

**COMMONWEALTH OF VIRGINIA
CO₂ TRADING REGULATION**

REGULATORY ADVISORY PANEL MEETING MINUTES

**SECOND FLOOR CONFERENCE ROOM
629 EAST MAIN STREET, RICHMOND, VIRGINIA
SEPTEMBER 6, 2017**

Members Present:

J.R. Tolbert, Advanced Energy Economy
Scott Weaver, AEP
Michael Van Brunt, Covanta
Lenny Dupuis, Dominion
John Morrill, VACO

Kathy French, Doswell/LS Power
Walton Shepherd, NRDC
Laura Rose, ODEC
Larry Carlson, Tenaska
Rhea Hale, WestRock

Members Absent:

Will Poleway, Birchwood

Donald Ratliff, Contura Energy

Department of Environmental Quality:

Michael G. Dowd, Air Division
Ann M. Regn, Office of Public Information
Karen Sabasteanski, Regulatory Affairs

Tom Ballou, Air Division
Angela Conroy, Air Division

Presenters/Other Participants:

Kate Zyla, Georgetown Climate Center

L. Preston Bryant, VCU Center for
Consensus Building

The meeting began at approximately 9:35 a.m.

Meeting Purpose: This regulatory advisory panel (RAP) has been established to advise and assist the Commonwealth in the development of a regulation that (i) ensures that Virginia is trading-ready to allow for the use of market-based mechanisms and the trading of carbon dioxide (CO₂) allowances through a multi-state trading program, and (ii) establishes abatement mechanisms that provide for a corresponding level of stringency to CO₂ limits imposed in other states with such limits. The purpose of this meeting is for DEQ to coordinate and facilitate discussions of this group in an effort to find common ground and elements that could be included in the regulation.

Welcome: Mr. Bryant welcomed the group and reviewed the agenda.

Group discussion, allowance distribution. Because there was no general agreement at the previous meeting on the distribution of allocations, the group revisited the issue. No consensus was reached as to whether allocations should be weighted toward covered sources or all load-serving entities, and the size of any set-asides, however, it

was generally agreed that any set-asides should be targeted toward protecting consumers.

Presentation, modeling update: Mr. Ballou summarized modeling activities to date (see Attachment A). It is anticipated that more detailed modeling information will be available by the end of the month, and a webinar will be arranged to discuss modeling results.

Presentation, stringency of the cap: Mr. Ballou described a number of approaches to be considered when determining the stringency of the cap (see Attachment B).

Group discussion, cap stringency and biomass: Based on Mr. Ballou's presentation, the group discussed options for setting the emissions cap. No consensus was reached, although it was observed that it is difficult to make definitive decisions based on several unknown elements (e.g., modeling results and future actions to be taken by RGGI).

The group then discussed the pros and cons of including biomass electric generators as affected units under the draft proposed regulation; no consensus was reached.

Finally, Mr. Bryant and Ms. Regn reviewed the group's prioritization and weighing exercise (see Attachment C); no changes or need for additional discussion were identified.

Next Steps/Future Meetings: Mr. Bryant wrapped up the meeting and summarized future steps in the regulation development process. The group agreed that no additional meeting beyond the modeling webinar is needed. Therefore, this meeting concludes the RAP's work, although the group may be reconvened after completion of the proposed regulation stage. A final meeting report will be circulated for the group's review prior to submittal to the State Air Pollution Control Board in advance of its December meeting.

The meeting adjourned at approximately 2:25 p.m.

Attachments
REG\DEV\C17-RP03-MINUTES

Modeling Status

- Modeling being performed by ICF through the Georgetown Climate Center
- Four scenarios using the Integrated Planning Model (IPM)
- Two reference cases – BAU for Virginia
 - RGGI reference case (for consistent comparison)
 - Virginia reference case (demand, renewables)
- Two policy cases using RGGI reduction targets applied to VA starting in 2020

RGGI Model Rule - Applicability

XX-1.4 Applicability.

