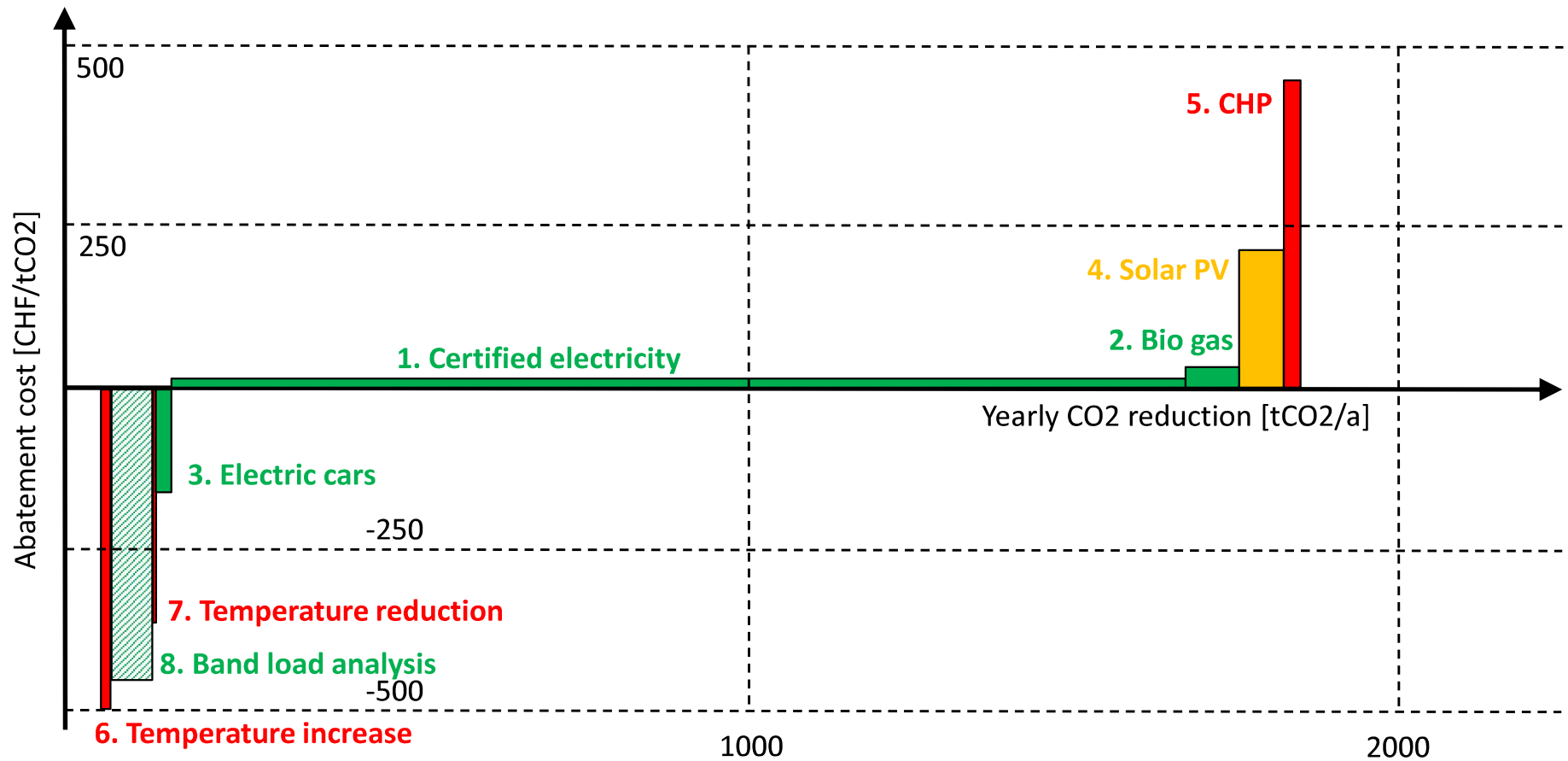


- Georg Fischer Machining Solutions (GFMS) is starting a project aiming at reducing energy consumption and CO2 emissions at their operating sites.
- A pilot project is therefore being implemented at the following Swiss locations:
 - Biel
 - Langnau
 - Losone

