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**2022
EARTH DAY
CELEBRATION**

**Reaching Net Zero Together:
Environmental & Regulatory Considerations
in Alternative Energy Development**

Rick R. Rothman | Kirstin E. Gibbs | David B. Mendelsohn

April 18, 2022

Program Overview

- **APRIL 18** | Reaching Net Zero Together: Environmental Considerations in Alternative Energy Development
- **APRIL 19** | Emerging Contaminants—The Road Ahead
- **APRIL 20** | Major Federal Environmental Cases—What Lies Ahead
- **APRIL 21** | Climate Change Regulation—From Emissions Standards to Disclosure Rules and Everything In Between

Register at <https://www.morganlewis.com/events/earth-day-celebration-series>

Reaching Net Zero Together Webinar Series

- **APRIL 21** | Innovation and IP

Presenters



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Permitting for New Non-Fossil Fuel Generation

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Permitting New Alternative Electricity Generation

In this section, we will discuss:

- Siting and Environmental Impacts
- Federal Oversight and Permitting
- State and Local Permitting
- Engaging Community and Other Stakeholders



Siting and Environmental Impacts

- Location, Location, Location
 - Depending on the type of generation (i.e., offshore wind, on shore wind, geothermal, solar, hydro), the siting options can be limited
 - Considerations of transmission impacts in siting near large users and/or transmission corridors
 - Designated Leasing Areas (DLAs) on public lands
- Environmentally Sensitive Areas
 - Conservation areas consideration
 - If public lands are involved, be clear on the boundaries of excluded public lands
- Endangered Species Considerations
- Surface Water and Stormwater Considerations
- Cultural Resources and Tribal Considerations
- Engagement with Local Environmental Groups



Federal Oversight/Permitting

- NEPA (National Environmental Policy Act) Process
 - Examples of Lead Agency and/or Consulting Agencies include:
 - Bureau of Ocean Energy Management (BOEM) for offshore wind
 - Coast Guard
 - EPA
 - Army Corps of Engineers (Wetlands)
 - Fish & Wildlife
 - At a minimum, the process will need to address important aspects of environmental review, including:
 - Alternatives Analysis
 - Cumulative Impact Analysis
 - Mitigation Measures
- Programmatic Environmental Review
 - Although not available for all projects, keep an eye out for programmatic environmental assessments or programmatic environmental impact statements.

Permitting: Statutory Considerations for Offshore Wind As Example

Offshore wind projects provide a good example of the multi-faceted statutory structure that covers the development of alternative energy. The following are the major statutes that come into play, and the agencies that are primarily responsible for implementation:

- Energy Policy Act of 2005 (BOEM)
- National Environmental Policy Act (BOEM)
- Coastal Zone Management Act (State CMPs)
- Other Statutes of Note
 - Marine Mammal Protection Act (NMFS)
 - Federal Endangered Species Act (NMFS/USFWS)
 - National Historic Preservation Act (BOEM/State Historic Preservation Officer (SHPO))
 - Clean Water Act and Rivers and Harbors Act (USACOE)

Federal Government Impacts

- The current administration has taken actions, including the issuance of Executive Orders, that are likely to have a significant impact on agency resources and focus on the permitting of new, cleaner generation.
 - **Climate Change**
 - Addressing climate change is a priority, including incentivizing clean energy and additional regulations for GHG emissions from traditional stationary sources
 - Biden administration efforts are government-wide and involve significant policy changes
 - **Infrastructure**
 - Renewable Energy Target – Establishing Federal Clean Electricity Standard
 - Tax Credits – Extension and Expansion
 - Federal Procurement

State and Local Permitting

- Air Quality
 - Depending on the type of facility, the air quality permitting requirements may not be a significant challenge. For instance, wind and solar installations do not tend to have significant air emissions.
 - However, for permitting purposes, there is also consideration of construction-related emissions.
 - For large projects, consider whether any temporary or portable facilities trigger any NSPS (40 CFR Part 60).
 - Even smaller projects may be subject to local requirements and regulations that apply to construction related emissions and dust control.
- Water Quality
 - Surface Water
 - Stormwater
 - Industrial Discharges
- Cultural Resources and Historic Preservation
- Wastes



State and Local Permitting

State and local agencies and authorities also play an important role in a variety of aspects of permitting certain projects. Particularly if the project is not sited on federal lands, tribal lands or offshore, it is important to consider that these authorities may have more stringent and different requirements. As a sampling of these state or local permitting authorities:

- Mini-NEPA Lead Agency (i.e., CEQA)
- Land Use/Local Zoning Boards and Commissions
- Coastal Commissions
- State Energy Commissions/Authorities

Community/Stakeholder Considerations

Early engagement with community groups and other local stakeholders can help identify activities that will need careful attention during the permitting process, that may not be purely environmental, but are nonetheless important.