(a) *Units.* Any unit that, at any time on or after January 1, 2005, serves an electricity generator with a nameplate capacity equal to or greater than 25 MWe shall be a CO2 budget unit, and any source that includes one or more such units shall be a CO2 budget source, subject to the requirements of this Part.

(bu) *Unit.* A fossil fuel-fired stationary boiler, combustion turbine, or combined cycle system.

RGGI Applicability Continued

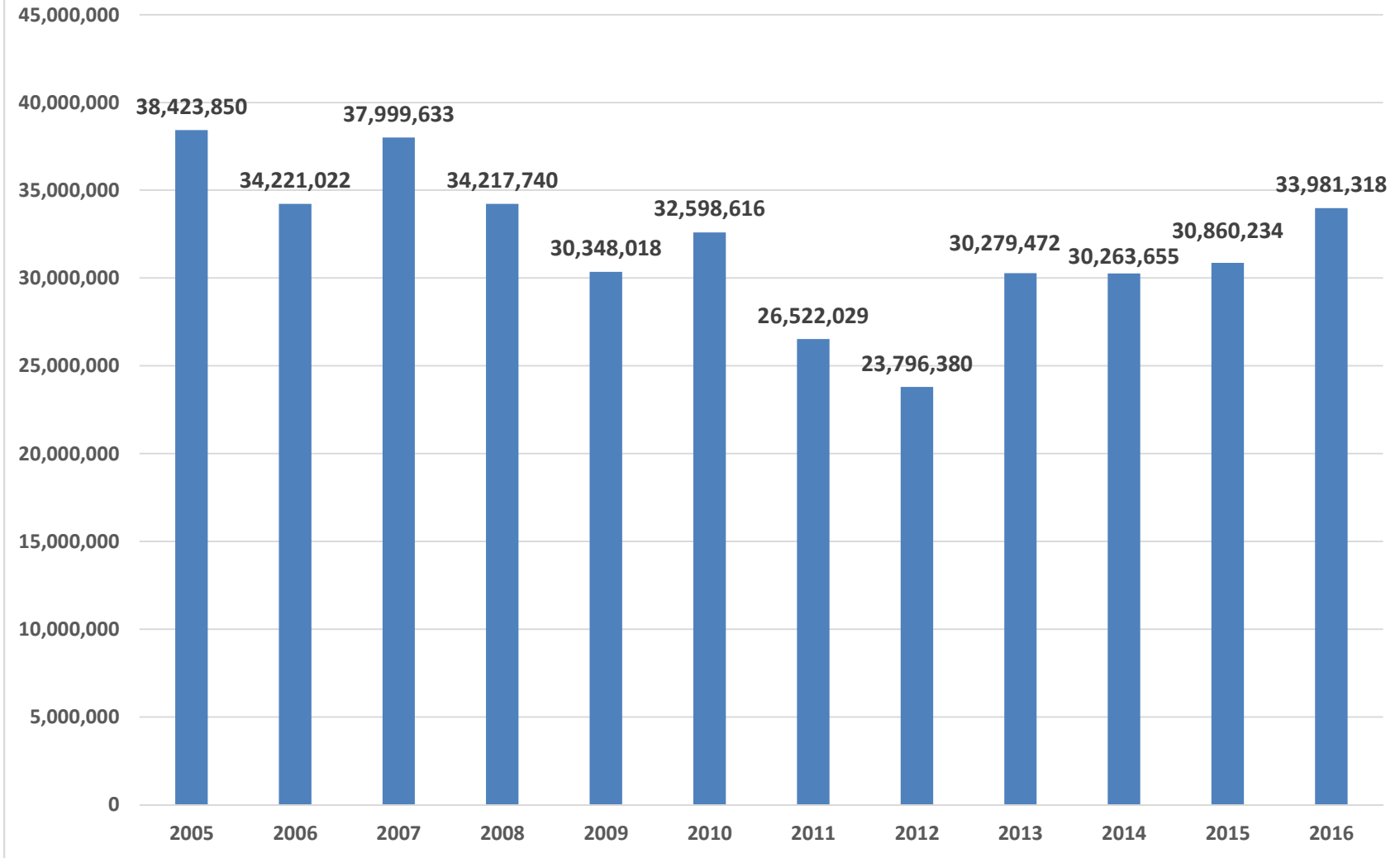
Limited exemption for units with electrical output to the electric grid restricted by permit conditions.

