



Biomass Facilities Office of Land Quality

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Introduction:

Construction or expansion of a biomass anaerobic digestion facility or biomass gasification facility requires a permit or registration from IDEM's Office of Land Quality. This document provides information on what approval is needed and how to get it. Please contact the IDEM staff listed below with any questions you may have.

Key Terms & Definitions:

- A **Biomass Anaerobic Digestion Facility** is a facility that anaerobically decomposes biomass to simple organic compounds and biogas in a closed and sealed chamber, and includes a methane recovery system.
- A **Biomass Gasification Facility** is a facility that uses heat and chemicals in a low or oxygen free environment to convert biomass to a synthetic gas.

Throughout the rest of this document "biomass facility" is used as a generic term for "biomass anaerobic digestion facility" and "biomass gasification facility."

- **Biomass** is material derived from living organisms that grow back or produce more of the material and is used as a source of energy. Biomass can include:
 1. agricultural crops
 2. agricultural wastes and residues
 3. animal wastes and byproducts, including manure
 3. aquatic plants
 4. algae
 5. byproducts of processing agricultural crops, including:
 - stems
 - stover
 - straw
 - other grain and crop residues
- **Appropriate Feedstock** is a segregated solid waste that can be processed with biomass at a biomass facility to produce useful materials or energy. Appropriate feedstock can include:
 1. food waste
 2. cooking oil and grease
 3. livestock operation residues
 4. industrial waste, such as paper pulp
 5. sewage sludge
 6. off-spec or unused animal feed from non-industrial waste sources
 7. dried distillers grain
 8. food waste from food manufacturing or food services
 9. wood pallets

These definitions, and others, are available in [329 IAC 11.5-2](#).

What Approval is Needed:

Biomass facilities need one of the following approvals to operate: a solid waste processing facility permit, a CFO/CAFO permit, or a biomass registration. The following table details which one of these approvals is needed.

	Biomass Registration Required? (329 IAC 11.5)	Solid Waste Processing Permit Required? (329 IAC 11)	CFO Approval Required? (327 IAC 19)
CFO with Biomass Facility (Biomass only) See footnote 1	No See footnote 1	No (IC 13-20-10.5-2)	Yes
CFO with Biomass Facility (Biomass & Appropriate Feedstock) See footnotes 1 and 3	No See footnote 1	No (IC 13-20-10.5-3(a))	Yes
CFO with Biomass Facility (Biomass & Solid Waste other than Appropriate Feedstock) See footnotes 1 and 3	No	Yes if waste other than Appropriate Feedstock per Biomass Rule	Yes See footnote 2
Biomass Facility (Biomass only, not at CFO)	Yes (329 IAC 11.5)	No (IC 13-20-10.5-2, 329 IAC 11.5)	N/A
Biomass Facility (Biomass & Appropriate Feedstock, not at CFO) See footnote 3	Yes (329 IAC 11.5)	No (IC 13-20-10.5-3(a), 329 IAC 11.5-1-1(b))	N/A
Biomass Facility (Biomass & Solid Waste other than Appropriate Feedstock, not at CFO) See footnote 3	No SW Processing Permit required (329 IAC 11.5)	Yes (IC 13-20-10.5-3(a), 329 IAC 11.5-1-1(a))	N/A

Other permits and approvals may be required under IDEM's air and water permit programs. For example, diesel-fired generators as small as 74 hp or natural gas-fired generators as small as 0.5 MMBtu/hr can require an air permit. If you believe that a biomass facility may require an air permit, you can contact IDEM's Compliance and Technical Assistance Program (CTAP) at (800) 988-7901 or ctap@idem.in.gov. Nathan Bell in IDEM's Office of Air Quality is also available to answer air permitting questions related to biomass facilities.

Footnotes

1. A biomass facility on the premises of a permitted CFO must be approved through incorporating the requirements of 329 IAC 11.5 into their CFO permit, instead of receiving a separate biomass registration. The CFO should submit a completed biomass registration form with its application for a new CFO approval or modification to the CFO Permits Section. The CFO biomass facility will then be approved through the CFO/CAFO permit.
2. Since the biomass facility remains part of the CFO's manure operations, it still needs to be included in the CFO's overall approval. The permittee must include a completed biomass registration form with its application for a new CFO or CFO modification.
3. A land application permit or a marketing and distribution permit (327 IAC 6.1) will be required if the facility is land applying, composting or distributing appropriate feedstock or other solid wastes, both alone and when mixed with biomass.

Where to Submit Biomass Facility Applications

- **CFO with Biomass Facility** – Joe Williams, Section Chief, Confined Feeding Permits Section, (317) 234-3540, jwilliams@idem.in.gov
- **Biomass Facility (not on the premises of a permitted CFO)** – Rebecca Joniskan, Section Chief, Solid Waste Permits Section, (317) 232-7200, rjoniska@idem.in.gov

If the biomass facility receives appropriate feedstock or solid waste and produces material to be land applied, the permittee also needs to apply for a land application permit, **whether or not it is located at a CFO**. Applications for a land application permit should be submitted to:

- **Land Application** - Jeff Harmon, Senior Environmental Manager, Land Application Group, Solid Waste Permits Section, (317) 232-8735, jharmon@idem.in.gov

Contacts

If you have any questions, please feel free to contact the following staff:

Engineering	Confined Feeding	Solid Waste	Land Application
Daniela Klesmith (317) 232-8840	Dennis Lasiter (317) 232-8732	John Hale (317) 232-8871	Jeff Harmon (317) 233-0472

The Indiana Code (IC) and Indiana Administrative Code (IAC) references in this document can be viewed on the Indiana General Assembly website at <http://iga.in.gov>. IC references are under the “Laws” dropdown menu. IAC references are under the “Publications” dropdown menu.