- Traffic
- Noise
- Aesthetic/Visual Concerns
- Light Pollution





Carbon Capture and Sequestration

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Types of Carbon Management in US

- Two types of carbon management methods
 - CCS or carbon capture and storage: captures carbon from the atmosphere and stores it deep underground.
 - CCUS or carbon capture utilization and storage—puts the some of the recovered CO₂ to use in other ways, often to help with oil extraction. Injection of CO₂ into oil reserves, causing oil to flow more easily and efficiently.
- There are 5,000 miles of CO₂ pipelines already in operation in the United States and pipelines are the safest way to transport this materials

BOTTOM LINE: Not new technology but renewed focus on using technology to reach net-zero goals by the mid-century.

Current Carbon Management Projects in the US

- Summit Carbon Solutions – CCS project
 - In 2021, announced plans to develop a new carbon capture and storage project in Iowa, Minnesota, North Dakota, South Dakota, and Nebraska.
 - Capture carbon dioxide emissions that otherwise would be emitted into the atmosphere from biorefineries, such as ethanol plants, compress the captured CO₂, and transport it through a pipeline to North Dakota where it will be permanently and safely stored underground in deep geologic storage locations.
 - Carbon dioxide and water are the byproducts of ethanol production.
 - The project will be the largest carbon capture and storage project in the world.

BOTTOM LINE: The project will capture and permanently store up to 12 million tons of CO₂ every year – which is equivalent to removing 2.6 million vehicles from our roads annually

Current Carbon Management Project in the US

- Oxy Low Carbon Ventures – CCUS Project
 - Expected to be largest “Direct Air Capture” or “DAC” plant in the world (developed by 1PointFive).
 - The equipment takes in air and, through a series of chemical reactions, it removes the carbon dioxide before releasing the remaining gases back into the atmosphere.
 - The plant will remove CO₂ directly out of the air. The oil company will transport the carbon dioxide via pipeline to one of its oilfields, to be used in enhanced oil recovery, injecting the gas directly into oil reserves to increase oil production and inject it into oil wells to increase oil production. Excess carbon will be stored underground.

BOTTOM LINE: The plant will remove 1,000,000 metric tons of CO₂ per year from the air; today, most DAC plants remove thousands of tons per year.

CCS Regulation in the US

- Permitting and Operating **Interstate** Carbon Dioxide Pipelines
 - Federal Regulation
 - 1. Safety**
 - Department of Transportation – PHMSA
 - Safety standards for CO₂ transported by a hazardous liquid pipeline or transported in a gaseous state
 - 2. Siting and Economic Regulation**
 - Is there a role for the Federal Energy Regulatory Commission?
 - Not a natural gas pipeline regulated per the Natural Gas Act
 - Not an oil or petroleum products pipeline regulated per the Interstate Commerce Act
 - FERC has no permitting authority or economic regulation
 - Is there a role for the Surface Transportation Board?

BOTTOM LINE: No federal agency has jurisdiction over the siting or construction of interstate CO₂ pipelines and no federal agency has exerted economic jurisdiction.

CCS Regulation in the US

- Permitting and Operating *Intrastate* Carbon Dioxide Pipelines
 - Regulation varies by state
 - Texas
 - Midwest
 - Eminent domain and landowner concerns
 - Common carrier regulation
 - Environmental justice
 - Efforts to limit CO₂ pipelines by county

