

Paper for the 11th UIC Sustainability Conference  
 Category: "Energy efficiency and CO<sub>2</sub>"

### SBB's climate protection initiative




**Climate change is one of the biggest challenges of our time. Commitment to protecting the climate also presents SBB with tangible opportunities. As a company, we want to reduce our CO<sub>2</sub> emissions by 30% by 2020, thereby also cutting energy costs. In addition, SBB wants to make more proactive use of its strengths as a provider of climate-compatible mobility to press home its advantage in the competitive intermodal environment.**

SBB produces a total of 134,000 tonnes of CO<sub>2</sub> each year (2009), which is the equivalent of 0.4% of Switzerland's total direct emissions. As a result of the small amount of CO<sub>2</sub> produced in the provision of traction power, the majority of SBB's emissions come from building heating and from diesel engines.

The transport of freight and passengers by rail in Switzerland produces on average 20 times fewer CO<sub>2</sub> emissions than the equivalent road transport. This is thanks to the high energy-efficiency of rail, the almost complete electrification of the network, and the environmentally friendly way in which electricity for the rail network is produced: over 70% is from hydroelectric sources.

We need to make use of these strengths and continue to build on them. At the same time, SBB must adjust early to the possible consequences of climate change, which could pose a threat to infrastructure in the long term.

SBB is facing up to its challenges by pursuing a three-pronged strategy: climate-friendly mobility provided by a climate-conscious company based on climate-proof infrastructure.

Climate-friendly mobility	Climate-conscious company	Climate-proof infrastructure
<p>Promote the use of rail as an attractive contribution to climate protection</p> <ul style="list-style-type: none"> <li>Attractive offering as a fundamental requirement</li> <li>Development of products with a "climate bonus" (e.g. CO<sub>2</sub>-neutral freight transport)</li> <li>Optimisation of the offering throughout the mobility chain</li> <li>Information and training (e.g. web tools)</li> </ul> 	<p>Reduce CO<sub>2</sub> emissions from operations by 30% by 2020</p> <ul style="list-style-type: none"> <li>Action regarding buildings (in addition to energy-saving initiative)</li> <li>EcoDrive for diesel locomotives and road vehicles</li> <li>Technical enhancements for diesel locomotives</li> <li>Traction-related energy efficiency measures</li> </ul> 	<p>Maintain level of protection despite increasingly difficult climatic conditions</p> <ul style="list-style-type: none"> <li>Incident monitoring</li> <li>Warning and alarm systems</li> <li>Continuation of existing protective measures</li> <li>Assessment of the need for resources and required level of protection</li> <li>Crisis management</li> </ul> 

The strategic pillar "climate-conscious company" of the climate-protection programme supplements the SBB energy-saving initiative. Whereas SBB's energy-saving targets are met principally through measures in electric train operations, the climate-protection programme focuses more on heating systems in buildings, on shunting locomotives and on construction and road vehicles. In spite of growth predictions, SBB has set itself the target of an absolute reduction in CO<sub>2</sub> by 30% compared with 1990 levels. And this in the knowledge that the major challenges of climate change require us to make reductions in all areas of the company.

Beyond reducing CO<sub>2</sub> emissions within the company, there is a far greater impact on national CO<sub>2</sub>-reductions by transferring mobility from road to rail. This is where the pillar "climate-friendly mobility" comes in. The goal is for the climate argument to be used far more in political debates, to help create more favourable operating conditions for more attractive rail services. The potential for transfer from road to rail should be exploited through active environmental marketing. In addition, measures should be encouraged in a targeted fashion to remove barriers to switching to rail (e.g. intermodal transport, first/last mile services, door-to-door concepts, ticketing, information and education).

Even though the focus of efforts to protect the environment today must be on the reduction of greenhouse gas emissions, we cannot let the change that we are starting to see – and the danger that goes with it – out of our sight. The extreme conditions that are to be expected more frequently in the long term as a result of an increase in global temperature, in particular heat waves, high water levels, landslides and stronger storms, will all have an effect on rail operations. Based on the long investment cycles for infrastructure, it is important to have an early event monitoring system and a planning process based on future climatic conditions, and these are set out in the strategic pillar "climate-proof infrastructure".

SBB's climate-protection programme was launched into the public eye in December 2009 when SBB's own Climate Express travelled to the climate conference in Copenhagen. On board were Swiss Federal Councillor Moritz Leuenberger and numerous other guests from the worlds of politics and business, together with representatives of non-governmental organisations, the media and young people. We were able successfully to use the attention generated by this event to showcase the motivating influence of the transfer from road to rail as a means of protecting the climate and creating a sustainable transport system.