

**Testimony of Michael J. Bradley, President, M.J. Bradley & Associates LLC
Executive Director of the Clean Energy Group**

at EPA's Public Hearing on

**Proposed "National Emission Standards for
Hazardous Air Pollutants from Coal and Oil-fired Electric Utility Steam Generating Units"**

May 24, 2011

Good morning and thank you for the opportunity to provide this testimony on the Utility Toxics Rule. My name is Michael Bradley, and I am and I am the President of M.J. Bradley & Associates LLC and the Executive Director of the Clean Energy Group.

I am testifying today on behalf of the Clean Energy Group's Clean Air Policy Initiative, a coalition of electric power companies. The member companies are some of the nation's largest generators of electricity, with over 170,000 megawatts of electric generating capacity (including 110,000 megawatts of fossil generating capacity) throughout the U.S., and serve nearly a fifth of all U.S. electric customers. The members include Austin Energy, Avista Corporation, Calpine Corporation, Constellation Energy, Exelon Corporation, National Grid, New York Power Authority, NextEra Energy, PG&E Corporation, Public Service Enterprise Group, Inc., and Seattle City Light.

On behalf of the member companies, I offer the following observations on the proposed Utility Toxics Rule:

- The rule provides the business certainty required for the industry to move forward with capital investment decisions;
- The proposal, while not perfect, is reasonable and consistent with the requirements of the Clean Air Act;
- The electric sector, overall, is well positioned to comply; and
- The Clean Air Act provides sufficient time to comply as well as the authority to accommodate special circumstances where additional time is necessary.

Proposed Utility Toxics Rule Provides Needed Business Certainty for Long Term Investments and Advanced Planning

There should be no surprise that EPA issued this rule. Since 2000, the electric industry has known that hazardous air pollutants would be regulated under the Clean Air Act. Now, over a decade later, EPA is under a court-ordered deadline to finalize the rule by November. Additionally, EPA conducted an extensive data collection effort, with the cooperation of industry, to ensure the standards were based on real-world operating experience.

Proposed Standards are Reasonable

The proposed standards for coal-fired units are not as burdensome as some in the electric sector had anticipated.

In fact, if there was any surprise, it was the degree of compliance flexibility proposed by the rule. For example, the proposal includes work practice standards for dioxins, surrogates for certain hazardous air pollutants, as well as the ability to average among units at a facility.

We are evaluating specific technical issues with the rule that we think need to be addressed, but we expect continued engagement with EPA will lead to a final rule that is both balanced and flexible. For example, we recently have seen EPA promptly fix data errors identified in the proposed mercury standard for coal-fired power plants. This minor update to the proposed mercury standard is a normal function of the public comment process, and the updated proposed standard will not change the overall impact of the Utility Toxics Rule on affected power plants.

Technologies to Comply with the Proposed Rule for Coal-Fired Power Plants are Available and Cost Effective

The technologies to control hazardous air emissions, including mercury and acid gases, are commercially available. Also, the industry has extensive experience with the installation and operation of these controls.

The Clean Air Act Provides the Necessary Time to Comply with the Act

Companies will generally have three years to comply once the rule is final. We believe that the vast majority of generating units can meet this schedule for several reasons.

First, to their credit, many companies have already installed major components of pollution control systems that will be required to comply. For example, about 60 percent of the nation's coal capacity has already been retrofit with scrubbers. Moreover, as shown in the attachments I will submit with my written statement, at least 30 coal-fired units are already compliant with each of EPA's proposed emission limits under the rule. We are not starting from scratch.

Second, EPA allows compliance flexibility in the rule by allowing power plant owners to average their emissions across all of the boilers at a facility. Almost 20 percent of coal capacity that currently lacks scrubbers is co-located at plants with scrubbers.

Third, historic experience shows that the industry has the capacity to install a large number of pollution control systems in a relatively short period of time. Between 2008 and 2010, the industry installed about 60 gigawatts of scrubbers and 20 gigawatts of advanced NO_x controls.

Fourth, most of the control technologies that coal-fired power plants will use to comply—like activated carbon injection and dry sorbent injection—can be installed in less than two years. Dry sorbent injection is a proven technology that reduces SO₂ and other acid gases. Relative to a scrubber, DSI requires much lower capital costs. Generally, DSI will be considered for coal units burning low sulfur coal. Other factors that will drive the deployment of DSI include unit size, percentage reduction of emissions

required, plant economics, and site specific characteristics. Several companies have already installed, or are in the process of installing, DSI technology including NRG, Duke, and Midwest Generation.