Regulation of Carbon Storage

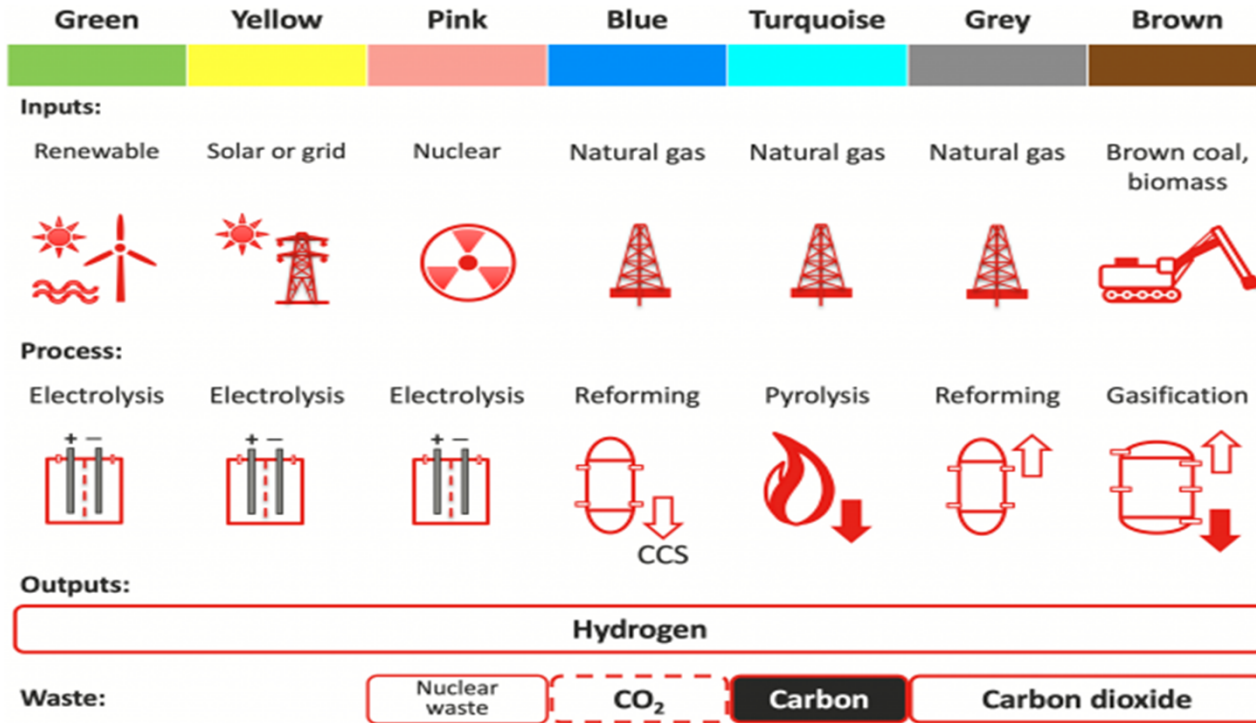
- How Storage of CO₂ Works
 - Using a US EPA-approved Class VI CO₂ injection well, compressed liquid CO₂ is injected more than a mile underground into the reservoir rock. A CO₂ treating facility separates and compresses the CO₂ into a supercritical fluid, preparing it for injection.
 - The CO₂ becomes trapped within this reservoir beneath an impermeable cap rock that locks the CO₂ underground permanently.
 - Geologically sequestered CO₂ is designed to be safe by deploying an EPA-regulated Monitoring, Reporting and Verification program.
- Challenges with obtaining Class VI CO₂ injection well status
 - Demonstrate that whatever is being injected does not harm Underground Sources of Drinking Water (USDWs).
 - Injection wells regulated by EPA unless states or tribal agency has obtained primacy.
 - Laws and regulations must be at least as stringent as EPA's minimum requirements.
 - To date, only North Dakota and Wyoming have obtained primary for the Class VI program but no state has issued a permit yet.



Hydrogen Project Development

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What Color is Your Hydrogen?



Hydrogen Investment in the US

- Potential
 - Clean hydrogen (e.g., Blue or Green) can be used in several ways:
 1. Fuel hard to decarbonize sectors of our economy:
 - long-haul trucking
 - steel and metal manufacturing
 2. Store energy for long periods of time
- Challenges
 - Cost with production and storage at scale
- DOE Hydrogen Shot
 - Reduce the cost of hydrogen by 80%
 - Clean hydrogen demonstration projects

Regulating Hydrogen

- Production
 - EPA, 40 CFR Part 98 Subpart P – Hydrogen Production
 - Emissions reporting by source and thresholds
 - Local regulations
- Storage
 - OSHA, 29 CFR Part 1910 Subpart H – Hazardous Materials
 - Storage and delivery requirements
 - FAA, 14 CFR Part 420
 - At aircraft and spacecraft launch sites
 - Local Regulations

