ATIP Foundation Initiative: "Advancing the Bioeconomy" USDA Rural Development Projects Conducted 2019-2020 in CA (eight central valley counties), OH (nine northwest counties), and TX (four north central counties)

The ATIP Foundation has completed projects (referenced above) that were conducted on a regional basis, utilizing a replicable model developed by the Foundation premised on the industry-cluster model developed by Michael Porter at Harvard University in the mid-1980s. Our Model is further premised on input gleaned from eight national forums hosted by the Foundation in 2016–2017, in partnership with the federal Biomass Research & Development (BR&D)[1] Board, co-chaired by the US Departments of Agriculture & Energy. These three projects were funded by USDA Rural Business Development Grants awarded and administered in each of the states.

In each of these studies, we engaged local, regional and state leaders from six sectors we identified as primary stakeholders; all vital to the success of our Initiatives. They include (1) economic & workforce development; (2) academia; (3) municipal, county, regional and state elected & appointed officials; (4) financial services; (5) business & industry; and (6) the supply chain, from biomass source to end users.

The principal goal of each project was to develop, with assistance from these sectors, a geospatial inventory of biomass (wastes) in the region that could be repurposed for bioenergy production and/or creation of valuable co-products. Inventories include animal wastes, food wastes, municipal wastes, sewage sludge, woody biomass, etc. Additionally, we created geospatial inventories of service providers who could support the bioeconomy in each region. All of these are displayed as separate "layers" in the GIS database.

ArcGIS Pro was used for all projects, and these databases include both publicly available data, as well as proprietary information. Animal waste calculations were made with our specific algorithms to identify tons per farm per day. These detailed databases are suitable for working with industry to calculate optimal locations for facilities to capitalize on biomass sources; such activities would be conducted under a non-disclosure agreement executed with the ATIP Foundation.

Additionally, the Foundation also created publicly accessible ArcGIS Webmap versions of the databases that do not include proprietary or confidential information. These can be accessed, and each layer browsed by clicking on the URLs below:

CA:https://arcgis.com/apps/webappviewer/index.html?id=ca5799270e4b4fe68ef7c57fcd1d861c

OH: https://arcgis.com/apps/webappviewer/index.html?id=8861b925efcc47c2b6bc448d76ec75b0

TX: https://arcgis.com/apps/webappviewer/index.html?id=e4e4ae3e65304d3593a03819f3915ece

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[1] The Biomass R&D Board consists of representatives from the U.S. Department of Energy, U.S. Department of Agriculture, U.S. Department of the Interior, U.S. Department of Defense, U.S. Department of Transportation, the National Science Foundation, the Environmental Protection Agency, and the Executive Office of the President of the United States.