

# Hydrodec of North America, LLC

*Good for business, good for the planet*

## **Hydrodec response to the U.S. Department of Energy's 2019 Review on the Beneficial Reuse Options for Used Lubricating Oil**

### Carbon Credits (Environmental Attributes\*) & Used Oil

Hydrodec has been invited to provide a response to the U.S. Department of Energy's 2019 Stakeholder Workshop on the Beneficial Reuse Options for Used Lubricating Oil held on October 16, 2019.

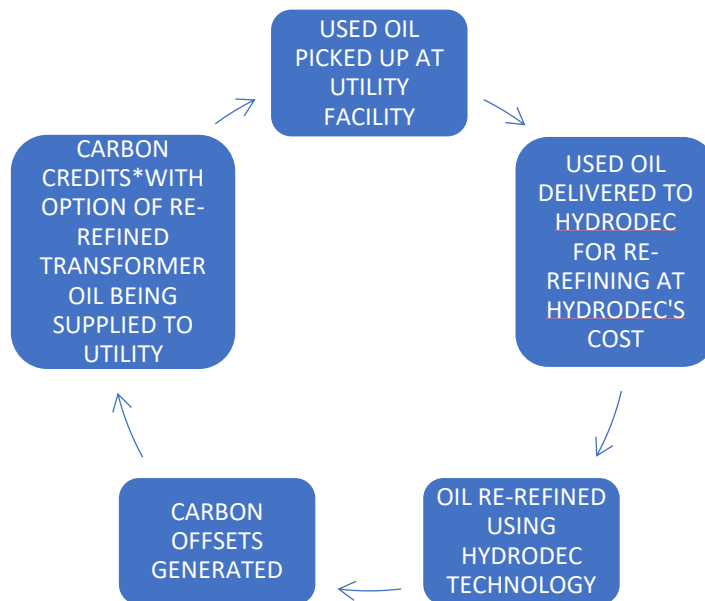
Hydrodec is engaged in the business of re-refining used transformer oil to standards comparable with new transformer oil. It collects used transformer oil from utilities and government facilities when separated from end-of-life transformers in the field, either at the end of their 20-30 year working life, or as a result of adverse weather conditions. Such separation is increasingly seen as best environmental and safety practice for U.S. utilities as it reduces the potential liability of transporting used transformers with oil in place.

Hydrodec of North America (HoNA) is the first transformer oil company in the world to generate carbon credits\* for every gallon of used transformer oil re-refined. The American Carbon Registry (ACR) has approved Hydrodec's rigorous emissions reduction accounting methodology to generate carbon credits\* for every ton of carbon dioxide displaced by recycling used transformer oil. In return for the used transformer oil, Hydrodec is offering the utilities carbon credits\* based on a formula set by the American Carbon Registry (ACR) for the feedstock subsequently re-processed through the company's Canton facility.

Critical to the successful disposal of all used oil, including both lubricating and transformer oil, is total clarity over the final destination of such used oil. Currently, this does not exist. A legal condition requiring utilities to produce 'Certificates of Origin' (Non Hazardous Manifest) - documents that certify the destination of all used transformer oil - is essential to ensure best environmental practice and the end of unnecessary incineration which damages the environment. It would also end the current, inefficiently monitored export routes to and within Mexico for use, where it is used, for example, as a diesel extender. It would introduce a commercial solution to a growing environmental problem whilst assisting U.S. utilities with the delivery of ESG goals.

Through Hydrodec, a closed loop strategy allows for all used transformer oil to be re-refined in return for carbon credits\* with Hydrodec offering utilities a one stop shop for all their waste transformer oil. Our finished product - SUPERFINE transformer oil - meets or exceeds published performance standards. The Federal Toxic Substances Control Act (TSCA) PCB Permit allows Hydrodec to store and treat PCB contaminated mineral oil at any concentration since Hydrodec's proprietary catalytic hydro-treating process benignly destroys any polychlorinated biphenyl (PCB) molecules and other persistent organic pollutants from contaminated oil, resulting in substantial decontamination and regeneration of the feedstock and restoring the transformer oil to a "like new or better" condition. The process closes the recycling loop - returning used oil to like new or better. With their efficient manufacturing process Hydrodec delivers a 99+% process yield and a 67% reduction in energy consumption compared to virgin oil refining.

