

CONSULTING SCIENTISTS,  
PLANNERS & ENGINEERS

## AIR QUALITY



### SERVICES PROVIDED

**Accidental release modeling & planning**

**Agency negotiations**

**Air permits**

**Ambient pollutant and meteorological monitoring**

**Compliance audits**

**Control technology analyses (RACT, BACT, LAER, MACT, BART)**

**Dispersion modeling for stationary, mobile, and area sources**

**Emission inventories (incl. greenhouse gas & toxics)**

**Environmental Justice – Analyses & Public Outreach**

**Greenhouse Gas Sustainability Services**

**Cumulative Impact Analyses**

**Specialty modeling (incl. deposition, fogging, odor)**

*Having worked in 35 states and local jurisdictions, Epsilon advises clients on how to meet and comply with evolving air quality regulations.*

[www.epsilonassociates.com](http://www.epsilonassociates.com)



**At Epsilon, our team of Professional Engineers, Scientists, and Certified Consulting Meteorologists are skilled at solving complex technical and regulatory air quality compliance issues for our power, industrial, commercial, and institutional clients.**

Epsilon's air quality professionals solve complex technical and regulatory issues for our power, industrial, commercial, and institutional clients. We guide our clients through the rapidly changing landscape of air quality standards and regulatory requirements, obtaining approvals for new development and helping existing facilities ensure compliance. We work across disciplines with developers, engineers, and operations staff to provide seamless environmental support.

Epsilon prepares air permit applications (including PSD/NSR), environmental impact documents, siting and licensing applications, due diligence reviews, risk management plans, public presentations, environmental management systems, and responses to agency enforcement. Our Certified Consulting Meteorologists and Professional Engineers have provided expert testimony for dozens of projects.

In general, we support air quality compliance at all phases of a project life cycle including:

- Pre-construction feasibility analyses
- Preparation of air permit applications, including identification of applicable air quality regulations, air emission calculations, ambient air quality modeling, and ongoing communication with State/Federal agencies & other stakeholders
- Identification of state-specific Greenhouse Gas and Environmental Justice requirements
- Guidance on federal regulations ("MACT", "NSPS", "RMP", etc.) that may apply to given industrial processes
- Support for continuous emission monitoring systems (CEMS), including air emission trading activities and technical requirements under "Part 75" / "Part 60"
- Compliance audits and recordkeeping / reporting assistance for operational facilities
- Support for permit modifications, including addition of new units, process changes, and decommissioning of retired units

