

**COMMONWEALTH OF VIRGINIA
CO₂ TRADING REGULATION**

REGULATORY ADVISORY PANEL MEETING MINUTES

**SECOND FLOOR CONFERENCE ROOM
629 EAST MAIN STREET, RICHMOND, VIRGINIA
AUGUST 31, 2017**

Members Present:

Malcolm Woolf, Advanced Energy Economy	Frazier Blaylock, Covanta
Scott Weaver, AEP	Walton Shepherd, NRDC
Kathy French, Doswell/LS Power	Laura Rose, ODEC
Lenny Dupuis, Dominion	Larry Carlson, Tenaska
John Morrill, VACO	Rhea Hale, WestRock
Donald Ratliff, Contura Energy (formerly Alpha)	

Members Absent:

Will Poleway, Birchwood

Department of Environmental Quality:

Michael G. Dowd, Air Division	
Ann M. Regn, Office of Public Information	Tom Ballou, Air Division
Karen Sabastianski, Regulatory Affairs	Angela Conroy, Air Division

Presenters/Other Participants:

Franz Litz, Litz Energy Strategies	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 opened the meeting. He reviewed the agenda and logistics, and reminded the group that the discussion will be based on the assumption that Virginia will join or link to the Regional Greenhouse Gas Initiative (RGGI).

Presentation, RGGI Changes: Ms. Zyla reviewed changes to the program recently proposed by RGGI (see Attachment A). These changes include a new regional cap, adjustments to the cap, modifications to the cost containment reserve (CCR) size and trigger price, and implementation of an emissions containment reserve (ECR).

Presentation, Webinar Followup: Mr. Litz addressed a question remaining from the group's August 28, 2017 webinar: What is the "limited industrial exemption set-aside?" (see Attachment A).

Presentation, Allocation Scenarios: Mr. Ballou presented a series of scenarios showing various allocation approaches (see attachment B). The scenarios were developed to provide the group with a "snapshot" of how certain approaches would affect certain electric generating facilities.

Work Plan/Group Discussion: Mr. Bryant and Ms. Regn asked the group to rank a list of allocation goals (see Attachment A). The results were tallied and presented to the group (see Attachment C). There was general agreement on the list of goals and their relative strength. The two goals ranked the most important were: protect electricity customers and promote cost-effectiveness. The next topic was allowance allocations approaches, which were discussed and ranked. The group reached general agreement that the top ranked approach, output updating, was the recommended approach. Finally, the group ranked how allocation allowances should be distributed. After discussion among all members, no agreement was reached on a recommended distribution approach.

Next Steps/Future Meetings: Mr. Bryant wrapped up the meeting. The next meeting is scheduled for September 6, 2017. An additional meeting may be scheduled, and the groups' consultants may offer additional technical webinars.

The meeting adjourned at approximately 2:50 p.m.

Attachments
REG\DEV\17-RP02-MINUTES

RGGI Proposed Program Changes: Summary

- A regional cap of 75,147,784 tons of CO₂ in 2021, which will decline by 2.275 million tons of CO₂ per year thereafter, resulting in a total 30% reduction in the regional cap from 2020 to 2030.
- Additional adjustments to the RGGI cap, to account for the full bank of excess allowances at the end of 2020. The amount of this adjustment will be calculated in 2021 according to a formula to be established in the revised Model Rule, and it will be implemented over the period from 2021-2025.
- Modifications to the Cost Containment Reserve (CCR) size and trigger price. The proposed CCR size from 2021 onwards will be 10% of the regional cap. The CCR trigger price will be \$13.00 in 2021, and rise at 7% per year.
- Implementation of an Emissions Containment Reserve (ECR) in 2021, wherein states will withhold allowances from circulation to secure additional emission reductions if prices fall below established trigger prices. States will withhold up to 10% of the allowances in their base budgets per year. Allowances withheld in this way will not be reoffered for sale. The ECR trigger price will be \$6.00 in 2021, and rise at 7% per year, so that the ECR will only trigger if emission reduction costs are lower than projected.
- Announcement of proposed program changes: [http://rggi.org/docs/ProgramReview/2017/08-23-17/Announcement Proposed Program Changes.pdf](http://rggi.org/docs/ProgramReview/2017/08-23-17/Announcement_Proposed_Program_Changes.pdf)
- Summary of proposed program elements: [http://rggi.org/docs/ProgramReview/2017/08-23-17/Proposed Program Changes Summary Table.pdf](http://rggi.org/docs/ProgramReview/2017/08-23-17/Proposed_Program_Changes_Summary_Table.pdf)