If a company is unable to comply in time, the Act allows up to one additional year to install the necessary controls. Furthermore, EPA has the authority, and has used this authority in similar situations, to provide additional time beyond the one year extension on a case-by-case basis. This will allow companies to manage multiple control installations and avoid potential reliability concerns. In fact, the U.S. Department of Energy recently projected relatively modest coal plant retirements under EPA's air rules in its Annual Energy Outlook 2011. Even a scenario that forces SCRs and scrubbers on all coal plants, which we do not expect to the case, results in only about 10 GW of coal plant retirements above reference case levels.

Conclusion

To conclude, the Clean Air Act, amended by Congress in 1990 with overwhelming bipartisan support and signed by George H. W. Bush, requires regulations that limit hazardous air pollutants from the electric sector. In 2000, EPA took the first step towards regulating those emissions, and over a decade later, EPA is now working to finalize the rule. While complying with these obligations will require planning and significant resources, many companies are well on their way to complying. There is no reason to delay the implementation of the Utility Toxics Rule. Proceeding on schedule with the flexibility that is available will provide the business certainty the industry needs.

Thank you for your time.

Appendix



May 24, 2011



M. J. Bradley & Associates LLC
+1 978 369 5533 www.mjbradley.com

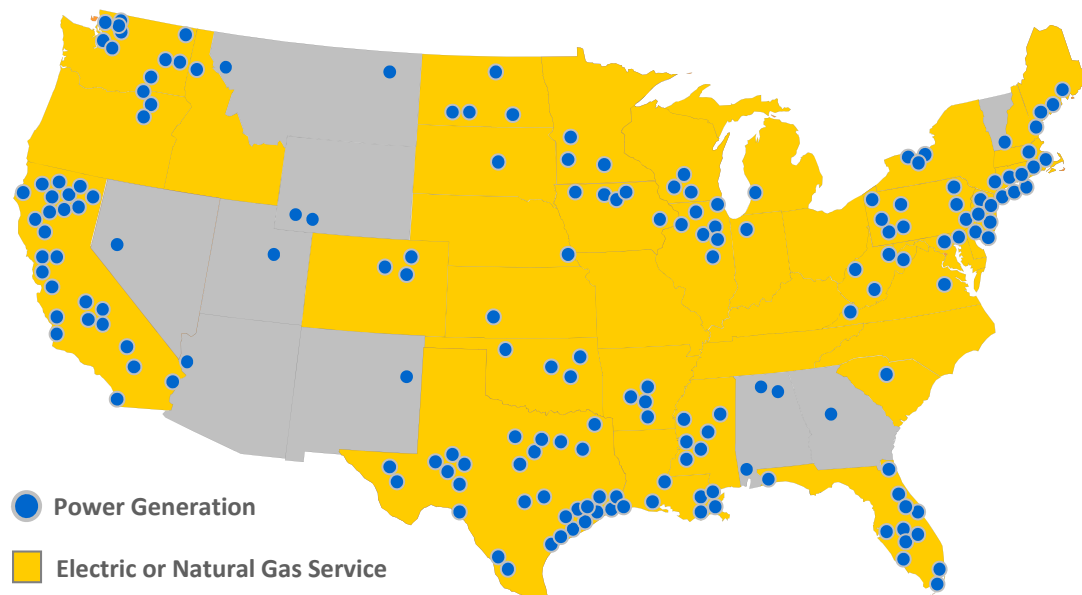
The Clean Energy Group: Clean Air Policy Initiative

A coalition of electric power companies dedicated to responsible energy and environmental stewardship

Our members serve electricity to more than 57 million people (20% of U.S. population)

We have over 170,000 megawatts of generating capacity throughout the U.S.