Regulating Hydrogen

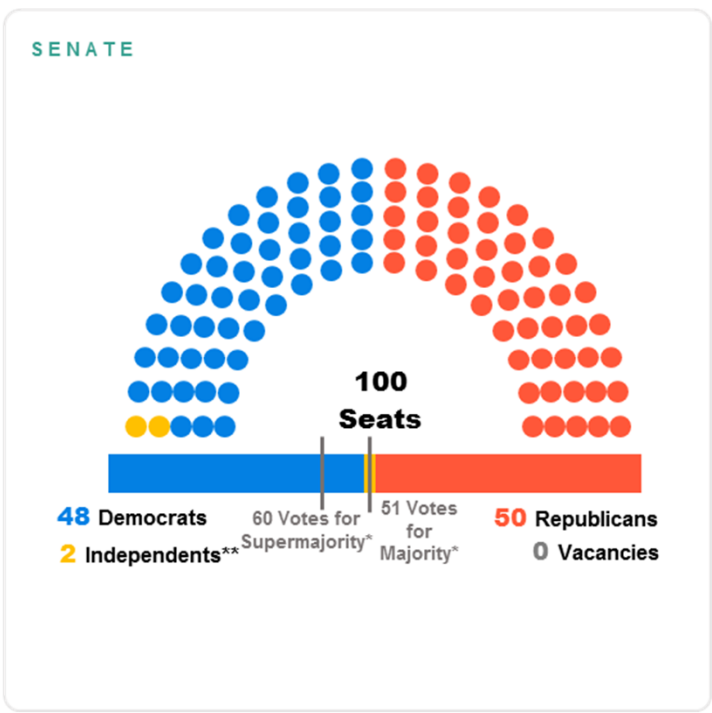
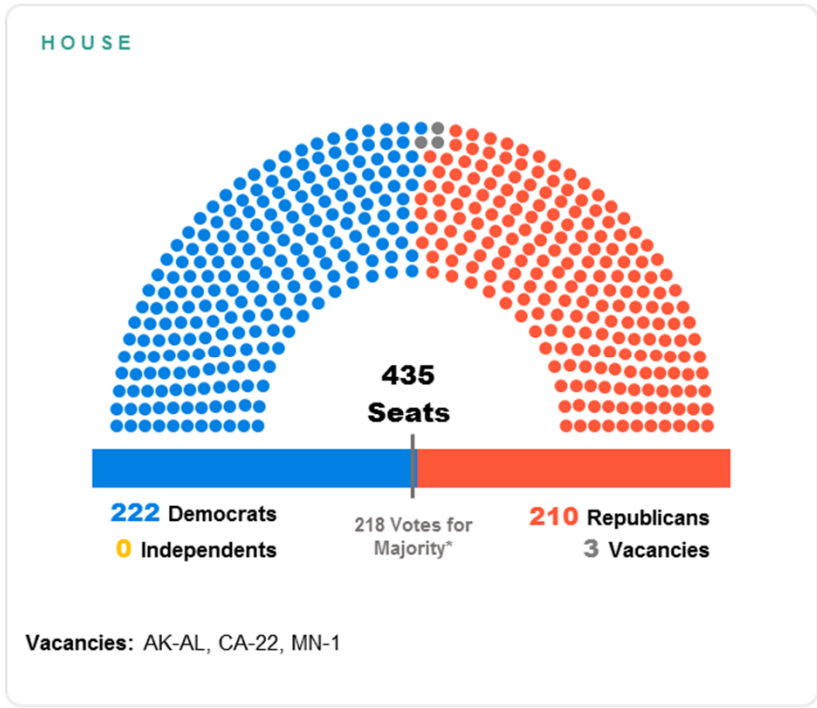
- Transportation by Pipeline
 - Safety – PHMSA
 - Big question – will FERC regulate interstate hydrogen pipelines?
- Transportation by Road (hydrogen as cargo)
 - Safety – PHMSA (49 CFR 172, 173, 177, 178, 180)
 - Federal Highway Administration and Federal Motor Carrier Safety Administration
- Transportation by Rail
 - Safety – PHMSA
 - 49 CFR 174 approval from DOT Federal Railroad Administration
- Transportation by Waterway
 - Safety – PHMSA
 - 49 CFR 176 requirements for transport by vessel