## **ELECTRIC POWER & COGENERATION**

**Constellation West Medway Peaker Project**  
West Medway, Mass.

**Milford Power**  
Milford, Mass.

**Hollingsworth & Vose CHP**  
Groton, Mass.

**Braintree Electric Light Department - Simple  
Cycle Gas Turbine**  
Braintree, Mass.

**FPL Energy - Bayswater and Jamaica Bay -  
Simple Cycle Gas Turbine**  
Far Rockaway, N.Y.

**Rhode Island State Energy Center - Combined  
Cycle Gas Turbine**  
Johnston, R.I.

**Manuta Creek Generating - Combined Cycle Gas  
Turbine**  
West Deptford, N.J.

**Indeck Niles Energy Center - Combined Cycle  
Gas Turbine**  
Niles, Mich.

**Advanced Power - Brockton - Combined Cycle  
Gas Turbine**  
Brockton, Mass.

**Dominion - Brayton Point - Coal, Oil, Gas**  
Somerset, Mass.

**Indeck Energy - Coal**  
Elwood, Ill.

**Pioneer Renewable Energy - Biomass**  
Greenfield, Mass.

**District Heating Plant - Biomass**  
Concord, N.H.

**Vicinity Energy - District Heating (Boiler Fleet)**  
Philadelphia, Pa.

**MIT - Central Utility Plant**  
Cambridge, Mass.

**Smith College - Gas Turbine CHP**  
Northampton, Mass.

**Ameresco/Tewksbury Hospital - IC Engine CHP**  
Tewksbury, Mass.

**Trigen/NECCO - IC Engine CHP**  
Revere, Mass.

**Versant Power - IC Engine Fleet**  
Various Locations, Maine

**Rhode Island Energy - IC Engine Fleet**  
Various Locations, R.I.

**Boston University - Boiler and IC Engine Fleet**  
Boston, Mass.

**Taunton Municipal Light Plant - IC Engines**  
Taunton, Mass.

**Aries Taunton - Biosolids Gasification**  
Taunton, Mass.

## **INDUSTRIAL**

**Casella Southbridge Landfill Expansion**  
Southbridge, Mass.

**Interplast**  
North Dighton, Mass.

**TBI - C&D/MSW Transfer & Recycling**  
Salem & North Andover, Mass.

**Casella - Landfill**  
Old Town, Maine

**The Newark Group - Pulp & Paper**  
Fitchburg, Mass.

**Noble Metal Services - Precious Metal Recovery**  
Cranston, R.I.

**GP Gypsum - Paper/Wallboard**  
Camden, N.J.

**Covalence Adhesives - Web Coating**  
N.J. & R.I.

**Acushnet Co. - Golf Ball Manufacture**  
Various Locations, Mass.

**Shawmut Corp. - Laminated Products  
Manufacture**  
S.C., Tenn., Mich., Mass.

**Shawmut Medical - Adhesive Lamination**  
El Paso, Texas

**Raybestos - Brake Pads**  
Crawfordsville, Ind.

**CD Aero - Capacitor Manufacture**  
New Bedford, Mass.

**GE Plastics - Integrated ABS Plastics**  
Ottawa, Ill.

**Storopack - Loose Fill Polystyrene**  
Mass. & N.J.

**Key Polymer - Specialty Chemical**  
Lawrence, Mass.

**Tyrolit - Abrasives**  
Westboro, Mass.

**Hess Weavers Cove - LNG Terminal**  
Fall River, Mass.

**Alcoa - Eastalco - Aluminum Refinery**  
Frederick, Md.

**Jamalco - Aluminum Refinery**  
Jamaica

**Palmer Foundry - Aluminum Casting**  
Palmer, Mass.

**P&G Gillette - Various Consumer Products**  
Boston and Andover, Mass.

**Palmer Paving - Asphalt**  
Springfield, Mass.

**Brox Industries - Quarry/Aggregate**  
Ipswich, Dracut, Merrimac & Marlboro, Mass.

**Hero Coatings - Adhesive Manufacture**  
Newburyport, Mass.

**CONSULTING SCIENTISTS,  
PLANNERS & ENGINEERS**

## **ENVIRONMENTAL JUSTICE**



### **SERVICES PROVIDED**

**US EPA and State regulatory guidance**

**Massachusetts Environmental Policy Act (MEPA) support**

**Environmental Justice assessments and analyses**

**Public outreach**

**Air modeling including stationary and mobile source emissions modeling**

**Air quality analyses**

**MassDEP air permitting support - Cumulative Impact Analyses and EJ fact sheets**

### **CONTACT EPSILON**

**Sonja Sax, Sc.D.**

**Lead Scientist**

**Air Quality Group**

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**Epsilon scientists, planners and engineers are expert in conducting Environmental Justice (EJ) analyses, including public outreach, assessment of community environmental and health burdens, application of EJ screening tools, and evaluation of any potential adverse or disproportional impacts from projects. These analyses help clients meet federal and state EJ permitting requirements for new projects in or near EJ communities.**

Our experts follow federal and state guidelines for EJ analyses, including protocols effective in 2022 for environmental justice evaluations under the Massachusetts Environmental Policy Act (MEPA). Based on these protocols, Epsilon has successfully conducted EJ analyses to secure the needed permits for projects within or near EJ communities.

Epsilon has extensive experience working with MEPA to respond to permitting scopes, conduct the necessary outreach to EJ communities, and complete the EJ analyses. EJ analyses include an assessment of existing environmental and health burdens using Massachusetts Department of Public Health tools and the US EPA EJ Screen tool. In addition, mesoscale analyses using the US EPA MOVES model are routinely conducted to estimate air pollutant emissions. Additional air modeling has also been applied to estimate project-related air impacts from stationary and mobile sources on EJ communities. Comparing the predicted air pollution concentrations to health-based standards, our work addresses concerns related to any adverse and disproportionate impacts in or near an EJ community that a project might have.