CO₂ RAP Webinars: Follow Up

- Recordings of the allowance allocation and consignment auction webinars and related materials are available on the DEQ greenhouse gas web page at: <http://www.deq.virginia.gov/programs/air/greenhousegasplan.aspx>
- **What is the “limited industrial exemption set-aside”?**

Under the RGGI model rule, states may exempt certain industrial, “behind-the-meter” electric generating units from applicability that would otherwise be covered. Under the exemption, an industrial “behind-the-meter” unit can voluntarily restrict its electrical output to the grid (through a permit condition) to less than or equal to 10% of the unit’s annual gross generation of the unit. Once exempted, the tons attributable to the exempted sources must be deducted from the state’s CO₂ budget. These tons are taken from the **limited industrial exemption set-aside account**. The regulatory agency retires for each subsequent allocation year the number of CO₂ tons equal to the exempt source(s) average annual emissions over the most recent three calendar years. The retired tons shall be taken from the limited industrial exemption set-aside account.
- Any additional questions?

Allowance Allocation: Goals

Goals	Comments
a) Promote fairness	
b) Protect electricity customers	
c) Promote cost-effectiveness	
d) Address emissions leakage	
e) Address specific circumstances	
f) Other allocation goals?	

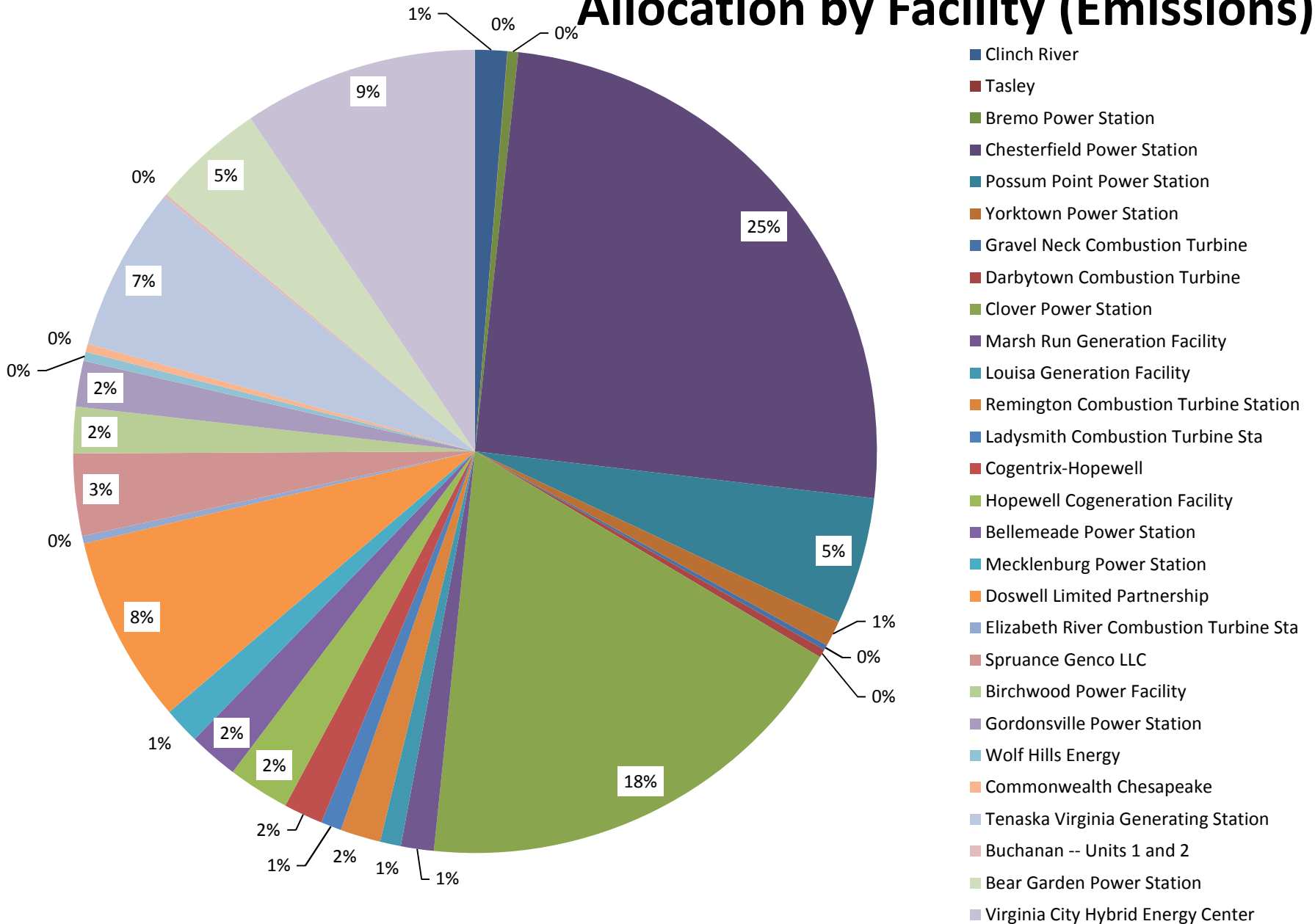
Allowance Allocation: Approach

Approach	Strengths	Weaknesses
a) Historical heat input		
b) Historical emissions		
c) Historical generation/output		
d) Historical sales		
e) Output updating heat input		
f) Output updating emissions		
g) Output updating generation/output		
h) Output updating sales		
i) Other allocation approaches?		

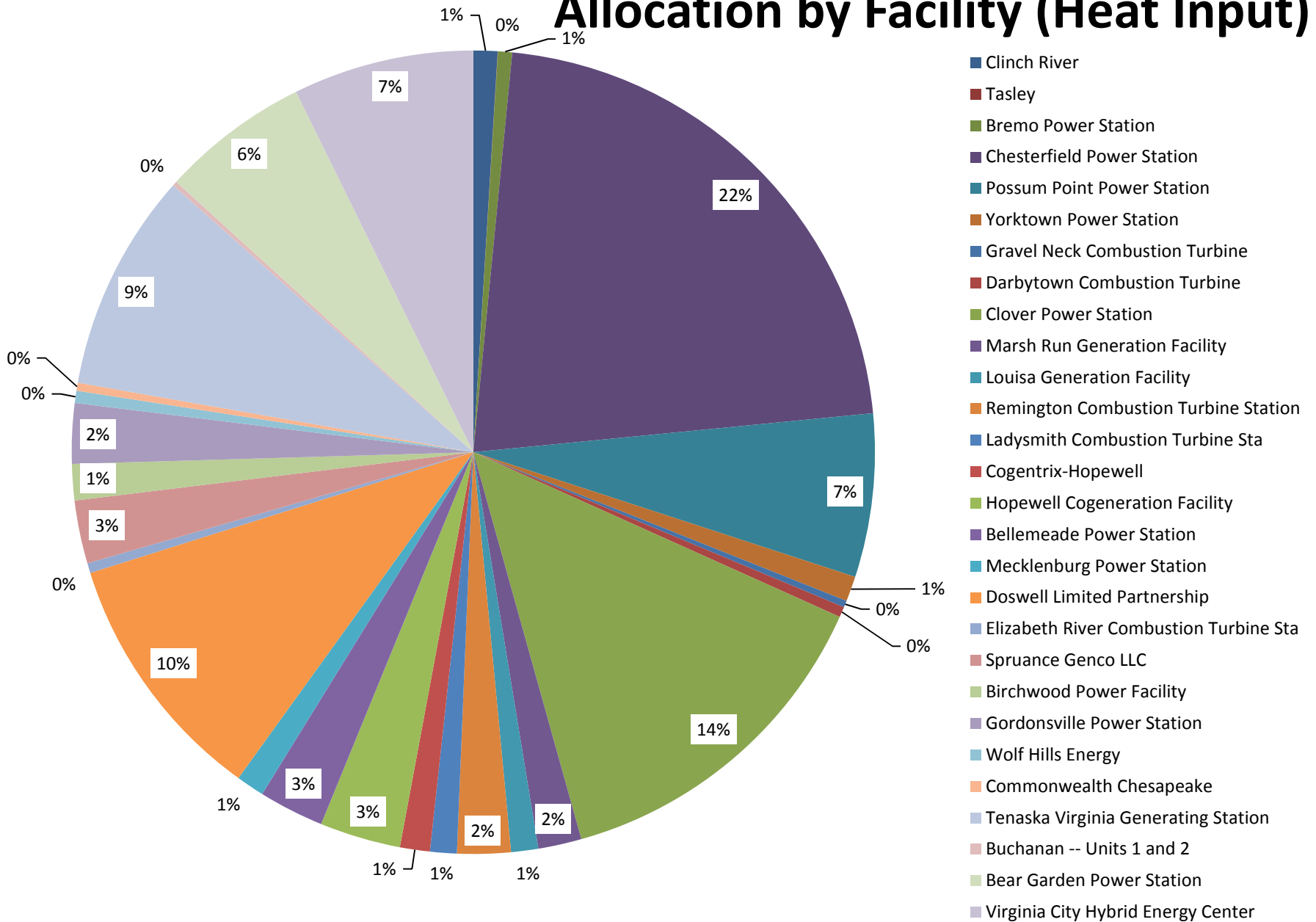
Allowance Allocation: Distribute to Whom?

