

# Bitumen roofing can be recycled... but isn't

September 30 2013, by Thijs Westerbeek

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Bitumen, the sticky, gooey black stuff you sometimes see oozing out of hot road surfaces, is a valuable binding agent. Not only in road building. But also in construction and in the production of roofing materials. What is more, it is of fossil origin—being petroleum based—and therefore a candidate for recycling. Over the past five years, Icopal, a company in the Dutch city of Groningen has developed a method of recycling bitumen called BiELSo. In order to introduce the process to other European countries, the EU supported the ECOPROTECTION programme. Yet, until now, a Dutch demonstration plant is the only one of its kind. Richard Zandvoort, the R&D manager of Icopal, tells [youris.com](http://youris.com) why.

## **Could you describe your technology?**

BiELSo' stands for Bitumen Endless Life Solutions. What we do is collect old materials containing bitumen. Most of this material comes from roofing felt. Then, we shred it, heat it, drain off the molten bitumen, and sieve away all contaminants like glass fibres, wood and stones. We then mix the recycled bitumen with just a little bit of virgin bitumen and use the mixture to produce new roofing felt of the same quality. Every square meter of roofing we produce in this fashion reduces CO2 emissions by as much as a car produces while driving one kilometre.

## **It sounds almost too simple, were there no technical problems at all during development?**

Yes. It was quite difficult to control the exact temperature of the melting process. Too high and the bitumen is separated into other chemicals. Too low and it does not seep out of the solid materials. We also had a hard time sieving it since it is really viscous and sticky. But we resolved all that issue and the recycling plant has been in operation since 2008.

## **How much of the bitumen in Europe is being recycled now?**

Sadly only a few tonnes—a fraction of the 500 kilotonnes of bituminous waste per year in North-Western Europe alone. From our own experience, it was very difficult to introduce the technology to other EU countries. The idea behind project was to set up four new demonstration plants in Belgium, Germany, the UK and Denmark. But when the project ended in January 2012 none of that had been accomplished.

## What went wrong?

The old methods of disposing of the bituminous materials are, in fact, cheaper. It is simply landfilled, or incinerated. Furthermore, many EU countries have invested heavily in waste-to-energy plants and these need fuel. The fact that bitumen is now three times as expensive as it was in 2008 is not enough to compensate for that. So it is the policymakers that are in the way.

## What could be the solution?

It is mostly a matter of money, I am afraid. And that leads to three possible solutions. First, our recycling process could be subsidised. This is attractive from our point of view. But it seems unlikely that EU governments would be willing to do that in the midst of an economic crisis. Second, recycling bituminous materials could be made compulsory. This would probably work, but then you need a controlling system and inspectors. That is expensive. So, probably, the taxpayers would have to come up with the funding. Third solution, landfilling and burning bitumen in waste-to-energy plants could be taxed. Governments would undoubtedly like that, so policy makers will probably prefer this solution. But sadly it will make the relatively green energy from these plants more expensive.

**More information:** [www.icopal.co.uk/](http://www.icopal.co.uk/)

Provided by Youris.com

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