

FINAL Minutes of June 16, 2022 Ethylene Producers' Environmental Sub-Committee Meeting
(June 16, Rev. 1)

Following are the minutes of the June 16, 2022 Ethylene Producers' Environmental Sub-Committee Meeting, held via MS Teams with Walter Postula, Shell Global Solutions (US) Inc., as host.

Present: Rick Beleutz, LyondellBasell
Troy Boley, Spectrum Environmental Solutions, LLC
Ahmad Hamad, Siemens-Energy
James Kendall, ExxonMobil Chemicals
Brandon Lithgoe, Ashworth Leininger Group
Dan Lutz, Ineos
Andrés Muñoz Gandarillas, Neste
Walter Postula, Shell Global Solutions (US) Inc.
Mark Schmidt, Dow

Absent: Benjamin Burns, LyondellBasell?
Ted Heron, The Catalyst Group
Jacob Hilbrich, Chevron Phillips
Allyson Ledet, NOVA Chemicals
Patti Long, Eastman
Gerardo Ruiz-Mercado, US EPA (AIChE Environmental Division)
Arijit Pakrasi, Edge Engineering and Science
Jennifer Port, ExxonMobil Chemicals
Jeffrey Seay, University of Kentucky (AIChE Environmental Division)
Dick Siegel, R&B Consulting Services (AIChE Environmental Division)
Edward Soliz Jr., LyondellBasell
Jason Trembly, Ohio University (AIChE Environmental Division)
Mark Ulrich, Linde Engineering Americas
Gary Wojnowski, BASF

The meeting began at 9:02 am with Walter Postula reading the Ethylene Producers' Committee (EPC) anti-trust statement:

No activity of the committee shall involve the exchange, collection, or dissemination of information among competitors for the purpose of bringing about or attempting to bring about an understanding or agreement, written or oral, formal or informal, express or implied, among competitors, with regard to costs, prices, pricing methods, terms or conditions of sale, distribution, production quotas or other limitations on either the timing or volume of production or sales, or allocation of territories or customers.

The meeting agenda was published in advance and is included below:

- 1) Reading of Anti-Trust Statement [9:02 AM]
- 2) Chair/Co-Chair for 2023 session [9:04 AM]
- 3) Review of 2022 Session(s) (Attendance data below) [9:10 AM]
- 4) Discussion of Potential Topics for 2023 Environmental Session [9:20 AM]
- 5) Date for Potential Face to Face [9:45 AM]
- 6) Review of Action Items [9:50 AM]
- 7) Important Date Reminders

- June 20, 2022 – Call for abstracts opens
- October 25, 2022 – Call for abstracts closes
- December ??, 2022 – Papers accepted or rejected
- January ??, 2023 – Program goes live
- March ??, 2023 – Paper submission closes
- March 12-16, 2023 – Spring Meeting – Houston, TX

8) Adjourn [10:00 AM]

Chair/Co-Chair for 2023 session: Past practice is that the Co-Chair will move into the Chair role. Gerardo was not able to make this call. The action for him is to inform subcommittee as ability to perform as Session Chair for 2023. Floor was opened to those attending for a Co-Chair volunteer. No one stepped forward. Call is still out for volunteer. The Session Chair/Co-Chair main responsibilities include: (1) shepherding authors/presenters through process of submitting abstracts and papers to AIChE Confex system; (2) communicating with EPC Program Chair/Co-Chair on status/issues and relaying any communication from Program Chair to the authors/presenters (i.e. deadlines); (3) relay EPC guidelines for presentation and paper formats to authors/presenters; (4) collection of presentations and papers for inclusion in upload of content to Omnipress archive site.

Review of 2022 Session: Rick attended entire session and thought topics were very relevant and that the speakers did a good job. Walter received similar feedback on the session during the conference from a couple attendees. Unfortunately, there was no Slido feedback gathered because the “Polls” were not activated (true for all sessions). AIChE sent out a blanket request, that had same questions as Slido, to all those who registered that indicated they were attending the EPC but received very few responses. Attendance (per paper) is shown below. Lower numbers were typical for the first paper of the day. Rick liked being opposite of the Industry 4.0 session and the Wednesday morning time slot. Overall, the EPC attendance was roughly 75% of the last in-person conference. AIChE’s overall target was also 75%, but they were probably a bit short.

Ethylene Plant General Environmental	# attend
154a1. Ethylene Risk and Technology Review What’s the PATH Forward?	60
154a2. Flare Challenges Under the New MACT Regulatory Requirements	75
154b. Cracking of Renewable Feedstock	93
154c. Shell and the Plastic Circular Economy - Innovation, Collaboration and Investment	85
154d. Sustainability Certification for Ethylene Supply Chains Using ISCC PLUS	75
154e. ESG Economics Lead to Third Party Verification of Greenhouse Gas Emissions	65

Discussion of Potential Topics for 2023 Environmental Session: Brandon sees the decarbonization/renewable feeds/circularity topics continuing to be important. Thought is that EMACT topic has been covered, though Dan mentioned EPA is reconsidering. Rick will touch base with Steve Smith for any developments, may not be a 2X length paper again, but might be something. Troy brought up that fence line monitoring is in consent decrees (Dan mentioned that 2/3 of ethylene capacity is under consent decree). He is doing a review of Ethylene vs. Refinery performance. This could be a paper (timing seems to work). Rick mentioned that many have plans with respect to decarbonization/circularity but hard to find actual implementation. Could we be open to more “academic” papers? Andrés stated that Ghent is again interested in submitting. In principle academic papers are fine, assuming topic is relevant. Dan brought up that he has been asked by customers on lb. CO₂ / lb. product. Brandon will think about how to present and possible presenter. Someone from

EU might do better (they are further along), problem will be making it US focused. Andres will consider as well. Walter mentioned that something of use on this topic may be presented at EEPC. Once the program is available, we can review.

Date for Potential Face to Face: Discussed either October 13th or December 8th meeting as face to face. This will either correspond to reviewing abstracts or ordering of session. Mark U. and Linde has hosted in past. Others in Houston area are welcome to host as well.

Review of Action Items: Below are the action items (responsible in **bold**)

- **Gerardo:** Confirm ability to serve as Session Chair for 2023
- **All:** (For those who have not done so) Consider serving as Session Co-Chair for 2023
- **All:** Continue to develop topics and (hopefully) presenters for session
- **Rick:** Check with Steve Smith for any new EMACT developments
- **Brandon:** Give some thought on approach to presenting (and presenter) for GHG emissions from products.
- **Andrés:** Same as above.

Important Date Reminders: The dates listed in item 7 of the agenda were reviewed.

Adjourn: The meeting/teleconference was closed at 9:45 am.