Renovate Rather Than Demolish: the Most Frugal Move Starts with the Roof

The greenest building is often the one you don't demolish.

In construction, most emissions come not from use, but from building — and above all from demolition. As Switzerland aims for net zero, treating the envelope rather than rebuilding it is the most coherent choice. And the most local.

By Joël Kohli, Founder & Director



Demolishing means producing waste and releasing carbon already spent. Renovating the envelope means preserving what exists and adding only what is needed.

There is a persistent idea in construction: to make a building high-performing, you must demolish it and rebuild to the latest standards. The intuition seems logical. From a climate standpoint, it is often wrong.

For a building that already exists has a decisive advantage: **its carbon is already spent.** Demolishing it to replace it means erasing that capital, producing a mountain of waste, then emitting again to rebuild. Conversely, renovating it means preserving what exists and adding only the strict minimum. As the Confederation aims for net zero, this equation is no longer merely ecological: it is becoming regulatory.

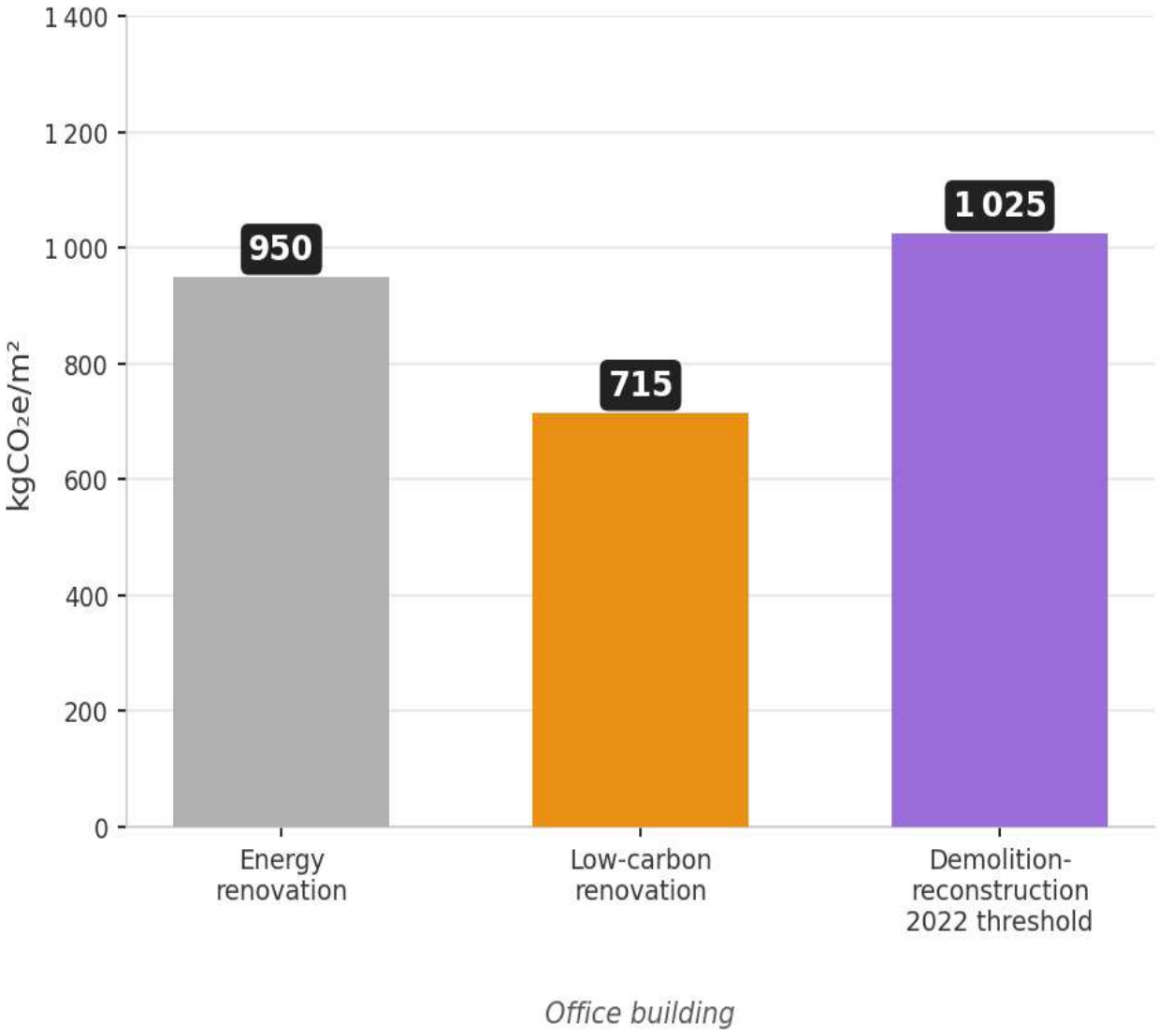
The Hidden Carbon: Embodied Energy

For a long time, a building's footprint was reduced to its heating consumption. That is an outdated view. A building's emissions actually fall into two broad categories:

