

# ASSESSING THE MOST ENVIRONMENTALLY FRIENDLY AND COST EFFECTIVE MSW PROCESSING METHODS



## A Global CleanTech Company Specializing in Energy from Waste and Renewable Fuel

The Client engaged PreScouter in this ongoing Research Support Service License to compile scientific information showing which methods of processing municipal solid waste (MSW) were most cost effective as well as environmentally friendly.



## CHALLENGE

PreScouter's goal in this engagement was to assess all steps involved in different MSW processing methods (Incineration, Anaerobic Digestion, Gasification, Plastic Treatment, and Landfill) to determine their greenhouse gas emissions and cost effectiveness. This was particularly challenging when all impacts were considered, such as carbon credits, carbon taxes, availability of market for end products, scale, and the type of waste that could be treated.



## APPROACH

PreScouter first determined the potential waste pathways, including main processes and further improvements such as carbon capture, hydrogen generation through water electrolysis, and plastic recycling, among others. Then, the PreScouter team identified all the input values needed, including direct and indirect GHG emissions as well as costs and revenues associated with all the steps. The results were compiled and analyzed to provide recommendations for the Client that were supported by the corresponding metrics and calculations



## OUTCOME

PreScouter assessed more than 40 combinations of processes and delivered a model to the Client providing both the inputs and the calculations that they could use for future decision making by simply adding new inputs.



**Impact of PreScouter's Work:** The Client used PreScouter's insights to move forward with developments that were identified as promising while deciding not to pursue other methods that PreScouter's investigation showed to be less attractive opportunities.

