

IME

institute of makers of explosives

IME Update

Canadian Explosives Industry Association

Niagara-On-The-Lake, Ontario

June 1, 2023

Founded in 1913

Mission:

***To promote safety and security
in the commercial explosives
industry***

What IME Does

- Represents all aspects of the commercial explosives industry: Manufacture, storage, transportation, use, handling, and disposal
- Promotes safety and the protection of employees/users, the public and the environment through publications, advocacy and outreach
- Advocates at all levels of government for the adoption of uniform rules and regulations consistent with the industry's safety and security best practices

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*To promote safety and security
for the commercial explosives
industry.*



AUSTIN POWDER



W. A. MURPHY, INC.
Explosives Distributor



Vet's
Explosives

MAXAM



GENERAL DYNAMICS
Ordnance and Tactical Systems

MP ASSOCIATES, INC.



General

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Liaison Members



CEAEC

Canadian Explosives Industry Association
Association Canadienne de l'Industrie des Explosifs



NIXT

National Institute for Explosive Technology



ISEE

International Society
of Explosives Engineers

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Academic Members



COLORADO SCHOOL OF MINES.

EARTH • ENERGY • ENVIRONMENT



College of
Engineering



University of
Science & Technology

Regulatory Update

Agencies Regulating Explosives in the U.S. (*not comprehensive*)

- **Bureau of Alcohol, Tobacco, Firearms & Explosives (ATF)** – *storage of explosives & AN when co-located*
- **Occupational Safety & Health Administration (OSHA)** – *manufacturing, storage of AN, use at construction sites*
- **Mine Safety & Health Administration (MSHA)** – *storage & use at mine sites*
- **Department of Homeland Security (DHS)** – *manufacturing & storage; security requirements for explosives & precursor chemicals*
- **Department of Transportation** – *explosives classification approvals, special permits, hazmat transport*
- **Environmental Protection Agency (EPA)** – *emergency planning & reporting requirements*
- **Interior Department** – *mining/blasting permitting on public lands*
- **U.S. Army Corps of Engineers (USACE)** – *mining/blasting permitting in conjunction with EPA*

Regulatory Update

ATF Regulatory Modernization Project

- Initiated by IME and kicked off by ATF in Fall 2022
- Comprehensive Update to ATF regulations (27 CFR Part 555 - Orange Book)
- Multiphase and Multi-Year Project
- First Phase will be rulemaking on Markings of Explosives, Licensure, and Recordkeeping
 - *IME supports, in principle, an optional “Track and Trace” style marking provided there are incentivizing elements in the regulation to opt-in.*
 - *IME will provide suggestions for structuring the program*
 - *Proposed rule expected summer 2023*

ATF Regulatory Modernization Project

- Future Phases could include a classification system, magazine construction, IMESA FR, underground storage
- ATF is seeking input from the broader explosives community

Regulatory Update

Department of Transportation – Pipeline & Hazardous Materials Safety Administration (PHMSA)

Rulemaking to adopt IME's changes to SLP-22 & SLP-23 into the hazardous materials regulations (HMRs)

- **SLP-22**
 - Allow alternative materials in construction of IME 22 boxes (day boxes)
 - Location requirement – as far as possible from potential sources of high temperature fires (e.g., fuel tanks, tires)

Suitable materials for the laminate construction include (but are not limited to) those listed in the following table.

Material	W/m*K	Btu/Ft*hr*F
1st layer		
Gypsum Board	.17	.0982
Ceramic fiber board	.085	.0491
Mineral wool board	.052	.0300
Magnesium Oxide (Mgo) Board	.15	.0867
Firex Board-II™	.089	.0154
2nd layer (interior)		
Plywood	.13	.0751
Firex Board-II™	.089	.0154
Mgo Board	.15	.0867

Regulatory Update

Department of Transportation – Pipeline & Hazardous Materials Safety Administration (PHMSA)