Our members deliver natural gas to more than 8.3 million customers



Many existing U.S. coal-fired units are already compliant with all of EPA's proposed limits for coal-fired generating units

(based on emission rates reported by companies to EPA)

Compliance Status

Plant Name	State	Unit	Owner	MW	Coal Rank	PM			Hg	Mercury	HCl	PM
						Control	NOx	SO ₂				
G G Allen	NC	3	Duke	282	bituminous	ESP	SNCR	Wet		✓	✓	✓
G G Allen	NC	4	Duke	297	bituminous	ESP	SNCR	Wet		✓	✓	✓
East Bend Station	KY	2	Duke (69%), DPL (31%)	651	bituminous	ESP	SCR	Wet		✓	✓	✓
Hammond	GA	1	Southern	115	bituminous	ESP		Wet		✓	✓	✓
Hammond	GA	2	Southern	115	bituminous	ESP		Wet		✓	✓	✓
Hammond	GA	3	Southern	115	bituminous	ESP		Wet		✓	✓	✓
Hammond	GA	4	Southern	520	bituminous	ESP	SCR	Wet		✓	✓	✓
Hayden	CO	2	Xcel (53%), SRP (30%), MidAmerican (17%)	285	bituminous	FF		Dry		✓	✓	✓
Hayden	CO	1	Xcel (53%), SRP (30%), MidAmerican (17%)	202	bituminous	FF		Dry		✓	✓	✓
Bridgeport Station	CT	2	PSEG	403	subbituminous	ESP + FF			ACI	✓	✓	✓
San Juan	NM	1	PNM Resources (47%), UniSource (20%)	370	subbituminous	FF		Wet	ACI	✓	✓	✓
San Juan	NM	2	PNM Resources (47%), UniSource (20%)	370	subbituminous	FF		Wet	ACI	✓	✓	✓
San Juan	NM	3	PNM Resources (47%), UniSource (20%)	544	subbituminous	FF		Wet	ACI	✓	✓	✓
San Juan	NM	4	PNM Resources (47%), UniSource (20%)	544	subbituminous	FF		Wet	ACI	✓	✓	✓
Clover	VA	2	Dominion	434	bituminous	FF	SNCR	Wet		✓	✓	✓
Chambers Cogeneration LP	NJ	2	Atlantic Power Corporation	285	bituminous	FF	SCR	Dry		✓	✓	✓
Chambers Cogeneration LP	NJ	1	Atlantic Power Corporation	285	bituminous	FF	SCR	Dry		✓	✓	✓
Birchwood Power Facility	VA	1	J-Power	222	bituminous	FF	SCR	Dry		✓	✓	✓
Spruance Genco, LLC	VA	4	Cogentrix	57	bituminous	FF		Dry		✓	✓	✓
Spruance Genco, LLC	VA	2	Cogentrix	57	bituminous	FF		Dry		✓	✓	✓
INDIANTOWN COGENERATION L.P.	FL	1	Indiantown Cogeneration LP	361	bituminous	FF	SCR	Dry		✓	✓	✓
Logan Generating Plant	NJ	1	Keystone Urban Renewal LP	242	bituminous	FF	SCR	Dry		✓	✓	✓
Oak Grove	TX	1	Energy Future Holdings	817	lignite	ESP + FF	SCR	Wet	ACI	✓	✓	✓
Erama Power Plant	PA	1	GenOn	100	bituminous	ESP + FF	SNCR	Wet		✓	✓	✓
Erama Power Plant	PA	2	GenOn	100	bituminous	ESP + FF	SNCR	Wet		✓	✓	✓
Erama Power Plant	PA	3	GenOn	125	bituminous	ESP + FF	SNCR	Wet		✓	✓	✓
Erama Power Plant	PA	4	GenOn	185	bituminous	ESP + FF	SNCR	Wet		✓	✓	✓
Colstrip	MT	3	PPL (30%), Puget (25%), PGE(20%), Avista (15%), MidAmerican (10%)	805	subbituminous	Venturi		Wet	ACI	✓	✓	✓
PSEG Mercer Generating Station*	NJ	2	PSEG	343	bituminous	ESP + FF	SCR	Dry	ACI	✓	✓	✓
PSEG Mercer Generating Station*	NJ	1	PSEG	343	bituminous	ESP + FF	SCR	Dry	ACI	✓	✓	✓
Brandon Shores*	MD	1	Constellation	643	bituminous	ESP + FF	SCR	Wet	ACI	✓	✓	✓
Brandon Shores*	MD	2	Constellation	643	bituminous	ESP + FF	SCR	Wet	ACI	✓	✓	✓
PSEG Hudson Generating Station*	NJ	2	PSEG	608	bituminous	FF	SCR	Dry	ACI	✓	✓	✓