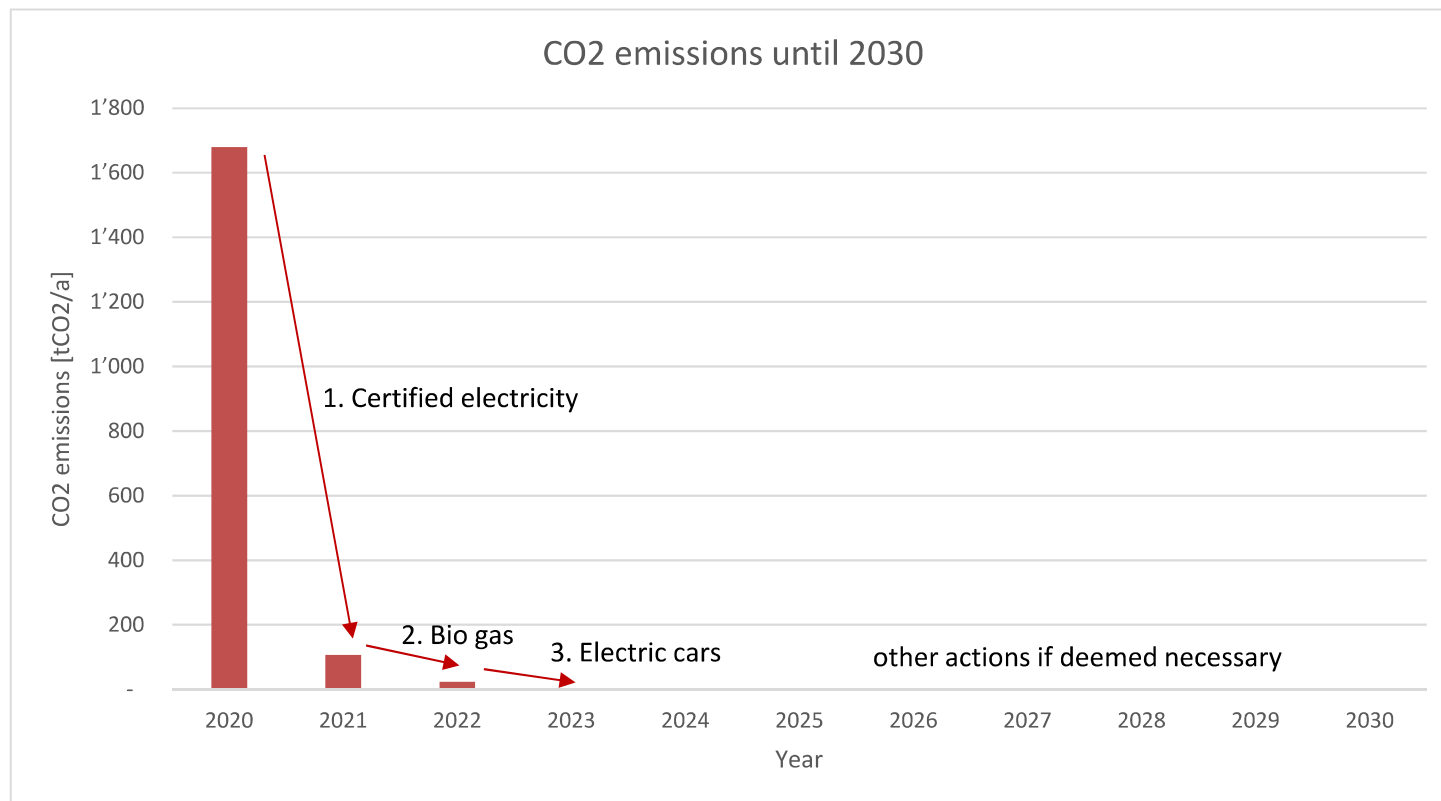
- The following actions were more detailedly examined
- Actions with high CO2 reduction potential and low abatement cost are preferred

Summary of actions	CO2 Reduction [tCO2/a]	Abatement cost [CHF/tCO2]	Yearly cost [CHF/a]	Priority
1- Certified electricity	1'572	14	22'222	High
2 - Bio-gas	83	32	2'633	High
3 - Electric cars	24	-159	-3'754	High
4 - Solar PV	69	213	14'737	Medium
5 - CHP	26	476	12'433	Low
6 - Temperature reduction (Winter)	5	-361	-1'680	Low
7 - Temperature increase (Summer)	15	-495	-7'302	Low
8 - Electric band load analysis	63	-450	-28'367	High