- **SLP-23**
 - Allow use of IM 101 & 102 tanks & T11, UN portable tanks
 - Authorize use of certain IBCs
 - Clarify that SLP-23 applies to CTMVs, Vessels, & Railcars
 - Extend security provisions in Section I to Section II (bulk trucks)
- *Comment deadline June 16; no announced date for final rule*
- **Electronic Detonators**
 - New numbers adopted into US rules – deadline to begin full use is July 26, 2023

Environmental Protection Agency (EPA)

- **Open Burning/Open Detonation Rulemaking**
 - Proposed rule expected this summer
 - Will require applicants for permits/renewals to evaluate available alternative treatment technologies (e.g., incineration, chemical treatment) and may require implementation of identified viable alternatives in lieu of OB/OD
 - Aimed primarily at the military, but is already having spillover impacts in commercial sector

Environmental Protection Agency (EPA)

- **Perchlorate**

- Appeals Ct. has ordered EPA to begin rulemaking to regulate perchlorate under Safe Drinking Water Act
 - *Perchlorate-containing commercial explosives & blasting agents are used in specialized high-pressure, high-energy applications*
 - *Perchlorate-containing compounds can also be found within a limited number of explosive products as either a naturally occurring contaminant (Chilean nitrate), or as a compound that was selected for incorporation into a particular product*
 - *Delay powders used in detonator manufacturing may contain a small amount of potassium perchlorate (KClO₄) in the delay mixture*

Why We Care:

- Regulatory levels for drinking water are used as cleanup standards for contaminated soil & groundwater
- Permitting authorities have, occasionally, banned perchlorate-containing products at blasting sites

Regulatory Update

Environmental Protection Agency (EPA)

- **Risk Management Plan (RMP) Rule**
 - *Comprehensive emergency planning rule requiring (among other things) “worst case scenario” projections (\$\$\$\$)*
 - *Proposed rule (2022) does not include explosives or AN. However, the Technical Background Document suggests possible future expansion of RMP to include AN*
 - *IME comments oppose inclusion of explosives & AN*

Occupational Safety & Health Administration (OSHA)

- **Process Safety Management (PSM) Standard**
 - *Like RMP on workplace safety side of the equation*
 - *OSHA is updating PSM; seems determined to include AN (and blasting agents by extension??)*

Environmental Protection Agency (EPA)

- **WOTUS – “Waters of the United States”**
 - *Definition of WOTUS determines whether waterbody is regulated under the federal Clean Water Act*
 - *Regulated waters fall under a complex (\$\$\$\$) permitting scheme*
- US Supreme Ct. decision May 25, 2023, narrows scope of CWA to waters “indistinguishable” from traditional waters due to a “continuous surface connection”
- New EPA WOTUS rule may have to be withdrawn

Why We Care:

- Permitting delays/denials can stall or halt mining, construction, industrial expansion projects

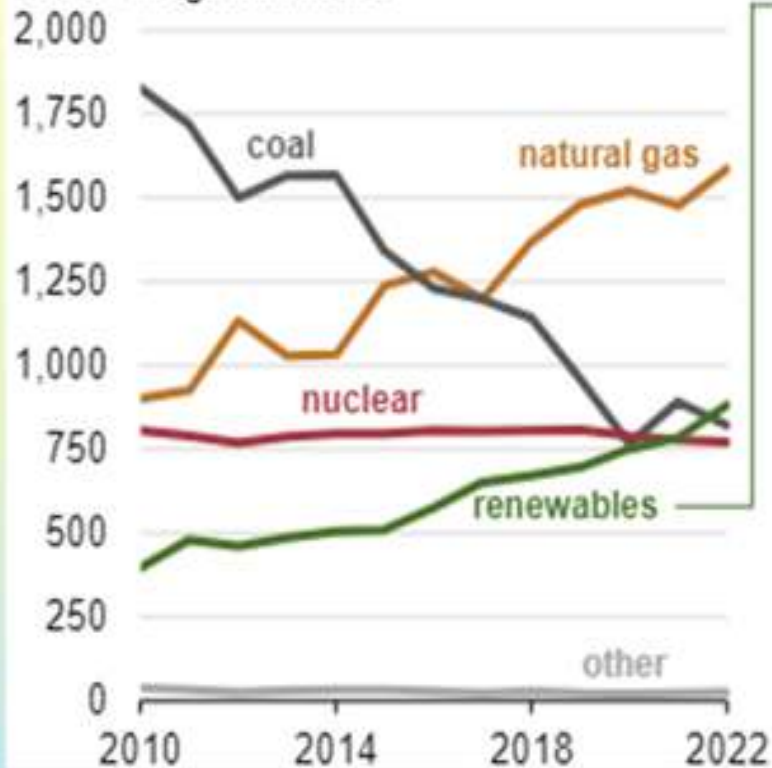
Environmental Protection Agency (EPA)