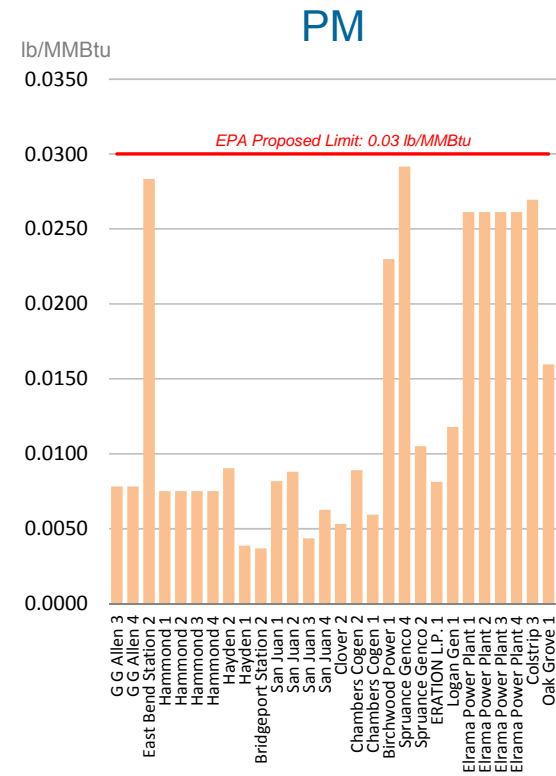
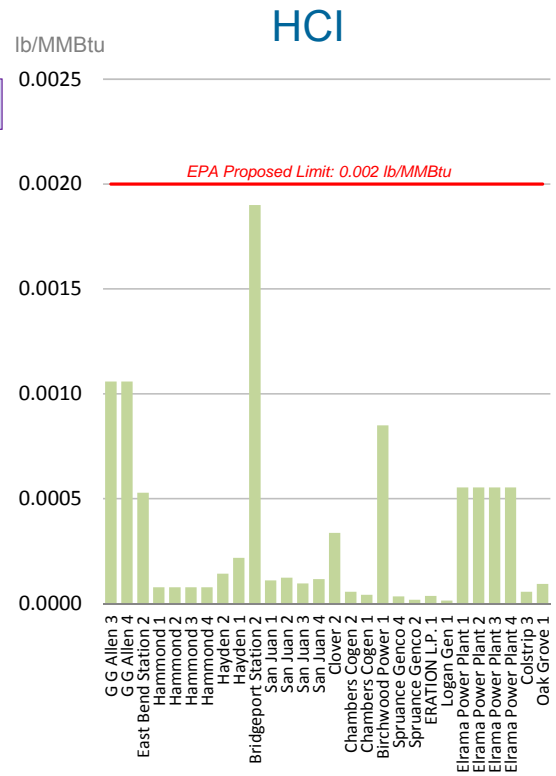
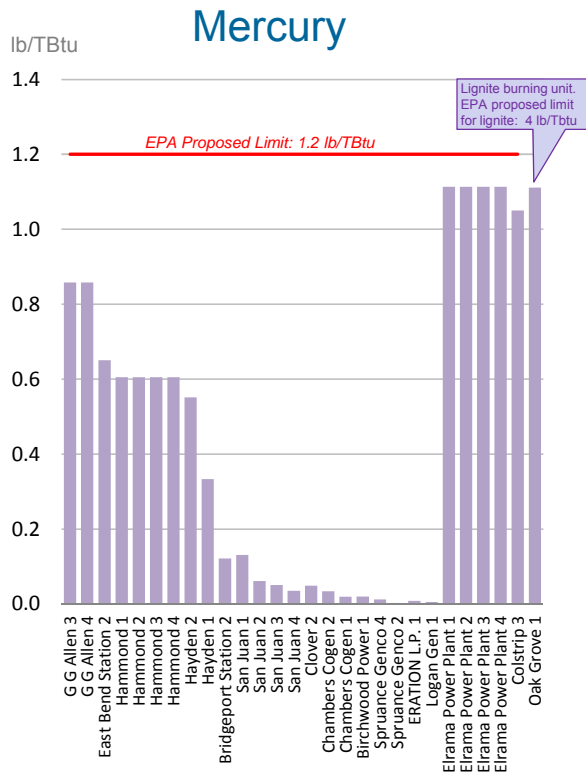
*these units are not present in the ICR database. Information from their owners, however, indicate that they would be able to comply with the proposed standards without the need for any additional controls.