	Strengths	Weaknesses
a) Covered electric generators		
b) All electric generators		
c) Load serving entities		
d) Entities other than electric generators		
e) Set-asides for specific parties or projects		
f) Other		

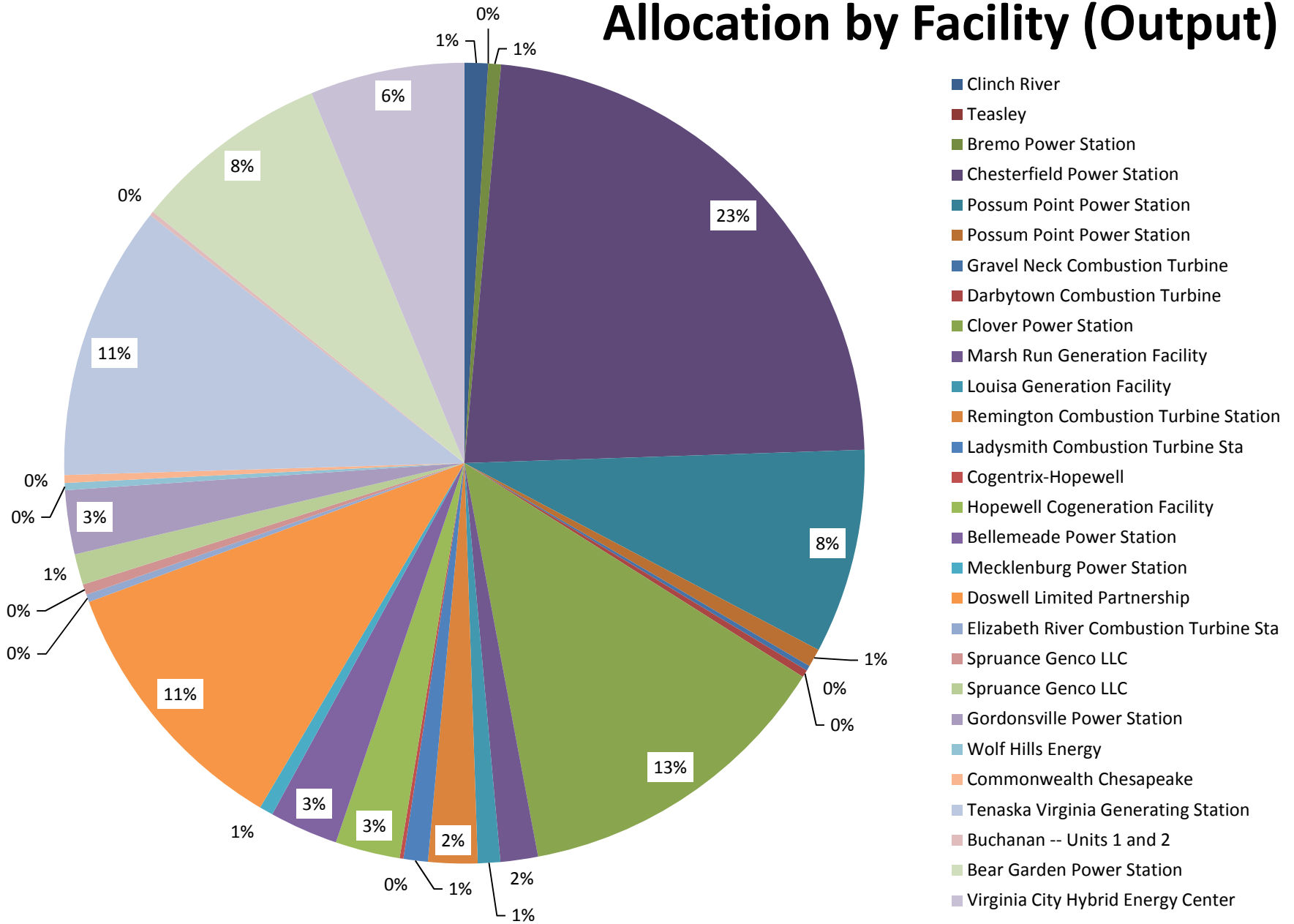
Allocation by Facility (Emissions)