(1) *Applicability.* Notwithstanding subdivision (a) of this section, a unit under subdivision (a) of this section that has a permit containing a condition restricting the supply of the unit's annual electrical output to the electric grid to less than or equal to 10 percent of the annual gross generation of the unit, and which complies with the provisions in paragraph (b)(3) of this section, shall be exempt from the requirements of this Part...

Stringency of the Cap

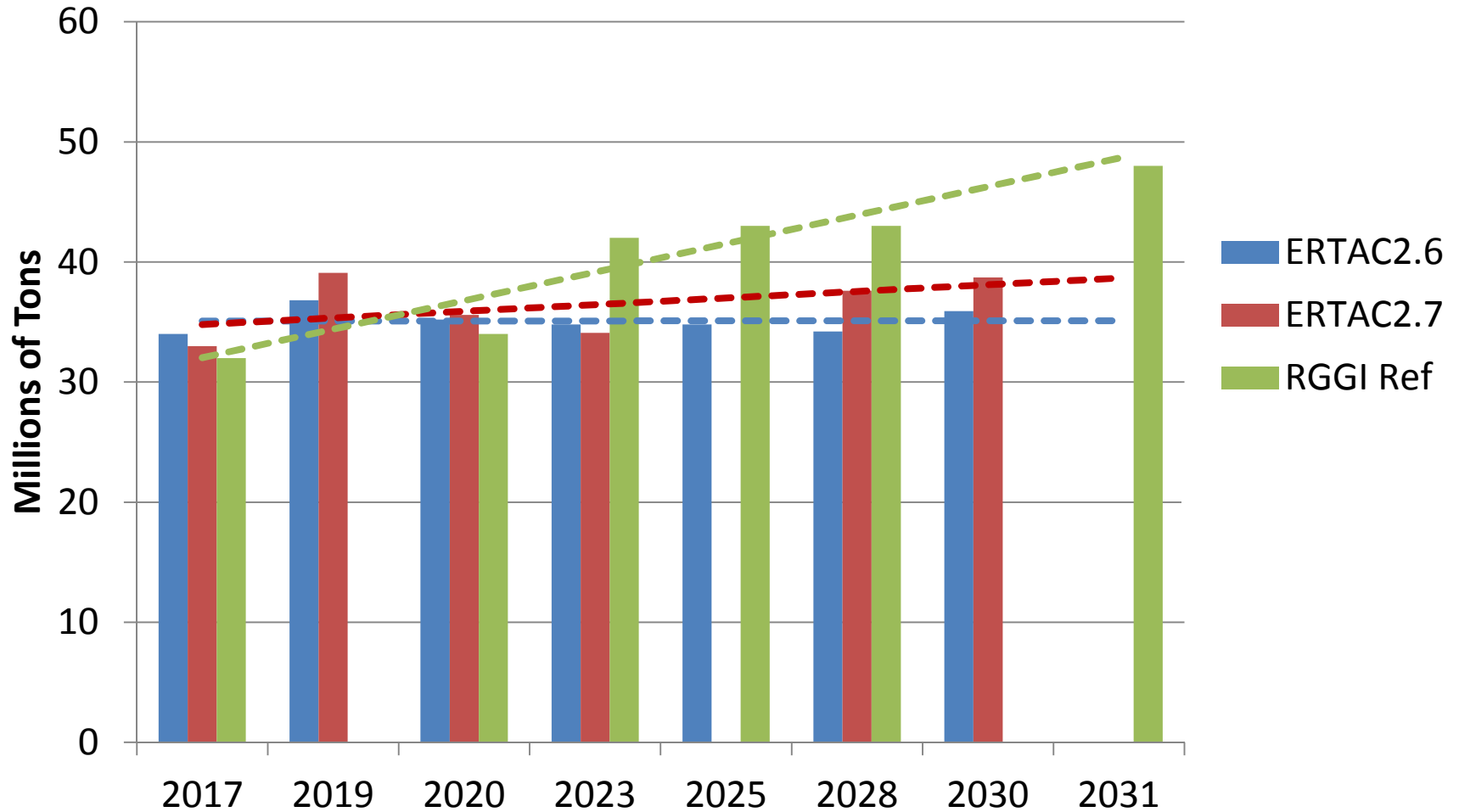
- Basis for the initial cap:
 - Historic or current CO2 emissions
 - Future projected CO2 emissions
 - ERTAC
 - IPM
 - Other
- Reduction requirement
 - Same as RGGI review (same reduction over time)
 - Phased in reductions (increasing reduction over time)
 - Other

