



What is a Biointermediate?

Robert Anderson

Biointermediates workshop

Office of Transportation and Air Quality

September 29, 2022

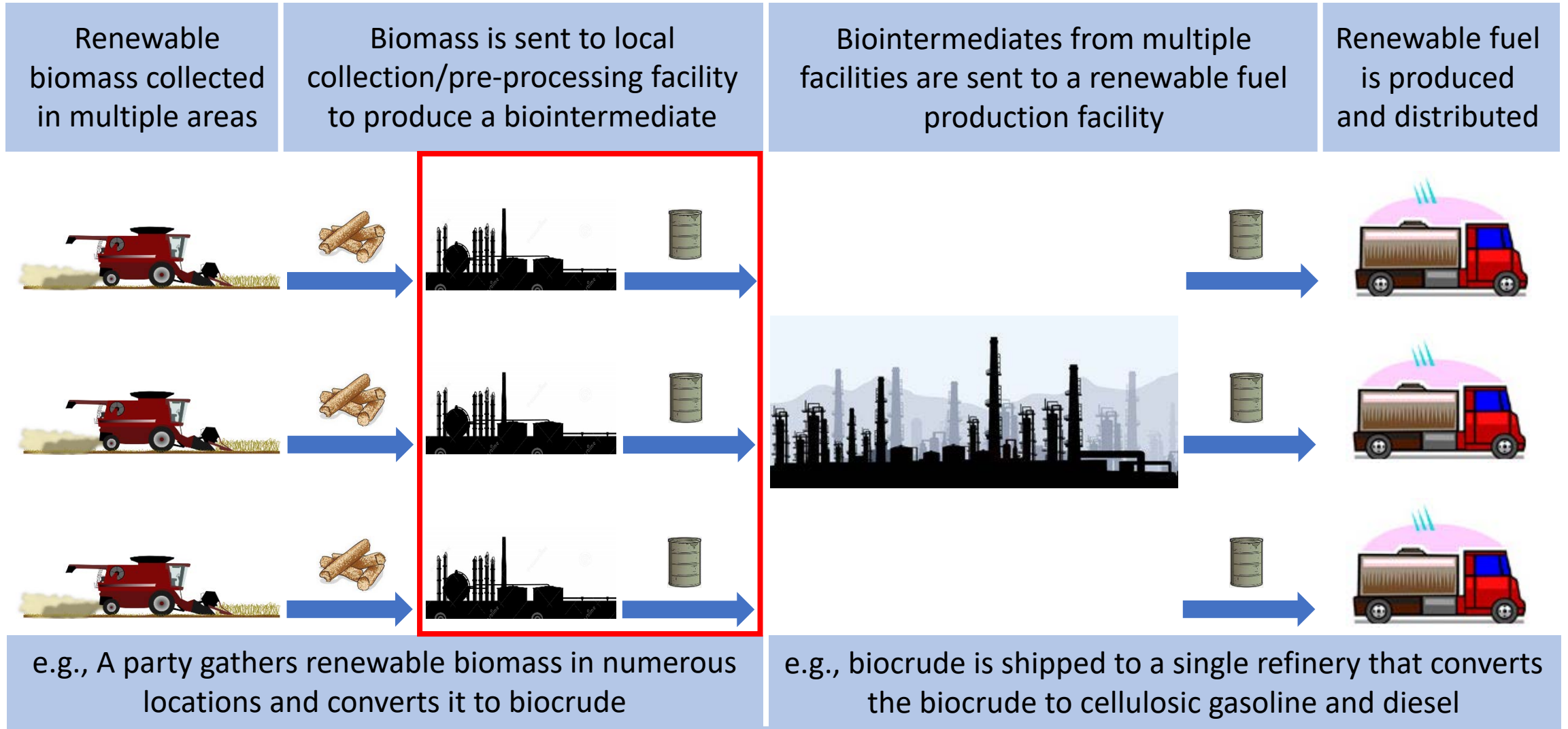
About this Presentation

- This presentation is being given to assist stakeholders in complying with the regulations regarding biointermediates finalized in the 2020-2022 RVO final rule.
- The presentation is not intended to discuss the merits of the regulatory requirements but rather to assist stakeholders in implementing them.
- To the extent participants provide questions, advice, or materials during or after this meeting, they should do so in their individual capacity.
- This presentation is not intended to supplant the regulatory requirements. Parties must comply with the applicable regulatory requirements regardless of whether and how those requirements are discussed in these presentations.
- The topics in this presentation do not represent future EPA decisions or actions in any particular circumstance and do not bind EPA to any particular decision or action.

