Regional Haze Best Available Retrofit Technology and Reasonable Progress

The following identifies an option for EPA implementation of a sulfur dioxide (SO_2) Best Available Retrofit Technology (BART) alternative approach similar to the Cross State Air Pollution Rule (CSAPR) as well as a possible expanded approach for reasonable progress purposes. However, some facilities may need to be addressed separately through source-specific determinations for BART or reasonable progress purposes. Any such facilities would be excluded from the alternative program discussed below. In addition to BART and reasonable progress requirements under the Regional Haze Rule, EPA Region 6 staff have indicated that such an approach could be used to satisfy visibility transport requirements under Federal Clean Air Act §110(a)(2)(D)(i)(II).

Coal-Fired BART Units

BART-eligible coal-fired electric generating units (EGUs) identified in Table 1 would comply with mass-based system caps that would be equivalent to the SO_2 allocations the units received under CSAPR. A system cap would apply to all applicable units at one or more sites under common ownership and control. An intrastate trading option would also allow companies to trade between systems within Texas.

The EPA has already determined that CSAPR is better than BART, and the approach, while not applying to all EGUs that were subject to CSAPR, would apply to the majority of SO_2 emissions from EGUs in Texas (see Table 5 below). If this strategy is combined with the reasonable progress option described below, the program would also cover those facilities which the EPA determined to have significant visibility impacts in the 2016 Regional Haze Reasonable Progress Federal Implementation Plan (FIP). Therefore, the EPA's CSAPR-is-better-than-BART determination will satisfy the requirement that BART alternatives show greater reasonable progress under this approach.

Table 1: BART-Eligible Coal-Fired EGU SO_2 Allocations and 2016 Emissions

Company	Site	Annual Allocation[1] (tons)	2016 Emissions (tons)
AEP	Welsh Power Plant (Units 1 & 2[2])	13,546	6,005
CPS Energy	JT Deely (Units 1 & 2)	12,252	7,625
Dynegy	Coleto Creek (Unit 1)	9,057	8,231
LCRA	Fayette/Sam Seymour (Units 1 & 2)	15,998	877
Luminant	Big Brown (Units 1 & 2)	17,032	42,470
	Martin Lake (Units 1 – 3)	35,840	25,471
	Monticello (Units 1 – 3)	29,609	24,958
	Luminant Subtotal	82,481	92,899
NRG	WA Parish (Units WAP5 & WAP6)	18,480	21,839
Xcel	Harrington (Units 061B & 062B)	10,616	8,869
Total All BART-Subject Units		162,430	146,345

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Gas-Fired and Gas/Oil-Fired BART Units

The gas-fired and gas/oil-fired BART-eligible EGUs could be incorporated into the above approach for SO_2 or could be addressed through source specific BART determinations, such as fuel restrictions as proposed by the EPA. The SO_2 allocations and emissions associated with these units are inconsequential compared to the coal-fired units. Source-

[1] EPA CSAPR allocations after tolling: https://www.epa.gov/sites/production/files/2016-05/unitlevelallocations_tolled-2.xls. Allocations DO NOT INCLUDE allowances distributed to existing units from the New Unit Set Aside (NUSA) pool after allocation to new units. Including NUSA allowances would increase allocations by approximately 3.5%; however, the amount of NUSA allowances distributed to these units is variable, changing year-to-year. Red indicates the source or system allocation is deficit to the 2016 emissions.

[2] Welsh Unit 2 was BART eligible and would have been subject to BART if the unit had not been retired in April 2016. Welsh Unit 2 is included to allow AEP to take credit for the shutdown.

specific BART determinations and enforceable fuel restrictions may be a more practical approach for satisfying SO_2 BART on these units.

