

Tyre-power can slash power bills — consultant

Consultant claims he offers a shortcut to tyres-to-energy profitability.

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It is my dream to build one — at least one — of these in the next five years.

Grégoire Jovicic

Paris — Grégoire Jovicic claims to know more about tyres-to-energy systems than most. And he aims to earn a living by selling that expertise.

Jovicic, a consulting engineer, said he has spent three years and €600 000 of his own money investigating all possible options for tyres-to-energy projects, and can use that expertise to help tyre manufacturers to reduce their energy bills.

Jovicic's key claim is that a typical tyre factory scraps up to four percent of production because of manufacturing defects. These tyres, he said, have sufficient energy to power the steam generators used in the curing department. Instead of paying up to €200/tonne to dispose of scrapped tyres, said Jovicic, tyre makers can burn them and reduce energy bills.

Jovicic cited a research project carried out for a small tyre maker in Europe producing 20 000 tonnes of scrap tyres each year, and paying €6 million to generate steam to feed the curing presses. A €20 million tyres-to-energy plant would have a pay-back of around three to four years, he said.

Jovicic said he has visited almost every tyres-to-energy facility in the world, and

understands the strengths and limitations of each technology, from fluidised beds (at Bridgestone's plant in Tochigi, Japan) to more conventional inclined kilns (similar to cement kilns) and rotating kilns with or without oscillating grates.

He added that his interest in tyre-burning facilities began when he discovered that the ash from a tyre burning facility is 53 per cent zinc oxide and 33 percent elemental zinc. Jovicic said, "we need a cooperation programme with a tyre maker to refine it and then sell zinc oxide with better than 99 percent purity for re-use. No-one is working on this today."

He said he knows about capital costs as well as running costs and the potential incidents at each type of plant. "I have data on the expenses of each plant and the benefits and drawbacks of each system. Not on all units worldwide, but I have also seen all the incident reports over 10 years at these plants, so I can do serious independent work looking at the technologies of many operators."

He contrasted this multi-technology approach with that of other potential vendors who have only one technology — such as rotating kilns — to sell.

Jovicic, speaking exclusively to ERJ during a 21 November interview, said he has three stages of project. The initial pre-feasibility study, which costs around €100 000, would propose a project and get to within 30 percent of the final project costs, he said.

The second phase is a full feasibility study, which costs up to €500 000, but will reduce the uncertainty to ±5 percent, according to Jovicic. He said the costs of such a study will vary enormously depending on the geographic region and the precise details of the tyre manufacturing operation at the site.

Jovicic said, "we can offer huge amounts of experience in technology; legal issues and commercial information." Jovicic also claims that he is able to offer advice on the safe handling of used tyres. He added that tyre storage depots are notorious for catching fire.

The final stage is a design and build project. Jovicic said he could be flexible on the fee basis for such a big project, and would certainly look at a fee based on the overall savings generated.

He said that any tyre company could try to get the same depth of research as he offers, but it would take three years and involve much greater cost than running a pre-feasibility study. And besides, he asked, "Would other tyre makers who operate these plants be willing to talk with them?"

Jovicic said he has held meaningful conversations with Continental, Goodyear and some minor players.

In summary, said Jovicic, there are 430 tyre factories around the world and only five of them operate a tyre-burning plant. "This is one percent so there are many opportunities to develop this business. It is certain that one plant, somewhere in the world will want to do the same thing, but which one?"

He concluded, saying, "it is my dream to build one — at least one — of these in the next five years."

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