11,468

Sources: EPA, Plant Owners, MJB&A Analysis

Most of the compliant coal-fired units' reported emission rates are significantly lower than EPA's proposed limits

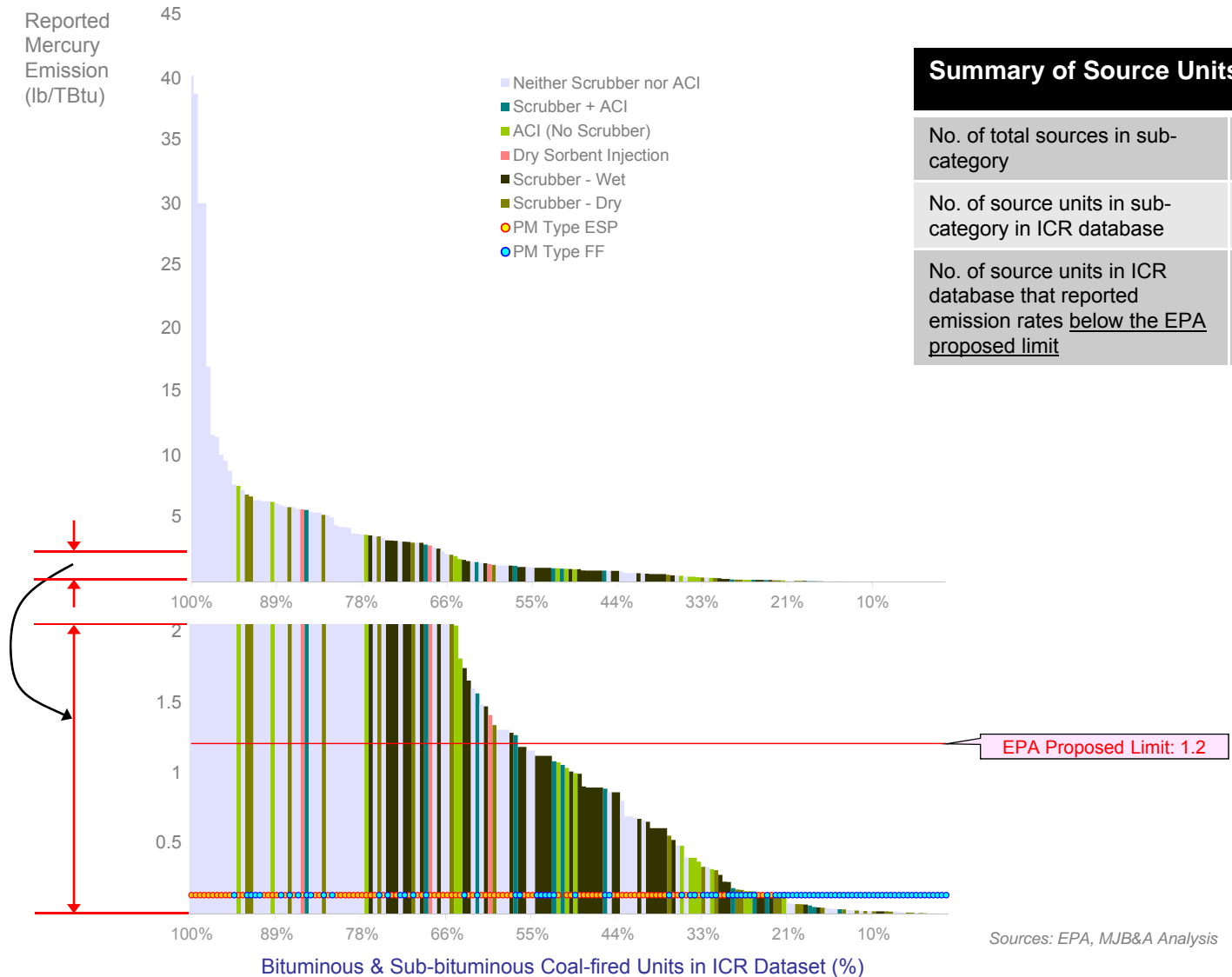
(based on emission rates reported by companies to EPA)



