

Frying Food, Displacing Fossil Fuels By Joe Ackerman Plastic Tour of 2022



How does systemic change and personal action affect climate change? When they intersect. If you save your used cooking oil, AND a local program exists to collect that oil, AND an industry exists to convert it to biodiesel, AND national regulations require a minimum content of biodiesel in commercial diesel fuel, then you have a steady demand that can support the collection infrastructure. You have cooking waste displacing fossil fuels.



In northern Austria, a program exists that does all these things. It has been running for 20 years, collecting from households and restaurants. Here's how it works: from local recycling depots (there are 179 in the district), you pick up a plastic pail and return it when it is full (3 or 25 litre, depending on how much you like to make samosas). The pails are shipped to the central facility in Wels, where the oil is removed and the pails are cleaned and dried to be reused again. Some pails have been in constant use for 15 years and broken or cracked pails are sent off to be recycled back into pails.



The emptying process involves warming the oil to 60° C (so it flows better) and scraping out the crunchies at the bottom (this collected sludge is shipped to be incinerated for electricity). The pails are washed and dried and the oil is transferred to large holding tanks (30,000 litres) where it is picked up by tanker once a week. With carbon credits and biodiesel price, cooking oil nets about 1 euro/L and provides cash for other parts of their recycling system. Austria and Germany mandate diesel fuel must contain 7% biodiesel. In Canada we require only 2%.

Thanks to Christian Ehrenguber at LAVU GmbH in Wels, Austria for the tour. Cooking oil recycling is featured in a video about LAVU: <https://www.youtube.com/watch?v=LOT3PtW9z7s>

Dr Joe Ackerman manages the Sustainability in Action Facility at the University of Manitoba. He was sponsored by the Department of Biosystems Engineering to travel to Europe in 2022 to learn what technologies are being used to recycle plastic.