- **Operational emissions** — heating, air conditioning, electricity, throughout the building's life.
- **"Embodied" emissions** — those contained in the materials themselves: extraction, manufacture, transport, installation… and, at end of life, demolition, removal and disposal of waste.

Now, as new buildings become frugal in use, it is embodied energy that weighs more and more heavily. For a new building powered by renewable energy, embodied energy can even exceed operational energy over the building's entire lifetime. And within that embodied energy, **end of life — demolition, transport and waste treatment — concentrates a considerable share of the emissions**, at the very moment when one thought “building new means building clean.”

Demolishing to rebuild therefore means paying twice: **once to destroy, once to rebuild.**



*A building's emissions are not limited to heating: embodied energy — materials, transport, demolition, waste — weighs more and more heavily as new builds become frugal in use. Source : Hub des prescripteurs bas carbone (IFPEB). * the 3 case studies are in high-demand zones (France).*

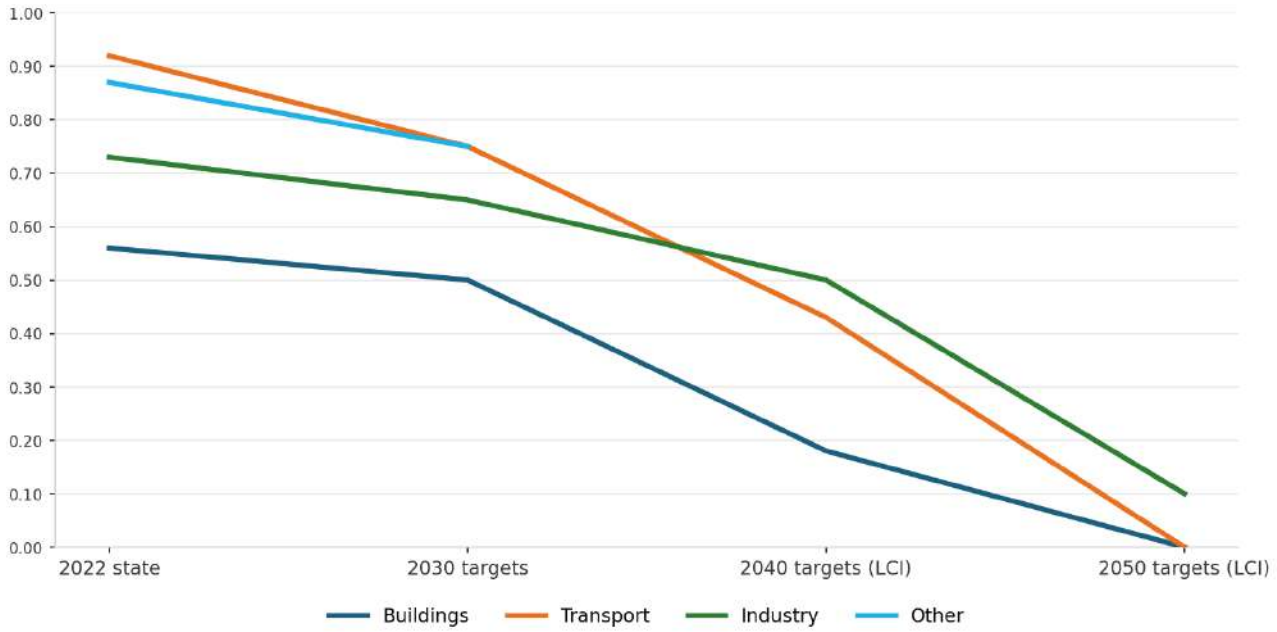
What Switzerland Is Aiming For — and Why It Concerns You

The framework is no longer a distant intention. It is set, dated, and reaches down to the cantons.

In Switzerland, the construction sector accounts for **about one-third of CO_2 emissions** and nearly **40% of energy consumption**: it is one of the three major levers of national climate policy. The Climate and Innovation Act sets two milestones: **halving emissions by 2030** (compared with 1990), and reaching **net zero emissions by 2050**.

