



SO, WHAT'S NEW IN METAL OVER METAL RETROFIT ROOFING?

Innovation is always taking place in the construction industry. New ways to do things, better products and faster, more accurate data to do our designs with. This is especially true in the retrofit metal roof industry.

Retrofitting of an existing building is becoming ever more technical than it was in the early 90's when I began doing retrofits. Uniform loading of the roof design is a thing of the past. We now have corner zone, edge zone, ridge zone wind load areas. We have unbalanced snow loading along with ever higher ground snow and wind speed designs.

This is not really news to any of you that have been involved in new or retrofit construction. What is changing the retrofit business is the addition of photovoltaic panels installed on older metal roofs.



Roof Hugger file photo

As the country becomes more and more energy conscience and the cost of electricity continues to increase adding photovoltaics after retrofitting with a new roof makes really good sense.

1. Metal roofing is the only roofing material that has a service life exceeding the life of the solar panels.
2. The cost of the solar panels is often reduced by local and federal tax credits.
3. Many utility companies will buy the excess electricity the panels generate.
4. The building owner has their utility bill reduced.



5. The panels can also be installed with specialized roof clamps that eliminate penetrations and potential leaks, in the new roof panels.
6. The portion of the retrofitted roof that supports the solar panels may be qualify for accelerated depreciation.

All good right? You know it is, except for one small detail, the WEIGHT. New solar panels can add 6 Lbs./sq. ft. or more. That is a lot to ask the old metal building purlins, that were never designed for that load, to support .

Now the question becomes how do you deal with this additional dead load? In the past we would typically have to go inside the existing building, and try to add additional purlins to handle the weight. This is a slow, difficult, expensive process. If it is over an office area, the only way to accomplish this is to remove the old roof purlins and install additional ones at the needed spacing and then reroof.

Fortunately for our industry, notched zee, retrofit sub-purlins have been proven to add additional capacity to the existing purlins. Depending on the existing buildings construction load increases of 6-12 lbs./sq. ft. have been accomplished.



AISI Continuous Span Base Load Test courtesy Roof Hugger

A structural analysis will need to be done because not all buildings will enjoy this increase but most will. This makes retrofitting with the thought of adding solar panels now or in the future a no-brainer. It can also make the cost of the roof retrofit much more affordable.

Ask your panel supplier or retrofit framing supplier about this feature on your next re-roofing project.