Sources: EPA, MJB&A Analysis

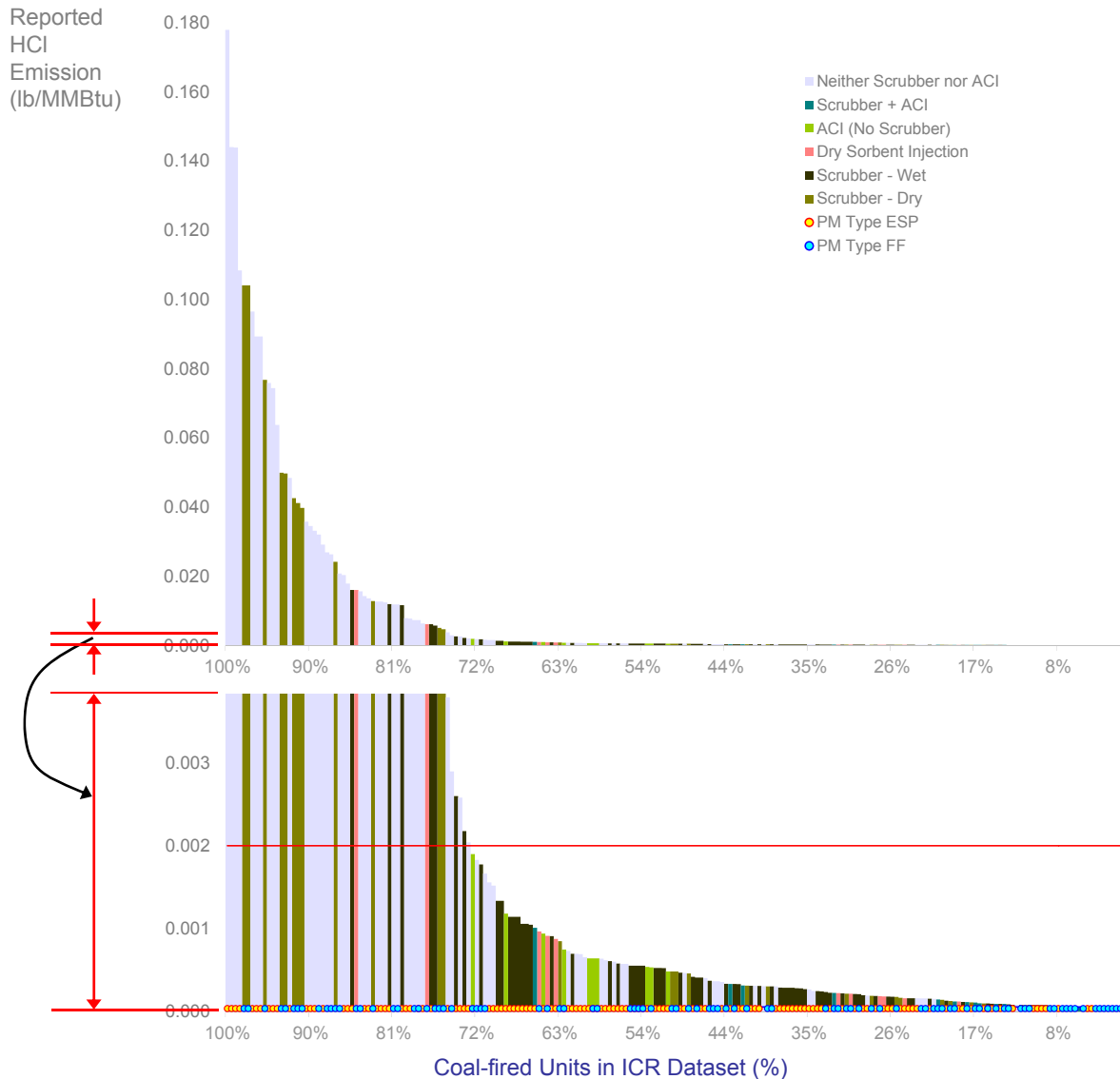
Among coal-fired units that submitted emission data under EPA's most recent ICR*, nearly 60% of units are compliant with EPA's proposed limit for mercury

*Information Collection Request



Among coal-fired units that submitted emission data under EPA's most recent ICR*, 73% of units are compliant with EPA's proposed limit for HCl