A View From Capitol Hill

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Congress – An Overview



Senate Leadership

Majority Leader Charles Schumer



Minority Leader Mitch McConnell



Senate Environment & Public Works Committee

Democrats (10)

- **Thomas R. Carper, Del. - Chairman**
- Benjamin L. Cardin, Md.
- Bernie Sanders, Vt. (I)
- Sheldon Whitehouse, R.I.
- Jeff Merkley, Ore.
- Edward J. Markey, Mass.
- Tammy Duckworth, Ill.
- Debbie Stabenow, Mich.
- Mark Kelly, Ariz.
- Alex Padilla, Calif.

Republicans (10)

- **Shelley Moore Capito, W.Va. - Ranking Member**
- James M. Inhofe, Okla.
- Kevin Cramer, N.D.
- Cynthia Lummis, Wyo.
- Richard C. Shelby, Ala.
- John Boozman, Ark.
- Roger Wicker, Miss.
- Dan Sullivan, Alaska
- Joni Ernst, Iowa
- Lindsey Graham, S.C.

Senate Energy and Natural Resources Committee

Democrats (10)

- **Joe Manchin III, W.Va. - Chairman**
- Ron Wyden, Ore.
- Maria Cantwell, Wash.
- Bernie Sanders, Vt. (I)
- Martin Heinrich, N.M.
- Mazie Hirono, Hawaii
- Angus King, Maine (I)
- Catherine Cortez Masto, Nev.
- Mark Kelly, Ariz.
- John Hickenlooper, Colo.

Republicans (10)

- **John Barrasso, Wyo. - Ranking Member**
- Jim Risch, Idaho
- Mike Lee, Utah
- Steve Daines, Mont.
- Lisa Murkowski, Alaska
- John Hoeven, N.D.
- James Lankford, Okla.
- Bill Cassidy, La.
- Cindy Hyde-Smith, Miss.
- Roger Marshall, Kan.

House Leadership

Speaker Nancy Pelosi



Minority Leader Kevin McCarthy



House Energy and Commerce Committee

Democrats (32)

- Frank Pallone Jr., N.J. - Chairman
- Bobby L. Rush, Ill.
- Anna G. Eshoo, Calif.
- Diana DeGette, Colo.
- Mike Doyle, Pa.
- Jan Schakowsky, Ill.
- G.K. Butterfield, N.C.
- Doris Matsui, Calif.
- Kathy Castor, Fla.
- John Sarbanes, Md.
- Jerry McNERney, Calif.
- Peter Welch, Vt.
- Paul Tonko, N.Y.
- Yvette D. Clarke, N.Y.
- Kurt Schrader, Ore.
- Tony Cárdenas, Calif.
- Raul Ruiz, Calif.
- Scott Peters, Calif.
- Debbie Dingell, Mich.
- Marc Veasey, Texas
- Ann McLane Kuster, N.H.
- Robin Kelly, Ill.
- Nanette Barragán, Calif.
- A. Donald McEachin, Va.
- Lisa Blunt Rochester, Del.
- Darren Soto, Fla.
- Tom O'Halleran, Ariz.
- Kathleen Rice, N.Y.
- Angie Craig, Minn.
- Kim Schrier, Wash.
- Lori Trahan, Mass.
- Lizzie Fletcher, Texas

Republicans (26)

- Cathy McMorris Rodgers, Wash. - Ranking Member
- Fred Upton, Mich.
- Michael C. Burgess, Texas
- Steve Scalise, La.
- Bob Latta, Ohio
- Brett Guthrie, Ky.
- David B. McKinley, W.Va.
- Adam Kinzinger, Ill.
- Morgan Griffith, Va.
- Gus Bilirakis, Fla.
- Bill Johnson, Ohio
- Billy Long, Mo.
- Larry Bucshon, Ind.
- Markwayne Mullin, Okla.
- Richard Hudson, N.C.
- Tim Walberg, Mich.
- Earl L. "Buddy" Carter, Ga.
- Jeff Duncan, S.C.
- Gary Palmer, Ala.
- Neal Dunn, Fla.
- John Curtis, Utah
- Debbie Lesko, Ariz.
- Greg Pence, Ind.
- Daniel Crenshaw, Texas
- John Joyce, Pa.
- Kelly Armstrong, N.D.