Virginia Power Plant CO2 Emission Trends



Source: EPA Air Markets Program Data (AMPD)

VA Power Sector CO2 Projections



ATTACHMENT C

Allowance Allocation: Goals														
												Totals	AVG	
B - Protect electricity customers	1	1	3	4	2	3	1	1.5		4	1	3	25	2.23
C - Promote cost-effectiveness	2	3	2	2	1	1	2	3		5	3	1	25	2.27
A - Promote fairness	5	2	4	6	3	2	4	1.5		3	5	4	40	3.59
G - Incentivize investment, tech, efficiency	0	0	1	0	5	6	5	5		0	4	2	28	4.00
E - Address specific circumstances	6	4	6	3	6	5	6	6		2	2	6	52	4.73
D - Address emissions leakage	3	5	5	5	4	4	3	4		6	6	5	50	5.00
F - Jobs : create new or keep	4	6	0	0	0	0	0	0		0	0	0	10	5.00
H - Maximize emission reductions				1	0	0	0	0		0	0	0	1	
I- Other generators										1	0	0	1	
total points	21	21	21	21	21	21	21	21		21	21	21		
										set aside for renewables				
										WTE				
											EITE,CHP, industrial gen			

Allocation Allowance: Approach													
												Totals	Average
G - Output updating generation/output	2	6	1	1	1	1	3	6	8	4		33	3.0
F - Output updating emissions	4	1	2	3	5	7	7	2	3	2	1	37	3.4
H - Output updating sales	3	2	4	2	7	3	2	8	4	5		40	3.6
B - Historical emissions	8	5	6	6	6	8	8	1	1	1		50	4.5
C - Historical generation/output	6	7	5	8	3	4	5	5	6	3		52	4.7
D - Historical sales	7	3	7	7	8	6	1	7	2	6		54	4.9
E - Output updating heat input	5	9	8	4	2	2	6	4	7	8		55	5.0
I - All new generation	1	4	3	5	9	9	4	9	9	9		62	5.6
A - Historic heat input	9	8	9	9	4	5	9	3	5	7		68	6.2

Allowance Allocation: Distribute to Whom?													
												Totals	Average
A - Covered electric generators	1	5	1	1	5	3	1	6	1		1	25	2.27
E - Set-asides for specific parties or projects	2	3	2	2	3	4	4	3	3		4	30	2.73
C - Load serving entities	3	6	3	5	4	1	2	1	4		2	31	2.82
B - All electric generators	4	1	4	6	1	5	3	4	2		3	33	3.00
D - Entities other than electric generators	5	2	5	3	2	2	5	2	5		5	36	3.27
F - Other	6	4	6	4	6	6	6	5	6		6	55	5.00