

Chapter 1

Air, Water, and Land: Recent Developments in Environmental Regulations Affecting Electricity Producing Coal Combustion Facilities

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Synopsis

§ 1.01.	Introduction	4
§ 1.02.	Clean Air Act	5
	[1] — Environmental Protection Agency Enforcement Initiative.....	6
	[2] — Emission Standards.....	8
	[a] — Standards for Criteria Pollutants.....	9
	[b] — Standards for Hazardous Pollutants	10
	[c] — Greenhouse Gases	12
§ 1.03.	Resource Conservation and Recovery Act	13
	[1] — The Current Framework	14
	[2] — EPA’s Proposed Regulations.....	15
	[3] — Congressional Action.....	17
§ 1.04.	Clean Water Act	18
	[1] — Cooling Water Intake Structures	19
	[a] — EPA’s 1976 Regulations and Status Quo Regulation.....	19
	[b] — EPA’s Proposed Rule	20
	[2] — Effluent Limitation Guidelines	22
	[a] — Current Regulatory Requirements	22
	[b] — EPA’s Proposed Rule.....	23
	[i] — Discharges to Surface Water from Existing Facilities.....	24
	[ii] — Discharges from Publicly Owned Treatment Works from Existing Facilities.....	25
	[iii] — Discharges to Surface Water from New Sources.....	26

[iv] — Discharges from POTWs
 from New Sources 26

§ 1.05. Conclusion 27

§ 1.01. Introduction.

Coal’s long history of powering America began right after the Revolutionary War, when coal fueled and heated the U.S. Military’s garrison at Fort Pitt (modern day Pittsburgh).¹ In the mid-1800s, coal furnaces and ovens were the predominant method of keeping American pioneers warm, and by 1961 coal combustion was the primary energy source for American electric utility companies.² Today, the Department of Energy calls coal the “solid cornerstone of America’s modern energy mix.”³ For the past six decades, coal has been the largest source of electricity generation and as of 2011, it provided 42 percent of America’s power generation needs.⁴ The United States contains the world’s largest estimated recoverable coal reserves and over one billion short tons of coal are mined every year.⁵ Coal is one of the cheapest sources of energy in America — so much so that we export about 10 percent of our mined coal to Europe, Asia, and other countries.⁶

Despite its considerable cost advantages and abundant available reserves, coal is facing an uncertain future in the United States. Surges in natural gas production are eroding coal’s price superiority in several parts of the U.S.⁷

¹ See Department of Energy, National Energy Technology Laboratory, *Key Issues & Mandates: Secure Reliable Energy Supplies-History of U.S. Coal Use* (2013), available at <http://www.netl.doe.gov/keyissues/historyofcoaluse.html> (detailing the history of U.S. coal use since the 1700s).

² *Id.*

³ *Id.*

⁴ See Department of Energy, Energy Information Agency, *Energy In Brief: What Is the Role of Coal in the United States?* (July 18, 2012), available at http://www.eia.gov/energy_in_brief/article/role_coal_us.cfm (highlighting coal’s essential role in the modern American economy).

⁵ *Id.*

⁶ *Id.* (“In 2011, U.S. coal exports climbed to 10%”).

⁷ *Id.* (“In 2009, coal began losing its price advantage over natural gas for electricity generation in some parts of the country, particularly in the eastern United States as a surge in natural gas production from domestic shale deposits . . . substantially reduced the price of natural gas.”).

Environmental groups are launching lobbying and informational campaigns coupled with lawsuits, all aimed at reducing American reliance on coal for energy production.⁸ On top of environmentalist campaigns and price competition from natural gas, federal regulators are imposing more stringent requirements on coal combustion power plants.⁹

This chapter focuses on current and imminent federal efforts to regulate coal combustion power plants. Led by the Environmental Protection Agency (EPA), federal regulators are tightening environmental restrictions across three media — air, land, and water. These regulatory threats center around three major federal environmental statutes: the Clean Air Act, the Resource Conservation and Recovery Act, and the Clean Water Act.

§ 1.02. Clean Air Act.

EPA's authority to create, implement, and enforce air pollution standards comes from the Clean Air Act (CAA or "the Act").¹⁰ Two broad areas of regulatory authority were created by the Act. "Criteria air pollutants" are subject to National Ambient Air Quality Standards¹¹ (NAAQS), while "hazardous air pollutants" (HAPs) are subject to National Emission Standards for Hazardous Air Pollutants¹² (NESHAPs). Technology controls for HAPs are more stringent than controls for criteria pollutants because of the more

⁸ The Sierra Club's "Beyond Coal" campaign is a typical example. Its mission statement reads: "Coal is our country's dirtiest energy source, from mining to burning to disposing of coal waste. Our campaign is uniting grassroots activists across the country, to move America Beyond Coal." See, e.g., Sierra Club, *Beyond Coal: Campaign Home* (2013), available at <http://content.sierraclub.org/coal/> (describing the Sierra Club's comprehensive anti-coal campaign).

⁹ See Institute for Energy Research, *Environmentalists Battle the Coal Industry with Regulations* (Jan. 9, 2012), available at <http://www.instituteforenergyresearch.org/2012/01/09/environmentalists-battle-the-coal-industry-with-regulations/> (surveying the multi-pronged attack on coal power generation).

¹⁰ See Clean Air Act, 42 U.S.C. § 7401 (2013) ("A primary goal of [the CAA] is to encourage or otherwise promote reasonable Federal, State, and local governmental actions, consistent with the provisions of this chapter, for pollution prevention.").

¹¹ See 42 U.S.C. § 7409 (2013) (establishing the criteria pollutant regulatory system).

¹² See 42 U.S.C. § 7412 (2013) (establishing the hazardous pollutant regulatory system).