*Information Collection Request



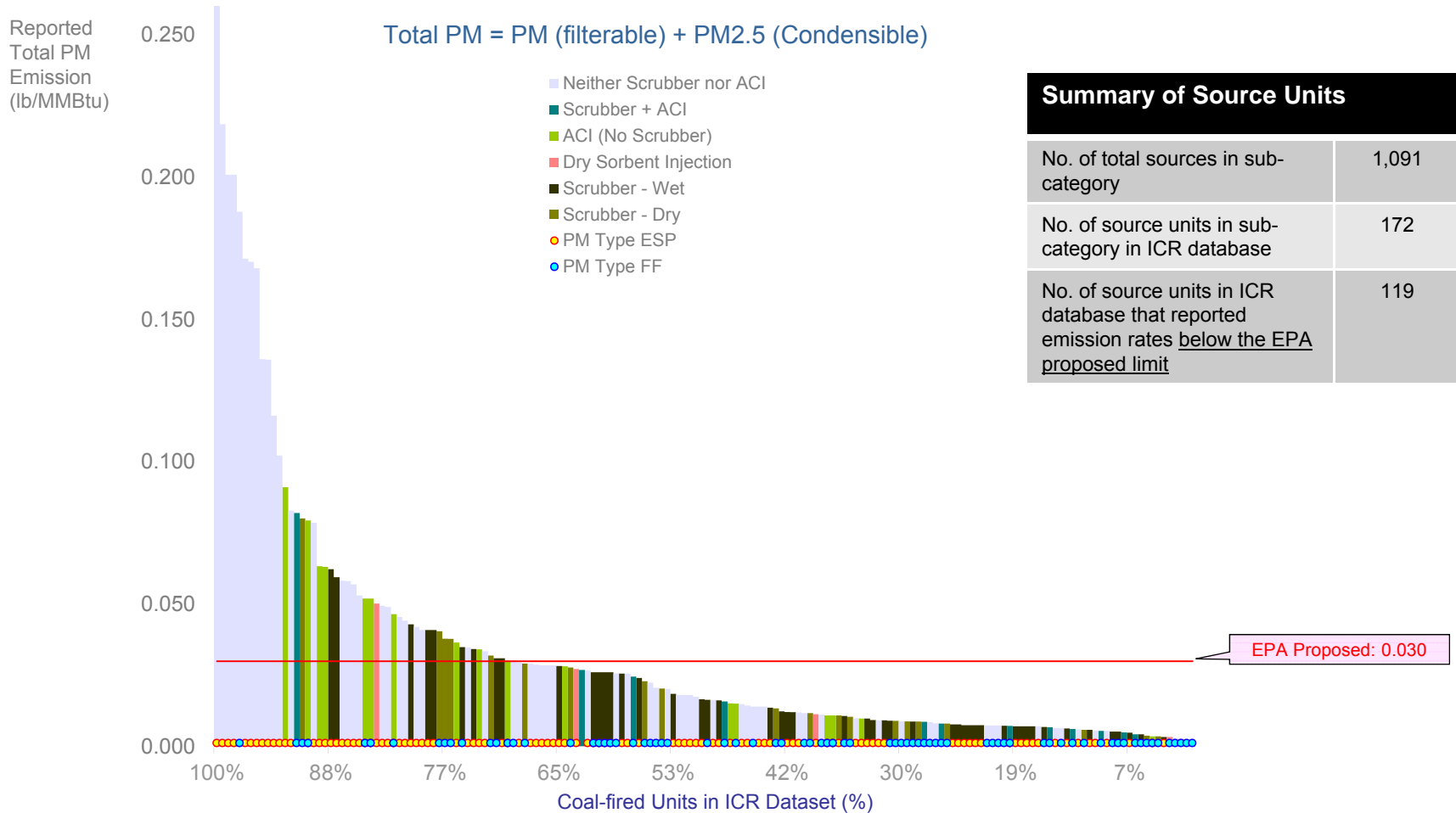
Summary of Source Units	
No. of total sources in sub-category	1,091
No. of source units in sub-category in ICR database	217
No. of source units in ICR database that reported emission rates <u>below the EPA proposed limit</u>	158

EPA Proposed: 0.0020

Sources: EPA, MJB&A Analysis

Among coal-fired units that submitted emission data under EPA's most recent ICR*, almost 70% of units are compliant with EPA's proposed limit for PM

*Information Collection Request



Sources: EPA, MJB&A Analysis