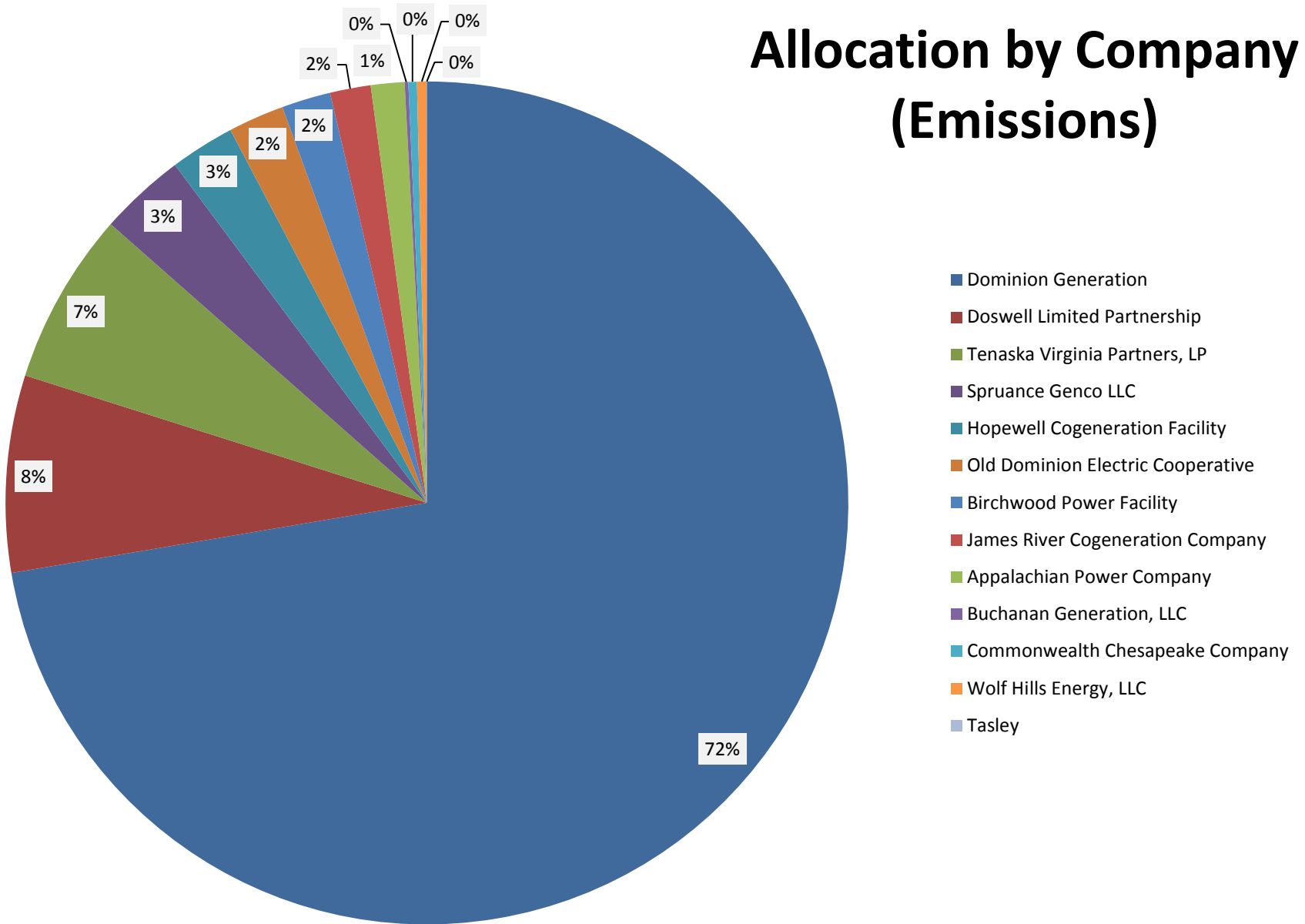
Allocation by Facility (Heat Input)