- *Regulations Impacting Coal*
 - **New rule on existing powerplants** – *cuts to greenhouse gas emissions by emphasizing carbon capture & storage (CCS) & future hydrogen co-firing*
 - **Mercury & Air Toxics rule** – *↓ mercury; focuses on lignite plants to “even the playing field” w/bituminous plants*
 - **National Ambient Air Quality Standards (NAAQS)** *for particulates & ozone*
 - **Cross-State Air Pollution Rule (CSAPR)** – *Nox & SO₂ trading program preventing upwind states’ emissions from interfering w/downwind states’ ability to meet NAAQS*
 - **Effluent Limitations Guidelines** – *water emissions*
 - **Coal Combustion Residue (CCR) rules** – *existing & “legacy” impoundments*

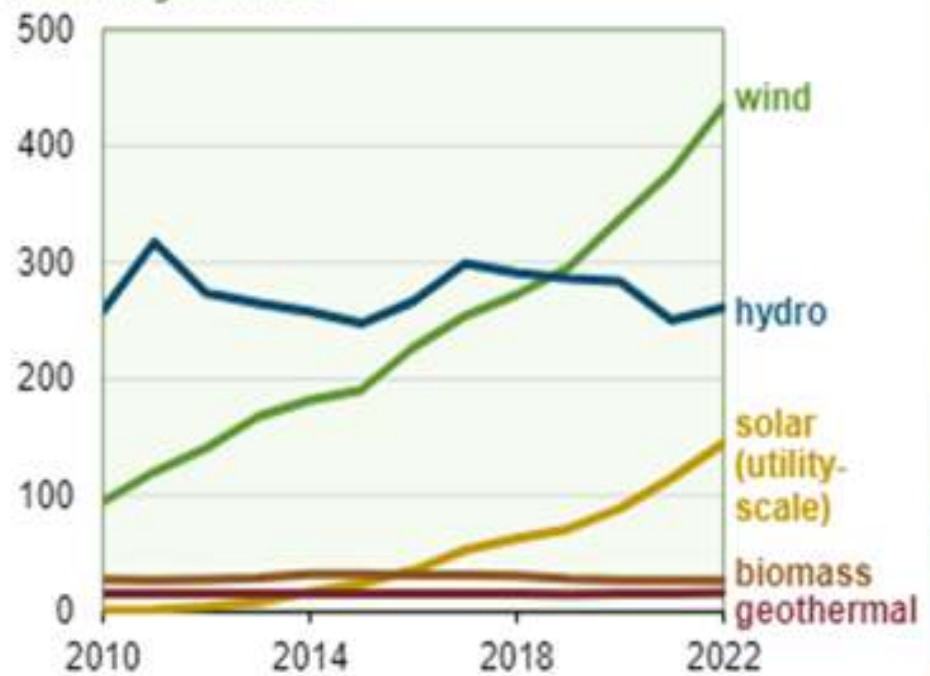
RENEWABLES SURPASS COAL FOR 1ST TIME IN 2022

U.S. electric power sector electricity generation (2010–2022)

million megawatthours



detailed renewable sources
million megawatthours



eia

Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS)