- Marginal Abatement Cost Curve



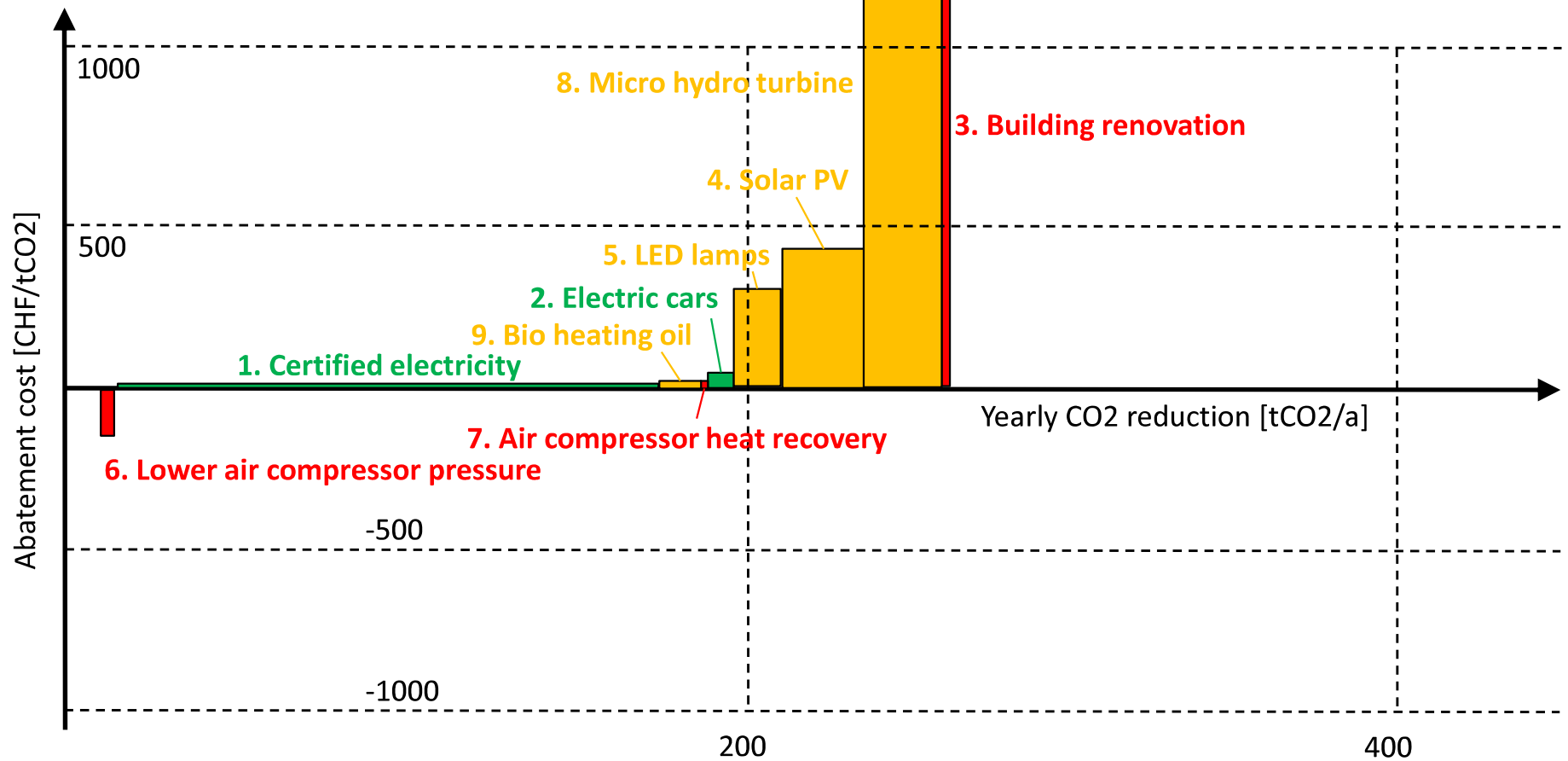
- With Actions 1-3, site can become CO₂-neutral in short time



- The following actions were more detailedly examined
- Actions with high CO2 reduction potential and low abatement cost are preferred

Summary of actions	CO2 Reduction [tCO2/a]	Abatement cost [CHF/tCO2]	Yearly cost [CHF/a]	Priority
1. Certified electricity	168	14	2'371	High
2. Electric cars	8	47	382	High
3. Building renovation	4	295'159	1'051'237	Low
4. Solar PV	26	431	11'130	Medium
5. LED lamps	15	301	4'384	High
6. Air compressor pressure	4	-142	-582	Low
7. Air compressor heat recovery	2	24	51	Low
8. Micro hydro power	24	1'322	31'976	Medium
9. Bio heating oil	13	23	299	Medium

- Marginal Abatement Cost Curve



Decarbonisation - Intro Langnau - Path to Decarbonisation

- Site can become CO₂-neutral in short time
 - Can bio heating oil be used?