This makes used transformer oil a 100% recyclable material that can be safely collected and brought back into use again and again. Having invested over \$100m developing this world leading technology Hydrodec has become the first 'Green Oil' company in the world; thereby providing the U.S. with a world-leading opportunity to become a market leader in the disposal of used transformer oil.



Hydrodec believes that where the technology and re-refining capacity exists, as it does in the U.S., re-use should be mandatory. At the very least, it should be encouraged as 'best practice'. It keeps products in the consumption sphere for a longer period (effectively for an indefinite period where at present recovery rates exceed 99%) and it promotes the possibility of diverting waste oil streams discarded by their last user from polluting waste streams and exposing utilities to possible litigation.

### Why Carbon Credits are so important to utilities:

- Growing stakeholder interest in carbon reduction programmes and environmental stewardship and sustainability goals
- Direct focus on a reduction of CO<sub>2</sub> emissions
- Corporate social responsibility – growing focus
- Carbon Reductions – increasingly driving policy
- Ever increasing environmental disclosure requirements
- Debt Market – Green Bonds
- Sustainability Bonds – increasingly linked to sustainability targets with embedded interest rate reductions
- Stock Market – listing requirements
- Credit Ratings – Moody's proposed methodology for ESG and Climate Change

- Environmental regulation – international trend; coming to U.S. but currently lagging Europe
- Growing stakeholder dialogue around goal setting and “science based targets”
- UN Sustainable Development Goals are now prominent criteria for pension funds, lobby groups, and shareholders
- Customer Sustainable Goals – energy efficiency, renewables, and best environmental practice growing in importance
- Growth in socially focused and environmental performance requests from customers and potential employees

With the use of Certificates of Origin an internal and external audit process is introduced, delivering clear visibility over the destination of all used transformer oil whilst promoting re-refining.

Hydrodec is now in the process of building ‘Sustainable Partnerships’ with leading U.S. utilities with strong Environmental, Social and Governance (ESG) policies to exchange carbon credits\* for their used transformer oil – which otherwise could end up being incinerated. While the carbon credits\* are currently offered to utilities directly for their used transformer oil, our future strategy will include a ‘closed loop’ with utilities. To complete the ‘closed loop’, there will be an option for utilities to request new transformers from the OEM’s to include our re-refined ‘Superfine’ transformer oil which, as set out in this submission, meets and indeed frequently exceeds the performance required by national (ASTM) and international (IEC) technical standards.

Hydrodec will work with existing and future collectors of used transformers for the receipt of all their used transformer oil. Where preferred by the utilities, Hydrodec will collect both ‘on-spec’ and ‘off-spec’ used transformer oil when separated from the used transformers in the field and will pay for the collection and transportation to Hydrodec’s 12 million gallon p.a. facility in Canton, OH.

When President Trump signed a bipartisan Bill into law in December 2018 requiring a one-year review of the potential for all used oil to be re-refined, many utilities stepped up their work on environmental best practice to meet the Environmental and Social Goals required by their Boards of Directors, their investor base and customers alike.

The door has been opened to utilities to become ‘Sustainable Partners’ with Hydrodec where the utilities can, for the first time, demonstrate their commitment to sustainability by gaining carbon credits\* for the treatment of all their own waste transformer oil. Hydrodec envisions helping Government and environmentally aware utilities with clear sustainability goals to reduce their carbon footprints and ensure that their used oil is properly handled according to best environmental practices and all Federal Regulations.

**In summary Hydrodec submit that the DOE Report should seek the inclusion of used transformer oil along with lubricating oil. Additionally, it submits that the DOE should denote the destination of all used oil through a system of ‘Certificates of Origin’ and maximise the opportunities for re-refining used oil in the U.S. In so doing, the DOE would provide transparency over the waste streams of utilities and improve control over the chain of custody.**

\* “Environmental Attributes” means any and all current and future greenhouse gas emission reduction credits, greenhouse gas offsets, verified carbon equivalent units, allowances and allowance payments or similar items, attributable to or arising from oil re-refining activity at the Facility by Hydrodec, including the exclusive right to report the exclusive ownership of the accumulated Environmental Attributes as certified by the American Carbon Registry to any agency or authority, including any present or future federal, state, or local certification program or emission trading program.