starting position when it comes to infrastructure, systemic and organizational expertise, competitiveness, the ‘Switzerland’ brand, and more. But opportunities do not turn into successes just by themselves. They have to be actively seized.

Cleantech is the future of the Swiss economy. Ours is an innovative country with people who embrace what lies ahead – by using and spreading our knowledge and our expertise. This is why we are enjoying enviable economic benefits already today.

Providing coming generations with a promising future is an honorable mission. By means of implementing Cleantech Strategy Switzerland we can avail ourselves exciting advantages – starting today. Please join us for Swiss Cleantech!

Nick Beglinger
President, swisscleantech
CEO, FFGS

Bertrand Piccard
President, swisscleantech patronage committee
President, Solar Impulse
Executive Summary
Our current global challenges and trends like population growth, rising standards of living, increased shortage of resources, and climate change, have given way to a general agreement: resource-efficient and emission-free business operations are becoming more and more important for competitiveness in the marketplace. Cleantech (i.e. sustainable business as a whole) has become a quality benchmark and an increasingly critical factor for business success.

The Swiss economy is in an **excellent starting position** to benefit from this development because it comes equipped with systemic and organizational Cleantech expertise in the business world, regulatory experience of the government and more success factors such as innovation, professional education and competitiveness. Equally important is the availability of sound professional knowledge in fields such as urban and regional planning, architecture, water and waste water management, recycling and waste processing, public mobility and sustainable finance management.

In order to seize this extraordinary economic and political opportunity we require a **forceful strategy towards a sustainable economy**. This is why the business association swisscleantech\(^1\) and the Foundation for Global Sustainability FFGS\(^3\) have jointly developed this ‘Cleantech Strategy Switzerland’. It is an exposé of basic assumptions, objectives and a call to action from the perspective of Swiss companies that think and act sustainably.

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1. swisscleantech adopts the cleantech definition of FFGS (http://www.ffgs.org/cleantech)
2. Business association swisscleantech (http://www.swisscleantech.ch)
3. Foundation For Global Sustainability (http://www.ffgs.org)
The Cleantech Strategy Switzerland is a pragmatic Cleantech endeavor complimentary to the Swiss government’s Cleantech Masterplan⁴ and similar national and regional initiatives. A central goal is to establish Switzerland as a prime research and engineering location and as an international Cleantech leader.

The Cleantech Strategy Switzerland sets the following five objectives for Switzerland:

1. to increase the security of energy supplies, as well as resource and energy efficiency
2. to create attractive jobs
3. to guarantee a high Swiss standard of living
4. to generate short- and long-term profits from fast-growing global Cleantech markets
5. to contribute to sustainable development on a global level

The Cleantech Strategy proposes a comprehensive approach consisting of three inter-connected provisions in order to achieve these goals:

The authors are convinced that sustainable and up-to-date business practices are only made possible through a consistent full-cost pricing, i.e. the proper inclusion of all external costs (e.g. in the case of CO₂ emissions through all external parameters). This enhances transparency and planning of corporate investment strategies, and creates clear incentives for innovation. Sustainability is systematically rewarded.

⁴ FDEA (OPET, SECO) in cooperation with DETEC (SFOE, FOEN) (http://www.cleantech.admin.ch)
A good example for this correlation is the **current revision of the Swiss CO2 law**. Switzerland should set itself an ambitious climate goal and aim for a total reduction of 40% (base year 1990). A 20% emissions reduction should be achieved nationwide through effective measures and a transparent regulatory framework. The remaining 20% would be reduced through measures abroad. This objective must be accompanied by confident communication and active participation of Switzerland in the negotiations of an international treaty.

Those three inter-connected provisions are of general and trans-sectoral nature. They are subdivided into **10 focus areas and 30 concrete action items** that are intended to facilitate the development of institutions, or to jumpstart clearly defined projects in a highly targeted way.

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**Figure 2.**
**Overview - provisions, focus areas and action items**