Congressional Considerations

- War in Ukraine
- Inflation/Macroeconomic Trends
- China Competition Legislation
- Build Back Better/Reconciliation
- Keeping the Lights On

Challenges

- Calendar
- Midterm Elections

The Calendar

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JANUARY							FEBRUARY							MARCH						
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JULY							AUGUST							SEPTEMBER						
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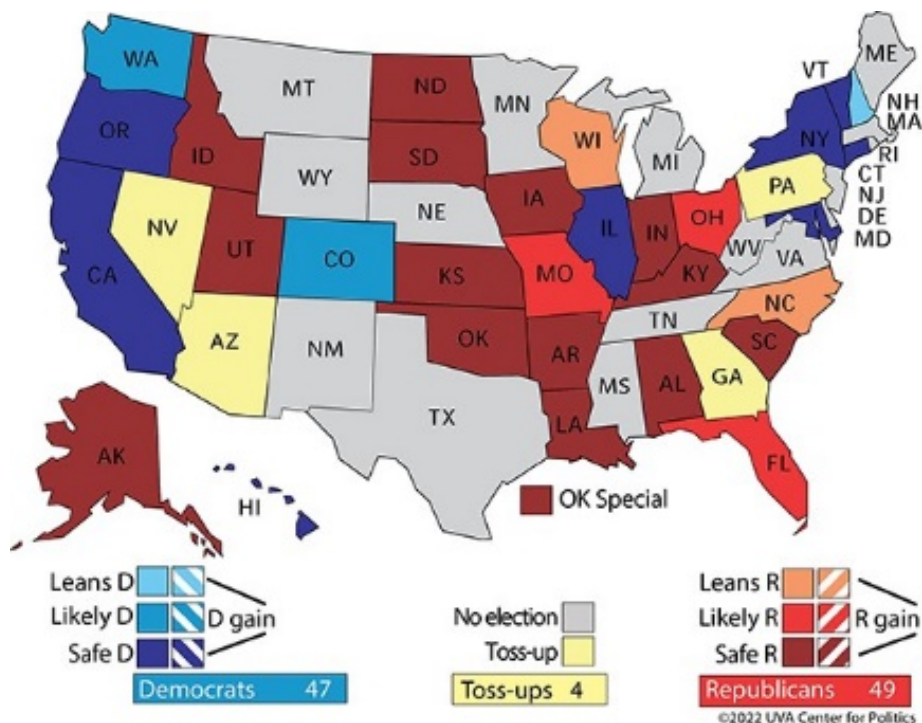
OCTOBER							NOVEMBER							DECEMBER						
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(Red days = Senate not in session)

2ND SESSION CONVENES—JANUARY 3, 2022
 TARGET ADJOURNMENT—DECEMBER 21, 2022

GPO: 2021 46-379 (04/21)

Midterm Elections – 2022



Coronavirus COVID-19 Resources

We have formed a multidisciplinary **Coronavirus/COVID-19 Task Force** to help guide clients through the broad scope of legal issues brought on by this public health challenge.

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To help keep you on top of developments as they unfold, we also have launched a resource page on our website at www.morganlewis.com/topics/coronavirus-covid-19

If you would like to receive a daily digest of all new updates to the page, please visit the resource page to [subscribe](#) using the purple “Stay Up to Date” button.



Biography



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Rick Rothman focuses on environmental and energy counseling and litigation. Rick's practice encompasses a broad range of environmental and energy laws, including the laws and regulations concerning air quality (both stationary and mobile sources), water quality, power plant siting, hazardous substances, impacted properties, energy efficiency, climate change, and Proposition 65.

Rick has experience in counseling clients in a number of different contexts, including threatened enforcement actions, variance requests, permitting and appeals, and due diligence reviews, and meeting state and federal reporting requirements and warning requirements. His litigation practice involves the representation of clients from large corporations to local agencies in matters before both federal and state courts.

Biography



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Kirstin Gibbs, co-leader of the firm's energy industry team, as well as a leader of the climate change and sustainability working group, represents pipelines, producers, traders, marketers, utilities, and end users, on a host of issues. She handles transactional matters related to the development of new oil and gas infrastructure and regularly provides assistance with negotiation of midstream transportation and storage agreements, complex asset management agreements, and commodity transactions. Kirstin also counsels global clients interested in addressing climate change and sustainability initiatives by investing in clean energy technologies, including renewable natural gas and hydrogen, and decarbonizing their operations.