A new and decisive development: in August 2025, the Federal Council confirmed that the **cantons will have to set limit values for embodied energy** — that is, the energy needed to manufacture, transport, store and dispose of construction products — not only for new builds, but also for **major renovations of existing buildings.**

In other words: the carbon of demolition and materials officially enters the equation. And on this ground, renovation starts with a considerable head start — because a renovated building counts only the emissions of the renovation works, not those of a complete reconstruction.



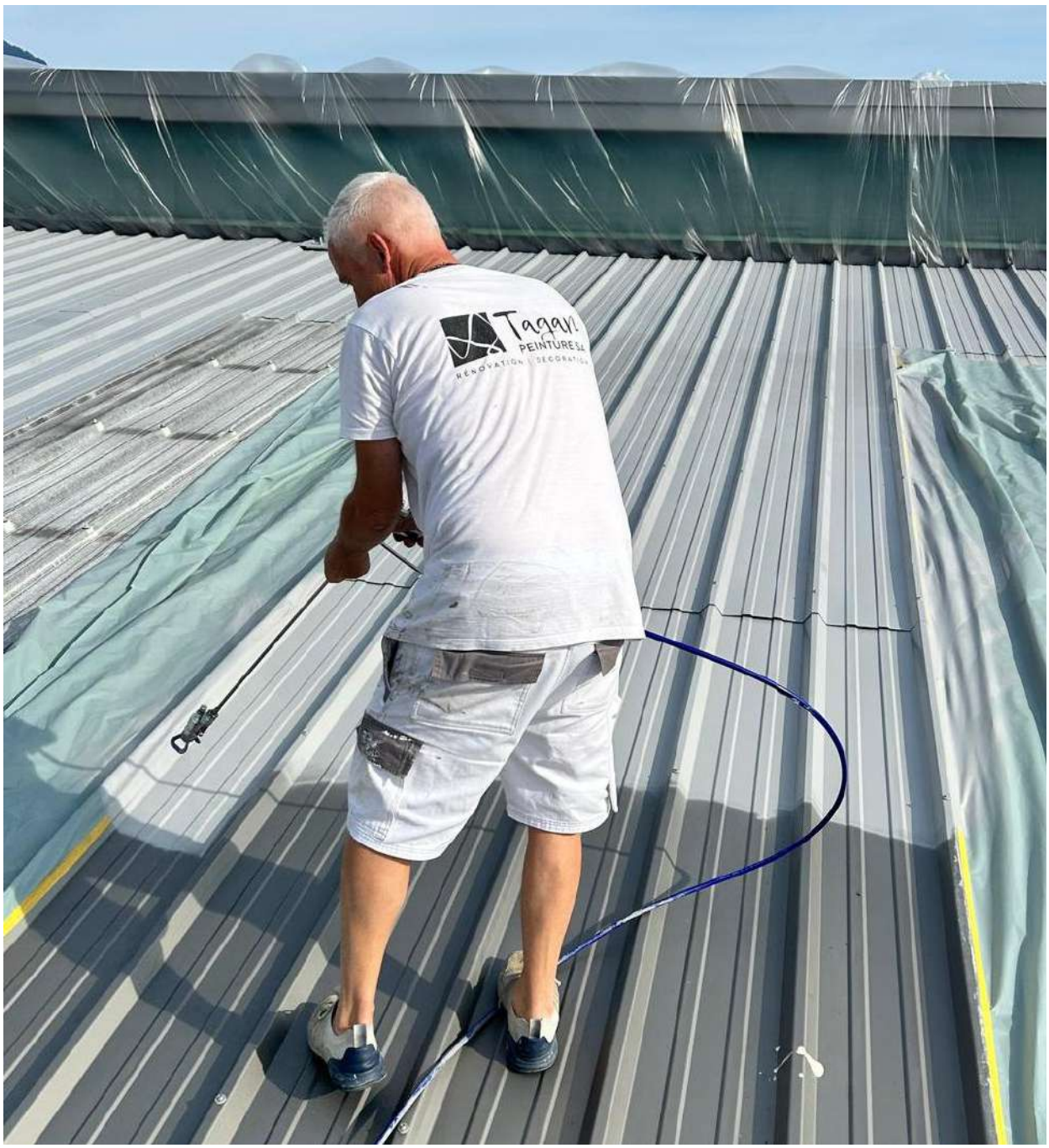
The framework is set: -50% emissions by 2030, net zero emissions by 2050. And from now on, the carbon of demolition and materials officially enters the equation. (Source : ecoLive.ch)