What is a Biointermediate (Conceptually)?

- In RFS2, we wrote our regulations to require renewable fuel to be produced from renewable biomass at a single facility (with limited exceptions).
- For years, we had heard that certain advanced and cellulosic biofuels require processing at more than one facility. The term ‘biointermediate’ refers to the partially-processed feedstock material that is transferred between facilities.
- To allow for these new advanced/cellulosic biofuels, we finalized provisions in the 2020-2022 RFS Standards rule to allow for certain biointermediates to be used.

Biointermediates: An Overview



 Biointermediate is produced

What is a biointermediate (Regulatorily)?

- Under 40 CFR 80.1401, “*Biointermediate* means any feedstock material that is intended for use to produce renewable fuel and meets all of the following requirements:
 - (1) It is produced from renewable biomass.
 - (2) It has not previously had RINs generated for it.
 - (3) It is produced at a facility registered with EPA that is different than the facility at which it is used as feedstock material to produce renewable fuel.
 - (4) It is produced from the feedstock material identified in an approved pathway, will be used to produce the renewable fuel listed in that approved pathway, and is produced and processed in accordance with the process(es) listed in that approved pathway.
 - (5) Is one of the following types of biointermediate: (i) Biocrude. (ii) Biodiesel distillate bottoms. (iii) Biomass-based sugars. (iv) Digestate. (v) Free fatty acid (FFA) feedstock. (vi) Glycerin. (vii) Soapstock. (viii) Undenatured ethanol.
 - (6) It is not a feedstock material identified in an approved pathway that is used to produce the renewable fuel specified in that approved pathway.”

What is Not a Biointermediate?

- Renewable fuels and renewable biomass that are not substantially altered are not biointermediates.
- The regulations at 40 CFR 80.1460(k)(2) state that no person shall: “[p]roduce a renewable fuel at more than one facility unless the person uses a biointermediate or the renewable biomass is not substantially altered. Form changes of renewable biomass such as bleaching through adsorption, rendering fats, chopping, crushing, grinding, pelletizing, filtering, compacting/compression, centrifuging, degumming, dewatering/drying, melting, triglycerides resulting from deodorizing, or the addition of water to produce a slurry do not constitute substantial alteration.” (emphases added)
- The regulations at 40 CFR 80.1426(c)(6) address the situation where a renewable fuel is used as a feedstock.

Potential Biointermediates

- A potential biointermediate is a feedstock that is:
 - Renewable biomass that was substantially altered at a facility other than the renewable fuel production facility;
 - Not a renewable fuel; and
 - Not one of the types of biointermediates listed in the definition at 40 CFR 80.1401.
- Potential biointermediates cannot be used for RIN generation unless and until EPA amends its regulations to allow for such use.
- As noted in the final rule, “will likely continue to periodically issue rulemakings related to the RFS program to set volume requirements, promulgate new pathways, and technically amend the RFS regulatory provisions. These ongoing regulatory activities will provide ample opportunities to add new biointermediates to the program with any other necessary regulatory changes on a regular basis.” See 87 FR 39638.

How to add a potential biointermediate

1. Submit a description of it to the support line
 - EPA will consider whether a potential biointermediate might actually be renewable biomass that was not substantially altered, or is a biointermediate that is already included in the regulations.
2. Consider submitting a petition for a rulemaking
 - Petition would request that EPA add the potential biointermediate to the regulations, thus allowing its use to produce RIN-generating renewable fuel
3. EPA will consider adding new biointermediates in future RFS-related rulemakings

What should a petition include?

- Petitions should contain the legal and technical justification for including a potential biointermediate in the program
- To help EPA consider your petition, include the following:
 - An explanation of why a rulemaking is being requested (because the potential biointermediate is not renewable biomass and EPA must revise the regulations to allow its use to produce RIN-generation renewable fuel)
 - A description of the potential biointermediate including:
 - The feedstocks and production processes used to produce the potential biointermediate from those feedstocks
 - The renewable fuels that would be produced from the potential biointermediate and processes used to make the RF
 - Pathway considerations
 - The timeline for its development and ultimate production
 - A discussion of whether the potential biointermediate could appropriately be produced, transferred, and used under the RFS biointermediates provisions
 - A description of whether any unique considerations for the potential biointermediate are needed

Potential Biointermediates Inquiries

- For the fuels support line e-mail: FuelsProgramSupport@epa.gov