

# Martens knock out solar power system

Structural provisions protect against damage from gnawing

**Martens bite through electrical cables not only in cars – solar power systems also get nibbled. While insurance covering such damage is available, there's a better solution: Protective measures prevent damage.**

Some 14,000 solar power systems are installed each year in Switzerland. Last summer, Franziska Göhl also had solar collectors installed on her flat-roofed home in Winterthur, Zurich Canton. Price tag: 16,000 Swiss francs. Measuring about 6 square metres in size, the system uses solar energy to generate hot water for home use.

Five months later, the installation no longer functions. „Suddenly there was no more hot water“, recalls Göhl. The service technician quickly identified the cause: Up on the roof, a marten had gnawed away at the insulation at a number of places on a control cable, in some locations completely severing the cable. Annoyed, Göhl exclaims that, „In such an exposed location on an easily accessible flat roof, the contractor should have provided some other form of cable protection, or at least warned me about this hazard.“ At least the company repaired the system free of charge. Until recently, damage to solar power systems caused by gnawing martens has not been a major



**Martens:** These rodents love cables ñ on rooftops as well

issue in Switzerland. By contrast, many installation contractors in Germany meanwhile clarify early in planning whether a building lies in an area that is home to higher than average marten populations. Christian Lübke, speaker of the German Insurance Association (GDV), confirms the need for caution: „Yes, major difficulties arise with photovoltaic lines, particularly in rural

regions.“ One good way of protecting solar power systems against martens is to implement appropriate structural provisions. Here's what to look for:

## • On-roof systems:

Solar power systems mounted on top of an existing roof are exposed to particularly high risk, as the cabling is easily accessible to animals.

• **In-roof systems:** Such systems form a constituent part of a roof or facade. Hence, system cables are routed from the house interior directly into the panels, and thus much more difficult for martens to get at.

• **Price:** Costs of structural provisions can mount up quickly to several hundred Swiss francs. Such measures can be

implemented more economically if they're considered already in the planning phase.

• **Wire mesh:** Surrounding cables or panels in finely woven wire mesh provides effective and inexpensive protection.

• **Cable ducts and conduits:** Laying electric cable through ducts, conduits or iron piping is likewise a good means of protection. However, the costs entailed make backfitting such hardware less recommendable.

• **Rodent-resistant cable:** Solar cables sheathed in stainless steel braiding offer good protection. However, they are about three times more expensive than normal cable, with 100 metres costing some CHF 900.–. Such cables are available e.g. from Helukabel.de and Alpha-kabeltechnik.de.

Daniel Jaggi

## What insuring against marten damage will cost

While no cantonal fire insurance or private building insurance in Switzerland covers damage to solar power systems caused by gnawing martens, private insurers offer special coverage for such damage.

The annual premiums charged by various insurers for an average-sized system (valued at CHF 20,000) are presented below. It should be noted that the other scopes of coverage offered by these policies differ from policy to policy:

- **Axa:** Machinery insurance, CHF 200.–
- **Helvetia:** Building services insurance, CHF 95.–
- **Swiss Mobiliar:** Building services insurance, CHF 200.–
- **National Suisse:** Animal damage insurance, CHF 60.–
- **Vaudoise:** «Home in one» insurance, CHF 32.30; deductible: CHF 200.–

- **Zürich:** Marten damage insurance, CHF 32.– (only available in combination with building water damage coverage)

Any backfitting of solar power systems to existing buildings must be reported to the building insurer without fail. All building insurers will meanwhile insure such equipment against fire and damage from natural hazards. The additional premium to insure a system worth CHF 20,000.– ranges from CHF 5.– to 33.– per year.