

GREENHOUSE GAS AND ENERGY MANAGEMENT FOR MANUFACTURING IN COLORADO

GEMM PHASE 2

RULE DEVELOPMENT INPUT: KICK-OFF MEETING, AUGUST 2022

MEGAN MCCARTHY, CLIMATE CHANGE PROGRAM

AIR POLLUTION CONTROL DIVISION



OVERVIEW

- GEMM 2 Progress
- Rulemaking Process & Timeline
- Rule Development Input Workgroup Process & Timeline
- GEMM 2 Rule Scope
- Rule Approaches & Key Issues of GEMM 2 Rule
- Q&A



GEMM 2 PROGRESS

- Dec, 2021 – Feb, 2022: Initial scoping for GEMM Phase 2, analysis of industrial sector
- February, 2022: Stakeholder discussions formally began and are ongoing
 - Participants: NGOs, local & regional governments, Climate Equity Community Advisory Council, industry & trade groups, public and private funding orgs, various state agencies
 - Identified rule scope, various rule compliance pathways and strategies
 - 100+ meetings held to date
- February, 2022: Discussions began and are ongoing with Colorado's Energy Office & Governor's Office on GEMM 2, to synergize decarbonization opportunities and funding, and assess options and implications of various rule approaches



GEMM 2 PROGRESS...CONT'D

- April, 2022: Public Stakeholder Kick-Off Meetings
- June – July, 2022: Rule scope, initial rule structure development, issue identification
- August, 2022: Rule Draft Input Workgroup Kick Off



RULEMAKING TIMELINE

2022:

- Rule Development Input Workshops (Beginning in Sept, bi-weekly or more)
- Individual stakeholder meetings (ongoing)
- Public Informational Update (Fall, TBD)
- Smaller Community Conversations (Fall, TBD)
- Webinar / Informational Session on public and private funding and decarbonization opportunities (Fall, TBD)

RULEMAKING TIMELINE...CONT'D

2023

- January: Initial Rule Draft
- January - April: Individual stakeholder meetings, rule draft refining, consensus building and supporting document development
- May: AQCC Rulemaking Request for Hearing
- June – August: Continued rule refining and consensus building
- September: GEMM 2 AQCC Rulemaking Hearing



2022 RULE INPUT WORKGROUP PROCESS AND TIMELINE

- August 9: Kick Off & Information Session
- Before August 19: Survey and identify interested participants
- End of August: Formalize and schedule workgroups
 - Regulated community
 - Non-regulated interest groups
 - Policy positions
 - Specific topics of concern / aspects of rule



2022 RULE INPUT WORKGROUP PROCESS AND TIMELINE...CONT'D

- September – December: Workgroups meet bi-weekly for 90 minutes (or more often / longer depending on need) for input opportunities, share suggested rule language, provide feedback
- January 2023: Initial rule draft available for feedback



GEMM PHASE 2: PROPOSED SCOPE

- Regulate all manufacturing stationary sources in Colorado with direct GHG emissions \geq 25,000 metrics tons per year as reported through Colorado's Regulation 22, not regulated in GEMM Phase I.
 - 18 manufacturing facilities
- 2015 GHG emissions from GEMM 2 facilities: **~2.7 MMT**
- 20% reduction from those 18 facilities: **~0.54 MMT of CO₂e reduced by 2030**
- 2019 GHG emissions from GEMM 2 facilities: **~2.4 MMT** (down by .3, or 11% already)



GEMM PHASE 2 FACILITY EMISSIONS (CO2E):