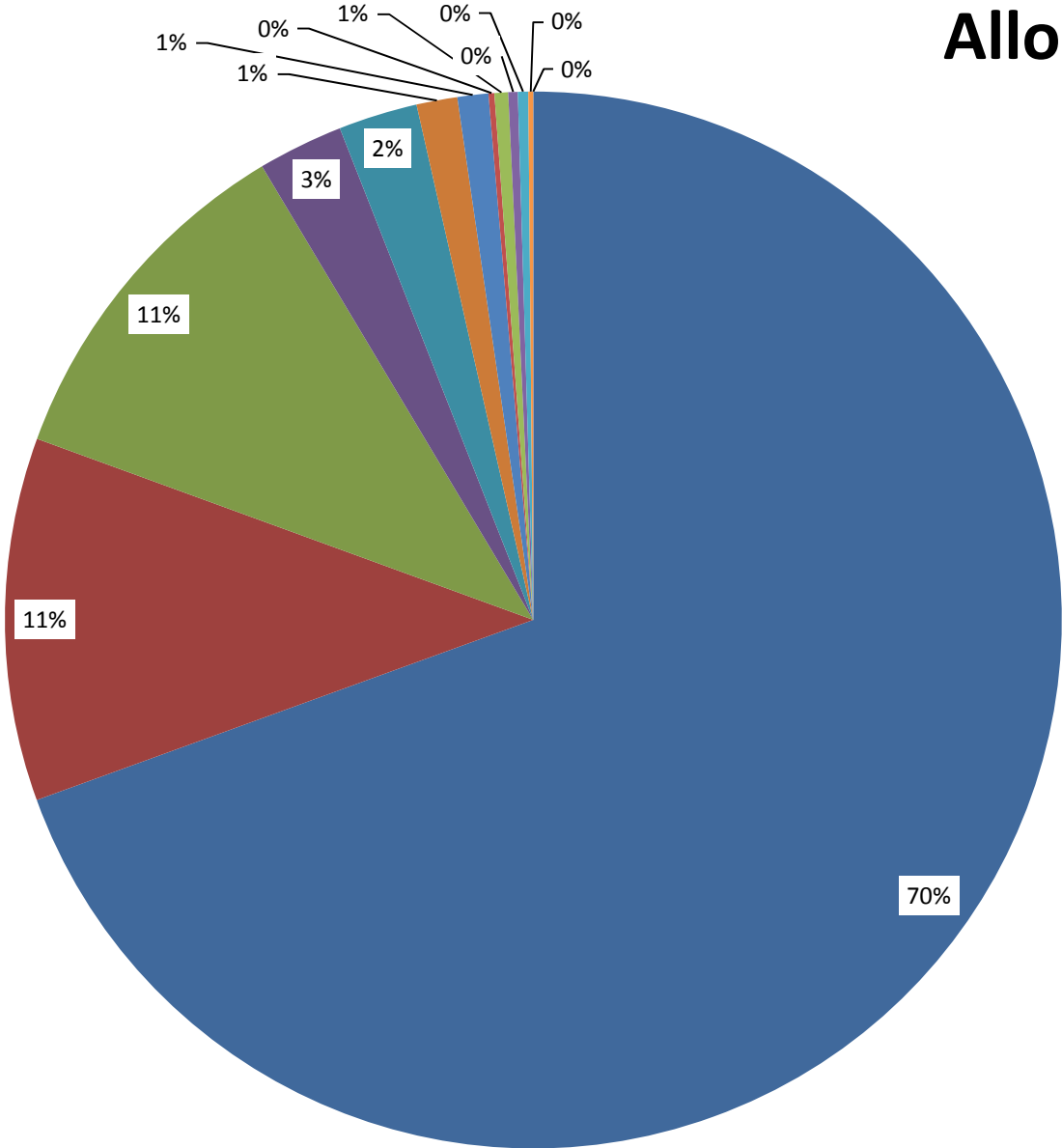
Allocation by Facility (Output)