Table 2: BART-Eligible Gas-Fired and Gas/Oil-Fired EGU SO_2 Allocations and 2016 Emissions

Company	Site	Annual Allocation[1] (tons)	2016 Emissions (tons)
AEP	Wilkes (Units 1 – 3)	19	2.0
CPS Energy	OW Sommers (Units 1 – 2)	62	2.0
El Paso Electric	Newman (Units 2 – 4)	4	3.2
Luminant	Graham (Unit 2)	226	0.3
	Striker Creek (Unit ST2)	145	0.5
NRG	WA Parish (WAP4)	3	1.6
Total All BART Units		459	9.6

Note: The EPA interprets the BART guidelines such that the determination of whether BART-eligible units are subject to BART is made on a site-wide basis, i.e., if a single BART-eligible unit at a site is subject to BART then all BART-eligible units at the site are subject to BART. Furthermore, if a BART-eligible unit located at a site is in a BART alternative program, then all BART-eligible units at the site should be included in the BART alternative program. Based the EPA's interpretation, OW Sommers Units 1 and 2 (co-located with JT Deely) and WA Parish Unit WAP4 (co-located with WA Parish WAP5 and WAP6) would need to be included in the BART alternative program.

Combined BART/Reasonable Progress Approach

A limited expansion of the SO_2 approach outlined above for BART-eligible units may be supportable for reasonable progress and visibility transport purposes. In the EPA's 2016 Regional Haze Reasonable Progress FIP, the EPA identified certain coal-fired EGUs as having significant contributions for visibility impacts. Nine of the 15 units subject to the EPA's reasonable progress FIP are BART-eligible units. The BART approach above could be modified to include the non-BART-eligible units from the reasonable progress FIP. This expanded approach would use system caps for both the BART-eligible EGUs and the non-BART EGUs subject to the EPA's 2016 reasonable progress FIP (Table 3), and would allow companies to trade between system caps via an intrastate trading program, e.g., NRG's system would include the WA Parish BART-eligible units and the Limestone units.

Table 3: Non-BART Coal-Fired EGUs under Reasonable Progress FIP, SO_2 Allocations and 2016 Emissions

Company	Site	Annual Allocation[1] (tons)	2016 Emissions (tons)
Luminant	Sandow (Unit 4)	8,370	12,105
NRG	Limestone (Units 1 & 2)	24,374	20,801
San Miguel Electric Cooperative	San Miguel (Unit 1)	6,271	6,815
Xcel	Tolk Station (Units 171B & 172B)	13,962	14,977
Total All Units		52,977	54,698

Furthermore, the EPA has requested the additional coal-fired units identified in Table 4 below be added to the list of applicable units under the Texas intrastate trading program. TCEQ has opened discussions with the affected companies regarding the possible inclusion of these units in the trading program discussed above.

Table 4: EPA's Requested Additional Coal-Fired EGUs, SO_2 Allocations and 2016 Emissions

Company	Site	Annual Allocation[1]	2016 Emissions

		(tons)	(tons)
AEP	HW Pirkey	8,882	4,441
	Oklaunion	4,386	1,530
	Welsh Power Plant (Unit 3)	7,208	5,042
LCRA	Fayette/Sam Seymour (Unit 3)	2,955	231
NRG	WA Parish (Units WAP7 and WAP8)	11,724	12,296
Xcel	Harrington (Unit 063B)	5,055	5,386
Total All Units		40,210	28,926

Table 5: Combined BART, Reasonable Progress, and EPA additional EGUs, SO_2 Allocations and 2016 Emissions

Approach	**Annual** Allocation[1] **(tons)**	**2016** Emissions **(tons)**	**% of Total** Texas EGU Emissions
BART Coal-Fired Units	162,430	146,345	60%
Non-BART Reasonable Progress Units	52,977	54,698	22%
Total with BART and Reasonable Progress Coal-Fired Only	215,407	201,043	**82%**
Gas & Gas/Oil-fired BART Units	459	9.6	Negligible
Total with Gas & Gas/Oil BART Units	215,866	201,053	**82%**
EPA Requested Additional Coal Units	40,210	28,926	12%
Total with EPA's Requested Units	256,076	229,979	**94%**
Total Texas EGU Emissions		245,737	

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