Issue:

- Duplication of ATF security regulations
- Costs industry Millions

IME Advocacy Efforts:

- Working with Congress and the White House since 2017
- Commissioned Government Accountability Office Study on overlap
- Past administration published proposed rule to remove explosives from the program in 2020

Status:

- Program expires in July of 2023
- Congress will begin working on reauthorization later this year
- IME is encouraging current Administration to continue the rulemaking process

U.S. Supreme Court Decisions Impacting Agency Rulemaking

“Judicial Deference”

- Historically, U.S. Courts have “deferred” to agencies when interpreting statutes they administer, and regulations they promulgate
- [Chevron Deference](#) - *Grants deference to an agency’s interpretation of its statutory authority if the interpretation was deemed “reasonable”*
- [Auer Deference](#) - *Grants deference to an agency's interpretation of an ambiguous regulation that the agency itself has promulgated*

- Auer deference was narrowed in 2019 (*Kisor v. Wilke*)
- Supreme Ct. has just accepted certiorari in a case challenging the legitimacy of Chevron deference (*Loper Bright Enterprises v. Raimondo*)
- *What are the Implications?*
- Without Chevron, courts would probably revert to case-by-case decision-making, which could limit or call into question federal regulations affecting every sector of the national economy where statutory language is less than clear
- Would likely complicate & slow rulemaking as agencies strive to keep their rules & policies defensible

United Nations

United Nations Activity

- IME's primary issue before the UN continues to be the exclusion of certain ammonium nitrate emulsions (ANEs) from Test 8(d)
 - *ANEs that pass 8(e) (minimum burning pressure test) should be exempt from 8(d)*
- A working paper was submitted for the summer UN session, & the US delegation's stance on the paper will be disclosed during a public pre-UN meeting scheduled for June 21, 2023
- It was noted that the recent tanker trailer explosion in Western Australia involving ANEs has raised several questions about the transportation of this substance

UN Activity

United Nations Activity

- AISIG has submitted two papers:
 - The definition of Class 1 Explosives, expanding the packing group of UN 3375 to groups I and III, and
 - Amendments to Chapter 2.17 of the Globally Harmonized System - Desensitized Explosives
 - IME's UN Subcommittee will review these papers to determine its stance(s).

UN Activity

IME Activities

- **New Website**
 - Launch date is imminent
- **eLearning**
 - SLP-27, *Security in Manufacturing, Transportation, Storage and Use of Commercial Explosives* (Release Date: June 5, 2023)
 - SLP-30, *Safe Handling of Solid Ammonium Nitrate*
 - SLP-17, *Safety in the Transportation, Storage, Handling & Use of Commercial Explosive Materials*
 - SLP-28, *Recommendations for Accountability and Security of Bulk Explosives and Bulk Security Sensitive Materials*

- **IME eLearning**
 - Complimentary to IME Members
 - Costs to non-members not yet determined, but should be nominal
 - Available access through IME website/shopping cart
 - Certain U.S. states plan to offer eLearn modules as part of blasters' certification/recertification training
- **Electric Vehicles & Explosives Transport**
 - IME Ad Hoc Committee
 - United Nations - *Working Party on the Transport of Dangerous Goods* – “Discussion for the use of Battery Electric Vehicles for the approval of EX vehicles is still underway as well . . . [as] for the application of Hydrogen Fuel Cell Vehicles”

Miscellaneous

- **Use of LTL Carriers in the US**
 - *In general*, not used for 1.1, 1.2, 1.3
 - Standard commercial carriers such as FedEx Freight, SAIA, Old Dominion will not accept 1.1, 1.2, 1.3
 - Some “contract carriers” will accept these materials
 - *Some* manufacturers use LTLs for 1.4 (placarding required if quantity is >1,000 lbs)
- **AN Lost in Transit**
 - Loss of 60,000 lbs of AN prill b/w Wyoming & California via rail transport
 - Cause to be determined – seals were intact
 - Widespread media coverage

Questions?

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