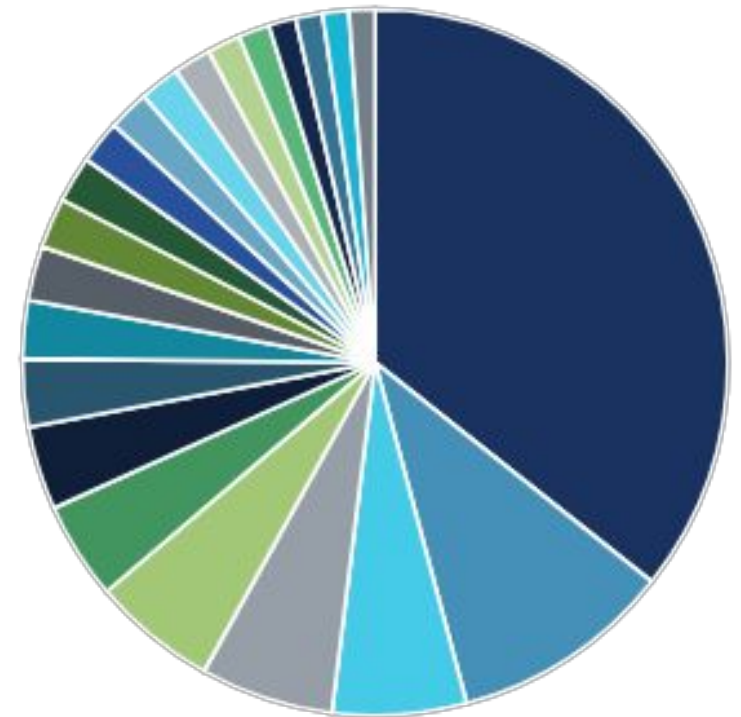
	2015 Emissions	2019 Emissions
SUNCOR ENERGY (USA) COMMERCE CITY REFINERY	962525	949972
Molson Coors USA LLC - Golden Brewery	379088	241805
Avago Technologies	288704	182824
Microchip Technology	278784	221597
WESTERN SUGAR COOP	150686	67000
OWENS-BROCKWAY GLASS CONTAINER INC PLANT 28	92157	116390
ROCKY MOUNTAIN BOTTLE COMPANY	86973	60344
AMERICAN GYPSUM COMPANY	55647	62779
JBS Swift Beef Company - Greeley Plant	55183	61114
STERLING ETHANOL, LLC	53325	58284
ANHEUSER BUSCH INCORPORATED FORT COLLINS BREWERY	51002	47110
Natural Soda	50797	43497
YUMA ETHANOL, LLC	49193	53002
Leprino Foods, Greeley	38254	90867
FRONT RANGE ENERGY	36282	37616
CARESTREAM HEALTH INC.	30998	28374
CARGILL MEAT SOLUTIONS CORPORATION	23801	35829
Golden Aluminum Inc.(2017 total instead of 2015)	27236	27600



GEMM PHASE 2 FACILITY 2020 EMISSIONS DISTRIBUTION

18 Facilities

- 1/3 Suncor Refinery
- 1/3 Molson Coors, Western Sugar, Microchip, Avago, Owens Brockway
- 1/3 10+ various companies



RULE APPROACHES BEING CONSIDERED

- Approach 1: **20% onsite reduction** for all
 - All GEMM 2 facilities are required to reduce 20% of their direct emissions onsite from what they emitted in 2015
 - Potential audit requirement or option to inform or guide facility-specific regulatory decisions
 - Could assess decarb opportunities and strategies, barriers, technology-specific co-benefits or risks, and economic or technical limitations

RULE APPROACHES BEING CONSIDERED...CONT'D

- Approach 2: ***Facility-specific*** reduction requirements
 - Facility requirement depends on current reduction % (where they are today vs. 2015), GHG reduction opportunities, contribution to the overall group's emissions, location
 - Would have to hit an overall target for group (20% minimum)
 - Potential audit requirement or option to inform or guide facility-specific regulatory decisions
 - Could assess decarb opportunities and strategies, barriers, technology-specific co-benefits or risks, and economic or technical limitations

RULE APPROACHES BEING CONSIDERED...CONT'D

- Approach 3: **20% reduction, Emissions Exchange Program**
 - All GEMM 2 facilities are required to reduce 20% onsite from what they emitted in 2015 but if an audit shows they cannot, they can opt into a program to **purchase** compliance credits from other regulated facilities.
 - Stringent audit process requirement
 - Retention of air pollution co-benefits for local communities are essential whether on or offsite reductions are achieved.