Headquartered in Massachusetts, our Air Quality team has been a sought-after subject matter expert for Massachusetts' first-in-the-nation Cumulative Impact Analyses requirements for air quality permits near EJ populations, now in force and applying to permit applications filed with the MassDEP on or after July 1, 2024.

# ENVIRONMENTAL JUSTICE REPRESENTATIVE PROJECTS

## RESIDENTIAL DEVELOPMENT

Thorndike – Residential Development

Raynham, MA

1234 & 1240 Soldiers Field Rd – Residential and Hotel Development

Boston, MA

Broadway Crossing - Residential Development

Raynham, MA

175 N Harvard St – Residential Development

Boston, MA

Olmsted Village - Residential Development

Boston, MA

Faneuil Gardens – Residential Development

Boston, MA

4000 Mystic Valley Pkwy – Residential Development

Medford, MA

The Commons at Trask Lane – Residential Development

Beverly, MA

## R&D, LAB, AND LIFE SCIENCES

1400 Boylston – Lab and Office Space

Boston, MA

22 Drydock – Life Science Building

Boston, MA

25-29 Research Dr – R&D and Life Sciences

Westborough, MA

600 Windsor Pl - R&D and Life Sciences

Somerville, MA

Watertown Mall Transformation – Lab and Office Space

Watertown, MA

## WAREHOUSE DEVELOPMENT

Tyngsborough Warehouse Development

Tyngsborough, MA

Lincoln Logistics Warehouse Development

Middleborough, MA

## LIGHT INDUSTRIAL DEVELOPMENT

124 Westborough Rd – Light Industrial Development

Grafton, MA

1414 Mass Ave – Light Industrial Development

Boxborough, MA

## GAS STATIONS

Salem Gas Station

Salem, MA

193 Hartford Turnpike Gas Station

Shrewsbury, MA

Agawam Gas Station

Agawam, MA

## OTHER

Aries Clean Technologies – Biosolids Gasification

Taunton, MA

Franciscan Children’s Hospital

Brighton, MA

Dana Farber Hospital

Boston, MA

125 Union St – Restaurant and Bank

Braintree, MA

West End Library

Boston, MA

262 St Botolph Street – Arena

Boston, MA

## GREENHOUSE GAS SUSTAINABILITY SERVICES



### SERVICES PROVIDED

**Massachusetts Environmental Policy Act (MEPA) Greenhouse Gas Analyses**

**(City of) Boston Carbon Neutral Building Assessments**

**Building Emissions Reporting**

**Carbon Reduction Consulting**

**Boston Building Emissions Reduction and Disclosure Ordinance (BERDO)**

**Land Alteration Calculations**

**Land Alteration Studies**

**Mesoscale Emissions Analysis**

**MEPA GHG Self-Certifications**

**Federal GHG Reporting and Monitoring Plans (40 CFR 98)**

**Massachusetts GHG Reporting (310 CMR 7.71)**

Epsilon has provided greenhouse gas analyses and carbon accounting on hundreds of development projects across Massachusetts. As a result, we are able to offer superior strategic advice and supporting technical expertise to help our clients navigate this rapidly changing regulatory environment.

Our knowledge of current greenhouse gas policies and protocols spans a broad variety of markets and project types. Epsilon's planners and engineers offer sustainability and climate change services including developing baseline estimates of GHG emissions, land carbon inventories, GHG compliance, and emission reduction strategies for state MEPA filings, as well as preparation of Carbon Neutral Building Assessments and Climate Resiliency Reports for the City of Boston's Article 37 Review.

Through the implementation of innovative data-driven and cost-effective sustainability solutions, our clients achieve and maintain compliance with these new and evolving climate change regulations.

We assist industrial, commercial, and institutional facilities in complying with State and Federal emission reporting requirements. Our services include compiling GHG emission inventories and preparing annual reports submitted via MassDEP and U.S. EPA electronic platforms.

**Massachusetts General Hospital Clinical Building**

Boston, Mass.

**Polar Park**

Worcester, Mass.

**Belchertown Redevelopment**

Belchertown, Mass.

**2 Harbor**

Boston, Mass.