Allocation by Company (Emissions)

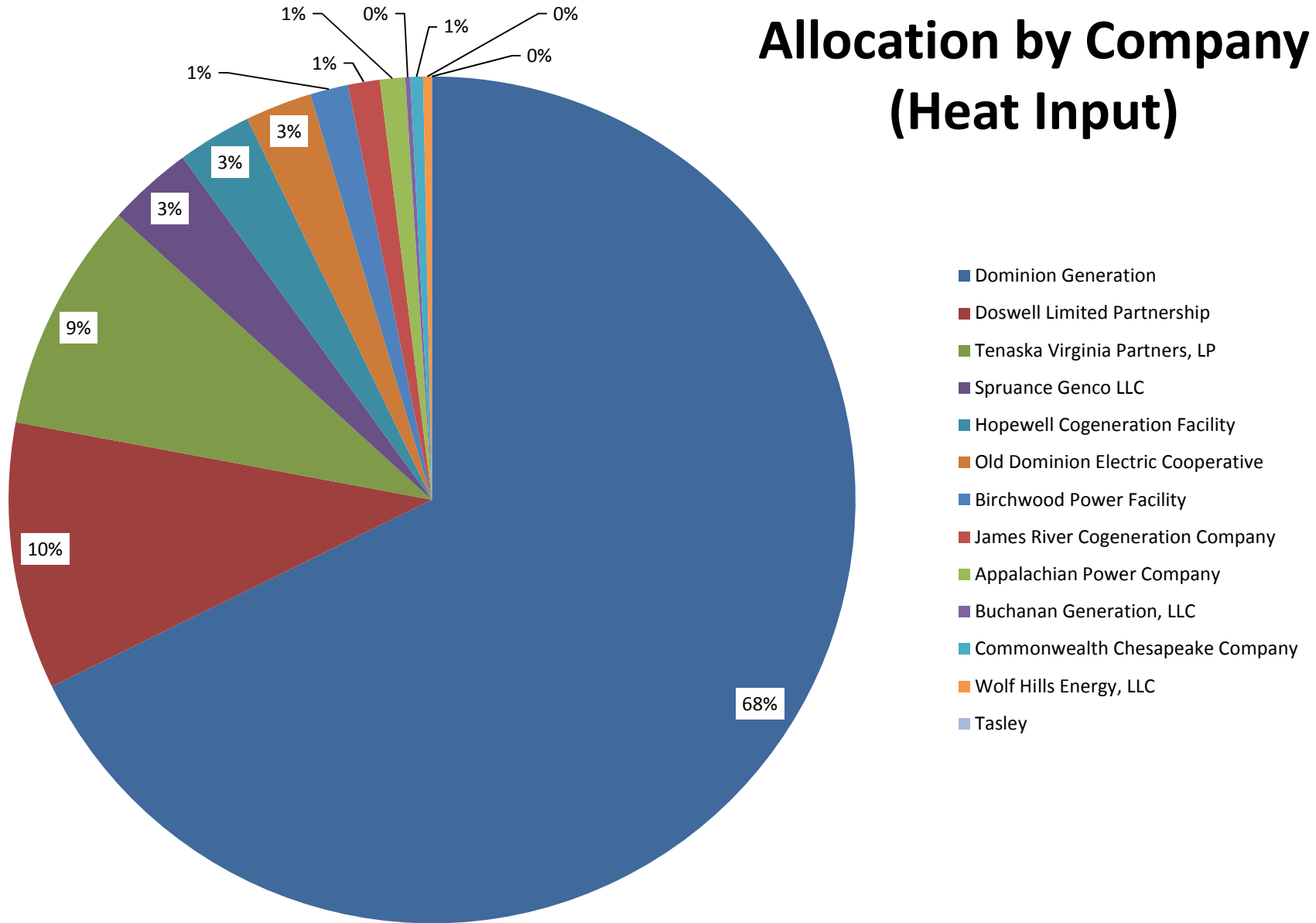


Allocation by Company (Generation)