Biography



David B. Mendelsohn

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David B. Mendelsohn is a government relations professional in Morgan Lewis's Washington Strategic Government Relations and Counseling Practice. He advises Morgan Lewis attorneys and clients on legislative developments and public policy issues and assists with lobbying registration and reporting.

David monitors a wide range of legislative and public policy issues, including: energy, tax, healthcare, infrastructure, digital assets, trade, and national security. He is currently serving as the government relations lead on the firm's Ukraine Conflict task force.

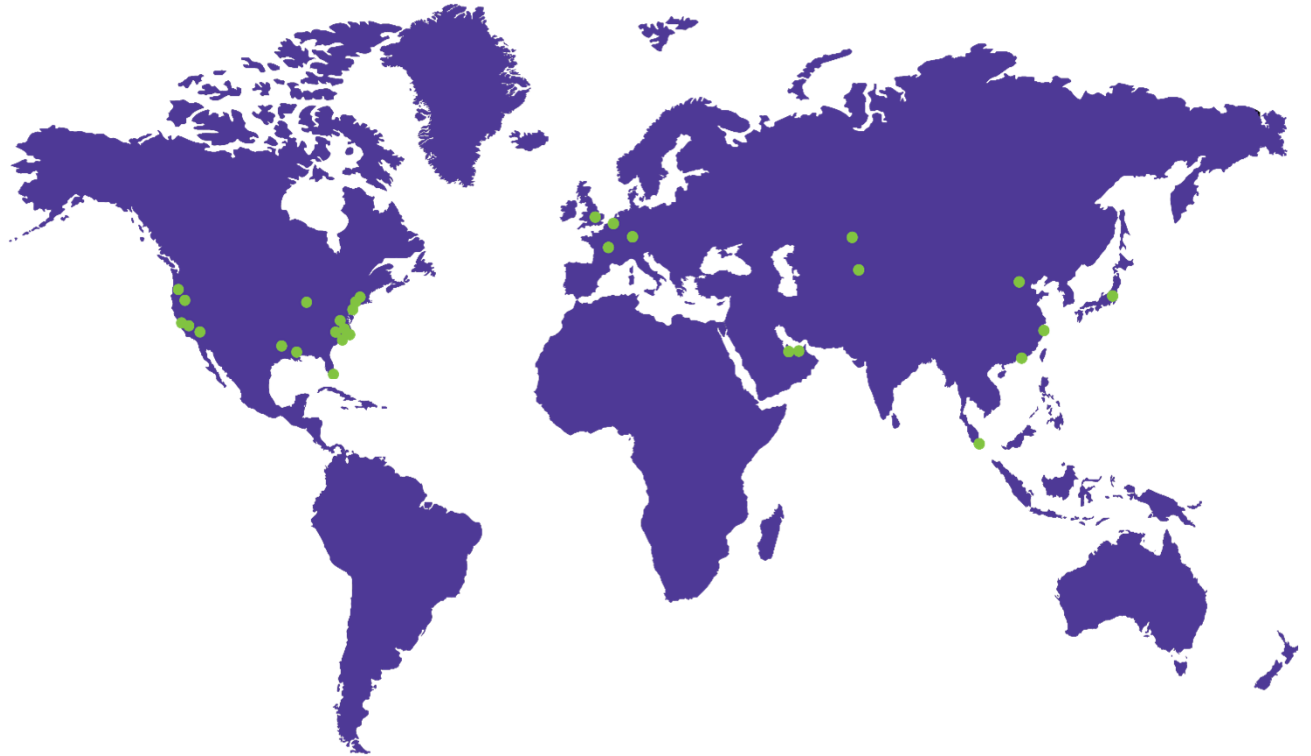
Prior to joining Morgan Lewis in 2011, he worked for the American Trucking Associations and previously interned in the Capitol Hill office of Congresswoman Gabrielle Giffords (D-AZ).

Our Global Reach

Africa
Asia Pacific
Europe
Latin America
Middle East
North America

Our Locations

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Boston
Brussels
Century City
Chicago
Dallas
Dubai
Frankfurt
Hartford
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Miami
New York
Nur-Sultan
Orange County
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Washington, DC
Wilmington



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