**Harvard Science and Engineering Complex**

Allston, Mass.

**Exchange South End (former Flower Exchange Building)**

Boston, Mass.

**Center 128**

Needham, Mass.

**Essex Landing**

Saugus, Mass.

**Watertown Arsenal - Athena Health**

Watertown, Mass.

**Commerce Way Plaza**

Plymouth, Mass.

**Washington Village**

South Boston, Mass.

**North Quincy Station**

Quincy, Mass.

**UMass Boston Energy Producing Facility**

Boston, Mass.

**Chelsea Lofts**

Chelsea, Mass.

**Harrison Albany Block**

Boston, Mass.

**Seekonk FedEx Distribution Facility**

Seekonk, Mass.

**Benjamin Franklin Classical Charter School**

Franklin, Mass.

**New Balance Boston Landing Development**

Brighton, Mass.

**Winthrop Center**

Boston, Mass.

**Hood Park**

Charlestown, Mass.

**Last-Mile Distribution Warehouse**

Charlton, Mass.

**MGM Casino**

Springfield, Mass.

**Union Square**

Cambridge, Mass.

**The Seaport District**

Boston, Mass.

**Nexus at the Allston Innovation Center**

Allston, Mass.

**Northeastern University Coastal Sustainability Institute**

Nahant, Mass.

**200 Newbury Street**

Boston, Mass.

**Smith College**

Northampton, Mass.

**Carver-Marion-Wareham Landfill**

West Wareham, Mass.

**NextEra Bellingham Cogeneration Facility**

Bellingham, Mass.

## COMBINED HEAT AND POWER AND PEAK SHAVING FACILITIES



**Epsilon is the go-to environmental consultant for combined heat and power (CHP) and peak shaving projects, in Massachusetts and beyond.**

### SERVICES PROVIDED

**Air permit applications**

**Air quality dispersion modeling**

**Compliance assistance**

**Emission monitoring plans**

**Noise testing and modeling**

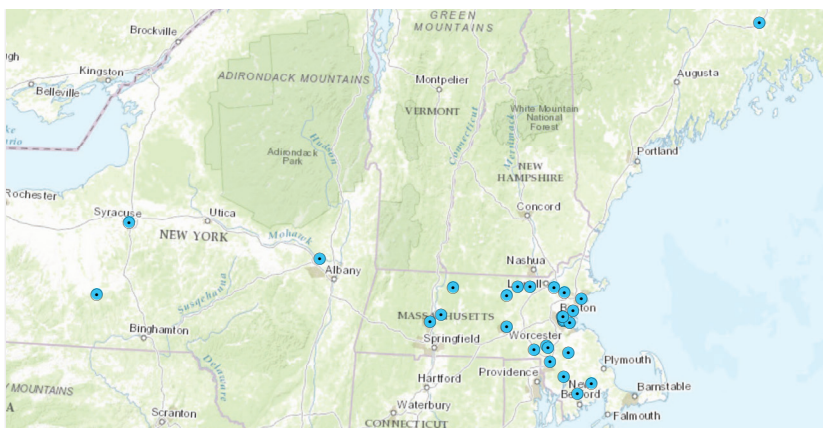
**Spill Prevention, Control and Countermeasures (SPCC) planning**

**Stack testing**

We have completed numerous projects ranging in size from 250 kW to 44 MW. These projects also range from small rich burn gas engines, lean burn gas engines, and diesel peak shavers, to gas and oil red combustion turbines with heat recovery steam generators, duct burners, and selective catalytic reduction (SCR) for control of air emissions.

We have completed air permit applications including Best Available Control Technology (BACT) analyses, and negotiated air permits (including Prevention of Significant Deterioration (PSD) permits), conducted air quality dispersion modeling, measured existing community sound levels, and conducted noise modeling. We also routinely assist with stack testing, noise testing and compliance services such as emission monitoring plans, recordkeeping systems, Spill Prevention, Control and Countermeasures (SPCC) plans, and other on-going compliance assistance as needed.