<table>
<thead>
<tr>
<th>Direction of Impact</th>
<th>Focus Areas</th>
<th>Action Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focus Cleantech</strong></td>
<td>Coordination, Information &amp; Networking</td>
<td>AI 01 Cleantech Contact Central, AI 02 Swiss Cleantech Information Services, AI 03 Swiss Cleantech Database for Innovative Projects and Companies, AI 04 National and International Events</td>
</tr>
<tr>
<td></td>
<td>Research &amp; Education</td>
<td>AI 05 Cleantech as a Research Focus, AI 06 Training Programs and Professional Education, AI 07 International Collaboration in Cleantech Research, AI 08 Cleantech Research Institutes and Labs, AI 09 Cleantech Focus in Technology Theme Parks, AI 10 National Cleantech Innovation Theme Parks</td>
</tr>
<tr>
<td></td>
<td>Financing</td>
<td>AI 11 Financial Instruments for Cleantech Development, AI 12 Support for Cleantech Investors, AI 13 International Cleantech Funding, AI 14 Investor Platforms Focusing on Cleantech</td>
</tr>
<tr>
<td></td>
<td>Pilot Projects &amp; Case Studies</td>
<td>AI 15 Cleantech Pilot Projects and Case Studies, AI 16 Large-scale Test Regions</td>
</tr>
<tr>
<td></td>
<td>Export &amp; Location Promotion</td>
<td>AI 17 Cleantech Export and Location Promotion, AI 18 Establishing Target Market Presence</td>
</tr>
<tr>
<td></td>
<td>Emissions Trading &amp; Development Cooperation</td>
<td>AI 19 Measures for CO2 Trade, AI 20 Interconnectivity between Emissions Reduction, Economic Development and Development Aid</td>
</tr>
<tr>
<td><strong>Clear Objectives</strong></td>
<td>Ambitious National Objectives for Cleantech</td>
<td>AI 21 Strategic Alignment of Swiss Climate Politics, AI 22 National Objective: 20% Reduction of CO2, AI 23 Foreign Objective: 20% Reduction of CO2, AI 24 Additional Objectives in other Fields of Sustainability</td>
</tr>
<tr>
<td></td>
<td>International Engagement</td>
<td>AI 25 Switzerland’s Role in Mexico and thereafter, AP 26 Target Values for other Cleantech Conventions</td>
</tr>
<tr>
<td><strong>Appropriate Framework</strong></td>
<td>Incentives System &amp; Internalization within Switzerland</td>
<td>AI 27 Consistent Internalization of External Costs within Switzerland, AI 28 Guidelines/Minimum Standards and Selective Development with Government Funds</td>
</tr>
<tr>
<td></td>
<td>Global Cooperation</td>
<td>AI 29 UN Cooperation for a Global Framework, AI 30 Active Bilateral Negotiations with the Authorities</td>
</tr>
</tbody>
</table>

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5 If it becomes apparent that the expected national objectives will be exceeded, the excessive national reductions can be offset against the foreign reduction objective, in order to achieve the projected total of 40% reduction.
One of the most critical success factors is the highest possible identification of Swiss Cleantech products and services with the 'Switzerland' brand. Many times in the past, we have seen that the "Swiss made" label was of enormous clout for Swiss businesses in the global markets. In the near future, Switzerland shall be as much associated with Cleantech ('Switzerland is Cleantech') as with tourism, watches and chocolate. Already existing attributes of Switzerland, such as the Swiss trademarks cleanliness, innovation, precision, and a highly functional infrastructure can be seen as ideal preconditions for Swiss Cleantech branding.

Key elements in its implementation are good coordination and close, new partnerships between business and government. This will create new challenges mainly for tasks such as information, communications, and networking. It must be guaranteed that regulative, educational and developmental initiatives are coordinated with the private sector in a professional and timely manner, that problems will be swiftly and efficiently solved, and that the Cleantech goals set provide economic incentives and allow for international positioning while being achievable in the real world. Industry and trade associations, and the scientific community can serve as an important link between public and private partners.

Implementing the Cleantech Strategy Switzerland offers great prospects to our country as a location for cutting-edge inventions, innovations and production – for present and future generations of Switzerland.

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Christian Häuselmann, Co-founder of swisscleantech

“Switzerland must ring Cleantech bells from Brussels to Beijing and Washington.”

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6 Examples for successful Swiss brandings with high degrees of identification are among others: watches, jewelry, chocolate, banking, cheese and tourism. Unique qualities of Swiss products and services are particularly reliability, top quality, longevity, and technological superiority; see IfM HSG and htp St. Gallen (2010): Swissness Worldwide.
swisscleantech is a Swiss Cleantech business association that stands in the tradition of liberalism and sustainability. Its aim is fourfold: to help Swiss Cleantech companies to coordinate their efforts, to represent their interests in politics, to establish Swiss Cleantech within the ‘Swiss Made’ brands and to offer direct services (www.swisscleantech.ch/services), reference projects (www.swisscleantech.ch/projekte) and other membership advantages.

swisscleantech’s most palpable objective (as outlined in the Cleantech Strategy Switzerland at hand) is to put Switzerland on the global Cleantech map. ‘Switzerland’ is not only supposed to evoke images of cheese and watches; our national imagery should also be globally associated with Cleantech.

swisscleantech was founded at the end of 2009 by Nick Beglinger, Christian Häuselmann and the Foundation for Global Sustainability (www.ffgs.org), as well as multiple partnering organizations (www.swisscleantech.ch/partner). Its present members are all among the pioneers of Cleantech in Switzerland.

Today swisscleantech can already count approx. 170 Swiss companies of various industries and sizes among its members.

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