RULE EQUITY CONSIDERATIONS

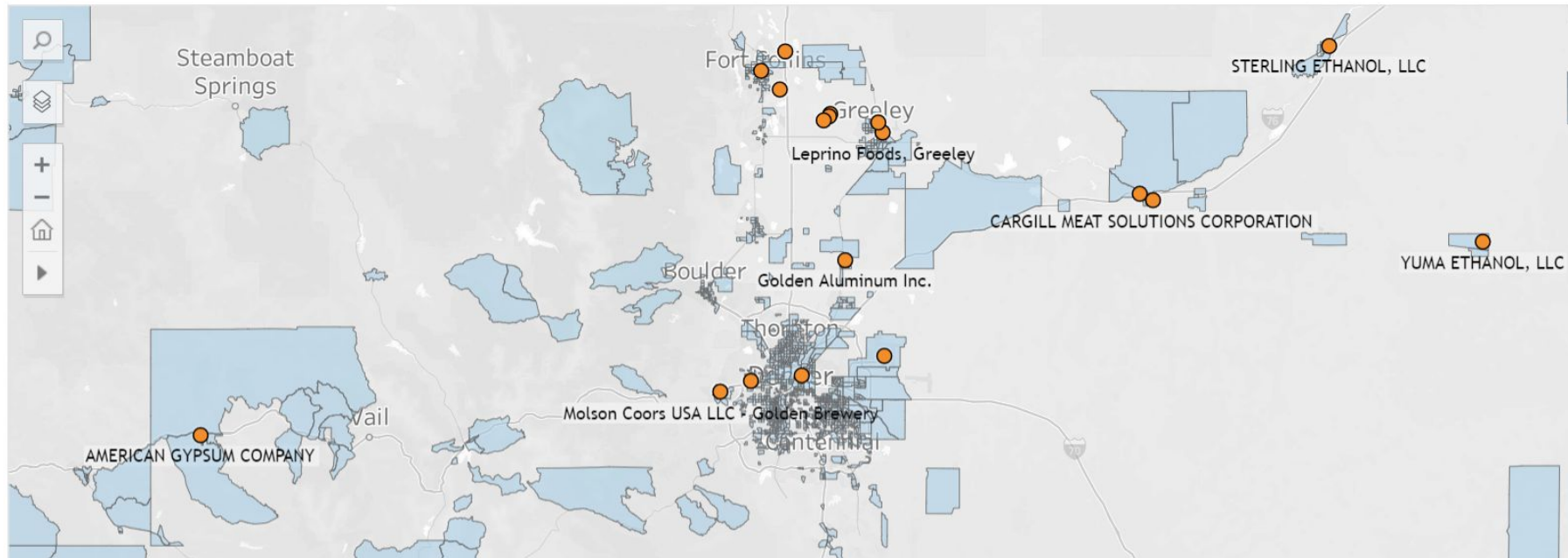
- How close a facility is located to disproportionately impacted communities, key pollutants from facility, equity score of area using the Colorado Enviroscreen
- Ability to retain local air quality co-benefits
- Emissions Exchange Program implications



EXAMPLE: PROXIMITY TO DI COMMUNITIES

Industrial Sources and Disproportionately Impacted Communities

This map places industrial source locations (orange dots) alongside the locations of disproportionately impacted communities, as defined by the Environmental Justice Act (blue polygons). True source locations may be slightly different than the points shown on the map.



OTHER CONSIDERATIONS

- What compliance looks like in 2030 for this group and for facilities individually
- Interim compliance or reporting deadlines
- Requiring specific decarb technologies or approaches for facilities vs. requiring a reduction requirement based on reporting
- Emissions Exchange Program and equity implications, scope of EEP
- Specific facility challenges i.e. treatment of cogeneration and non-representative baseline years



QUESTIONS?

- Please limit your questions to:
 - Rule development workshop process and timeline, participation questions
 - Rulemaking process and timeline
 - The process thus far

.....as we will be discussing rule concepts, nuts and bolts in the workshops.

Thank you!



THANK YOU!

<https://cdphe.colorado.gov/gemm-phase-2-rule>