### REPRESENTATIVE PROJECT LOCATIONS



# CHP AND PEAK SHAVING FACILITIES

## REPRESENTATIVE PROJECTS

PROJECT NAME	LOCATION	DESCRIPTION	AIR PERMIT	AIR MODEL	NOISE MODEL	STACK TEST	NOISE TEST	COMPLIANCE
Saint-Gobain	Worcester, Mass.	5 MW gas turbine/HRSG/DB	X	X	X		X	X
MATEP	Boston, Mass.	14.4 MW gas/oil turbine/HRSG/SCR	X	X	X		X	X
MIT	Cambridge, Mass.	2 x 22 MW gas/oil turbine/HRSG/DB/SCR	X	X				X
Harvard Blackstone	Cambridge, Mass.	8.8 MW gas/oil turbine/HRSG/DB/SCR	X	X	X		X	X
Harvard Allston District Energy	Allston, Mass.	2.7 MW gas engine/HR/SCR	X	X	X			
Erving Paper	Erving, Mass.	6.5 MW gas turbine/HRSG/DB/SCR	X		X	X		X
Hollingsworth & Vose	Groton, Mass.	4.1 MW gas/oil turbine/HRSG/DB/SCR	X		X		X	X
Acushnet BP II	New Bedford, Mass.	2.0 MW gas engine/HR/SCR	X	X	X	X	X	X
Acushnet BP III	New Bedford, Mass.	2.0 MW gas engine/HR/SCR	X	X	X	X	X	X
Brigham & Women's	Boston, Mass.	4.0 MW gas engine/HR/SCR	X	X	X	X	X	X
NSMC	Salem, Mass.	820 kW gas engine/HR/SCR	X	X			X	
Smith College	Northhampton, Mass.	3.3 MW gas/oil turbine/HRSG/SCR	X	X				X
Amherst College	Amherst, Mass.	1.2 MW gas/oil turbine/HRSG/SCR	X					X
UMass Boston	Boston, Mass.	4.6 MW gas turbine/HRSG/SCR	X	X				
Franklin Energy Center	Franklin, Mass.	3.3 MW gas/oil turbine/HRSG/SCR	X	X	X		X	
Lynn Energy Center	Lynn, Mass.	3.3 MW gas/oil turbine/HRSG/SCR	X	X	X		X	
UMass Memorial Medical Center	Worcester, Mass.	2.0 MW gas engine/HR/SCR			X			
UMass Memorial - HealthAlliance Hospital	Leominster, Mass.	2.7 MW gas engine/HR/SCR	X	X	X			
St. Joseph's Hospital	Syracuse, N.Y.	4.6 MW gas turbine/HRSG			X		X	
Union College	Schenectady, N.Y.	1.8 MW gas turbine/HRSG			X		X	
Cornell University	Ithaca, N.Y.	30 MW gas turbine/HRSG			X		X	
VA Hospital	Boston, Mass.	250 kW rich burn gas engine/HR	X	X	X			
Ameresco Tewksbury	Tewksbury, Mass.	750kW rich burn engine/HR	X	X	X		X	X
Ameresco Walpole	Walpole, Mass.	595 kW rich burn engine/HR	X	X	X		X	X
Ameresco Norfolk	Norfolk, Mass.	596 kW rich burn engine/HR	X	X	X		X	X
Trigen Revere	Revere, Mass.	2 x 3.0 MW gas engine/HR/SCR	X	X	X		X	X
TMLP	Taunton, Mass.	4 x 2.49 MW diesel engines/SCR	X	X	X	X	X	X
Middleboro Gas & Electric	Middleboro, Mass.	2.5 MW gas engine/SCR	X		X	X	X	X
Reading Municipal Light Dept.	Reading, Mass.	2.5 MW gas engine/SCR	X		X	X	X	X
Mansfield Municipal Electric Dep.	Mansfield, Mass.	2.5 MW gas engine/SCR	X		X	X	X	X
Bangor Hydro Electric Company	Coastal, Maine	Diesel Engines	X	X				X
Penn State University Medical Ctr.	Hershey, Pa.	8.0 MW gas turbine/HRSG			X		X	
Albany Medical Center	Albany, N.Y.	4.6 MW gas turbine/HRSG			X		X	
Saint Peter's University	Jersey City, N.J.	158kW engine			X			
Hudson Valley Community College	Troy, N.Y.	2.1 MW diesel engines			X		X	