Why Thermo-Reflective Is an Ideal Renovation Tool

In this logic of frugal renovation, thermo-reflective treatment of the envelope ticks every box. It improves the building's performance **without demolishing anything, without replacing anything, without producing waste.**

On **roofs**, it reflects up to 91% of solar radiation, reduces summer overheating, and extends the life of the existing waterproofing — pushing back a heavy overhaul accordingly. On **façades**, outer and inner alike, it acts on summer heating and winter heat loss. On **glazing**, a transparent solar-control treatment cuts the heat without touching the structure.

In each case, the principle is the same: **a thin functional layer is added to what exists, instead of discarding it.** It is a light, fast intervention, reversible on certain surfaces, and above all of very low embodied energy — the exact opposite of demolition-reconstruction. For a building that must gain performance without blowing up its carbon balance, it is the most direct route.



Treat rather than replace: a thin functional layer added to the existing structure, without removal, without waste, with very low embodied energy. (THERM'Reflectis (Suisse) Sàrl applicator : Tagan Peinture SA, Bex)

The Short Supply Chain: Frugality All the Way to the Site

There is a second, often forgotten dimension to the carbon frugality of a renovation: **who carries out the work, and where the skills come from.**

The THERM'Reflectis model rests on a simple principle: **mobilising as many local skills as possible.** Assessment, planning, certified application, monitoring of gains — all steps entrusted to local players rather than to distant supply chains. This short supply chain has a threefold virtue: it **reduces transport-related emissions** and logistics; it **anchors value in the regional economic fabric**; and it guarantees **on-site follow-up** that only a local presence allows.

Renovating rather than demolishing is already a frugal choice. Doing it with local skills pushes that frugality to the end of the chain — from the assessment to the last stroke of the roller.



A project entrusted to local skills: less transport, value anchored in the regional fabric, and on-site follow-up as close as possible to the building, in keeping with CSR values (Corporate Social Responsibility).

A Concrete Case: Extend Rather Than Redo

The example of a roof says it better than a long speech. Faced with an ageing roof, the reflex is often a complete overhaul — removal, disposal, new waterproofing. Heavy, costly, emitting.

The thermo-reflective alternative offers another path: **treating the existing roof to protect it, cool it and extend its service life**, pushing back the deadline for an overhaul by several years. No waste is produced, nothing is replaced, the asset in place is enhanced. This is precisely the kind of approach that makes sense for a public or community facility, where every franc and every tonne of CO_2 avoided counts — and must be justified to citizens.

An Envelope, Not a Demolition

The greenest building is not the newest. It is, very often, the one we managed to keep, improve and extend rather than raze.

As Switzerland writes carbon reduction into law — demolition and materials included — renovating the envelope ceases to be a “default” alternative and becomes **the smartest strategy**: less waste, fewer embodied emissions, less transport, an extended asset, and value anchored locally.

Before demolishing, let's ask the right question: **what if it all started by treating what is already there?**

Sources *: FOEN / SFOE — The construction sector, ~⅓ of CO_2 emissions and ~40% of energy consumption in Switzerland · Federal Council — Report on the compatibility of the construction sector with net zero, 20 August 2025 (embodied-energy limit values for new builds and major renovations) · Climate and Innovation Act (CIA) — targets -50% in 2030 and net zero in 2050 · SIA 380/1, 2025 Building Standard · ecobau — embodied energy and building life cycle*

Do you manage a building, a public facility or a real-estate portfolio in need of renovation? Before considering heavy works, let's talk about what the existing envelope can still offer.

👉 **Request a THERM'Reflectis assessment**

Cool, Reduce, Reflect — naturally.

Our 4-step approach:

Assessment *— thermal and structural →* ***Planning*** *— tailored →* ***Application*** *— certified →* ***Monitoring*** *of gains*

Was your building designed to meet this new challenge?

Your potential is unique. Whether it is an industrial site, an eco-district project, urban heritage or a service building, THERM'Reflectis has the expertise to reveal it fully.

> ***Do not let this potential lie dormant.***
> ***Every surface counts.***
> ***Every degree gained makes a difference.***
> ***Every project contributes to a more sustainable future.***

Contact THERM'Reflectis: let's turn your potential into performance together!

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“Revealing the hidden potential of every surface to build the sustainable Switzerland of tomorrow. Your project, our mission.”