



<b>Cooling Device</b>	<b>Inventor + Beck&amp;Partner</b>
<b>Target</b>	The target is to build a proof-of-concept machine that uses a variant of the Linde-process to provide cooling load with low-temperature waste-heat or solar heat.
<b>Long-term Perspective</b>	The machine promises to revolutionize the cooling for temperatures between -50°C and -20°C. If proven, it will make the process much more energy efficient and reduce cost and emissions.
<b>Sum of Investment</b>	Around 70.000,- for the proof, another 250.000,- for preparation of serial product. Later on funding for market entry and production buildup.
<b>Procedure</b>	<ol style="list-style-type: none"><li>1) Building the proof-of-concept</li><li>2) Measuring and reviewing it by independent laboratory</li><li>3) Final definition of the target market</li><li>4) developing of product / range of products for launch in this market</li></ol>
<b>Participation</b>	SGC funds development for stage 1+2
<b>Majority Owner</b>	SGC
<b>Additional Shareholders</b>	Management, user or industrial producer of cooling or AC
<b>Technical / Scientific Support</b>	Austrian Bioenergy Center, Technical University Graz, others on demand
<b>USP</b>	A large part (maybe even all!) of the energy for cooling will be replaced by waste heat, solar thermal heat or ambient heat (in hot countries). The process is simple, but includes several innovative ideas.
<b>Market</b>	Cooling / freezing to low temperatures, air condition, chemical industry. In a later variant it could also work as a motor that runs on waste-heat.
<b>Competition</b>	Cooling devices already on the market, heat pumps on the market and in development
<b>Technical Status</b>	Two of the three main processes are already tested, the third part is under tests now. A combination of the three processes would be the proof-of-concept. This has to be done and tested under lab-controlled situations.
<b>Risk</b>	The main risk is that the losses from mechanical engineering and



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	temperature leaks reduce the efficiency too much. The result could be that the advantage in energy consumption is eaten up by the losses. Careful engineering is required.
<b>Exit-variants</b>	Depending on positive result in stage 1+2, SCG has to decide to build up the company, to license it or to sell it.