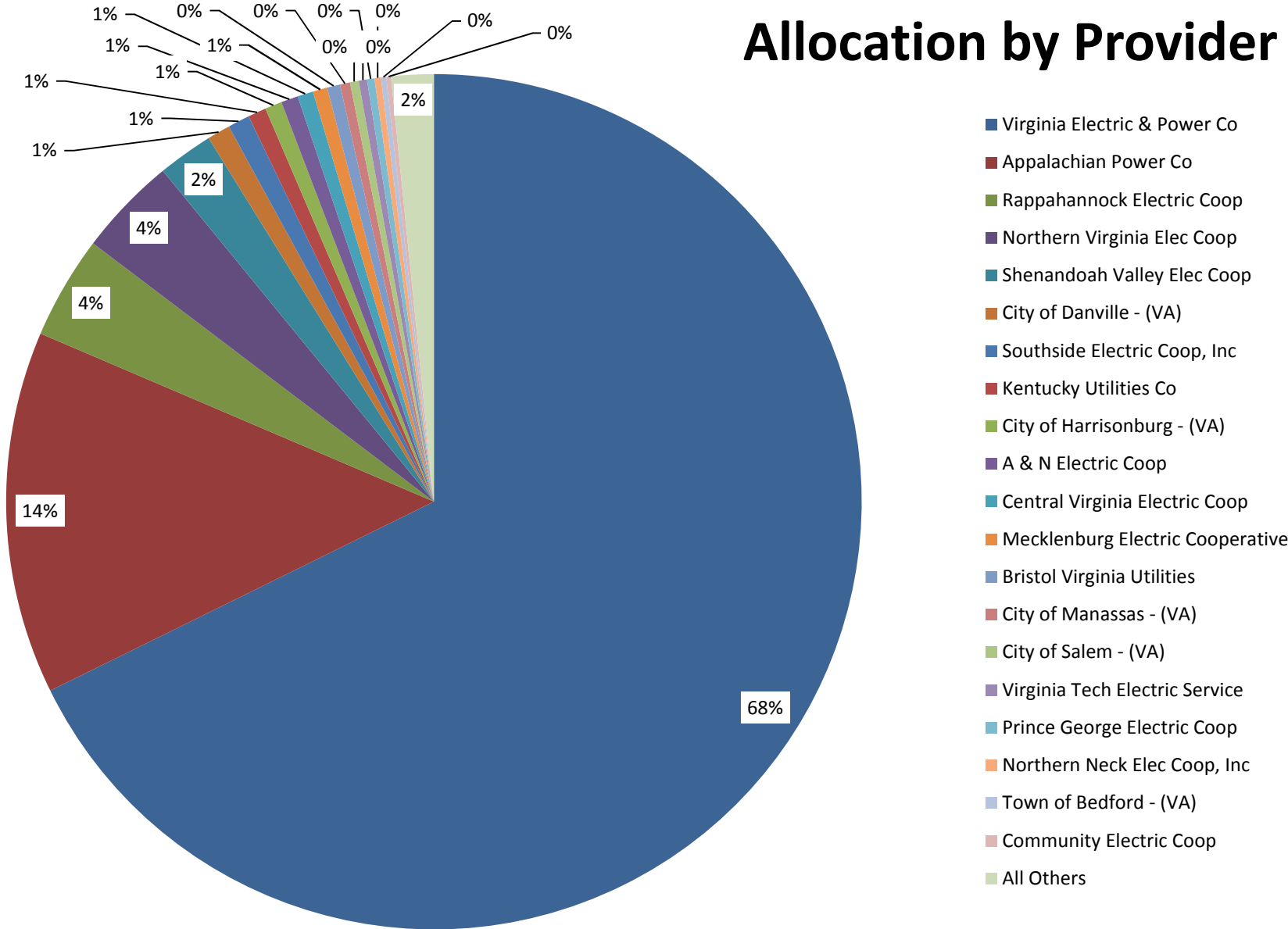


- Dominion Generation
- Doswell Limited Partnership
- Tenaska Virginia Partners, LP
- Spruance Genco LLC
- Hopewell Cogeneration Facility
- Old Dominion Electric Cooperative
- Birchwood Power Facility
- James River Cogeneration Company
- Appalachian Power Company
- Buchanan Generation, LLC
- Commonwealth Chesapeake Company
- Wolf Hills Energy, LLC
- Tasley

Allocation by Company (Heat Input)



Allocation by Provider



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	

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