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RESEARCH ARTICLE

Inferring Patterns of Influence on Climate and Energy Policy in the US State of Virginia (2015-2023)

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Abstract

Alongside lobbying and philanthropy, political donations from the richest 'oligarchic' actors to political 'elites', legislators on key committees, overwhelming influence the climate and energy policy process in the US state of Virginia between 2015 and 2023. By parsing oligarchic from elite actors in these terms, we trace the trajectory of 815 nominally progressive and regressive climate and energy bills through the VA legislature over that period, identifying four committees as veto-points. Legislators associated with the veto-points (bill sponsors, committee chairs, committee members) are then identified, and linked to large donations from two of the biggest oligarchic actors in the CEP space, an investor-owned utility and a donor-run philanthropic group, to generate donor - legislator communities. The most prolific donor -legislator community centers on the utility, which appears to use a reward and retain strategy for legislators, especially committee chairs, while also opportunistically fine-tuning donations according to shifts in partisan control of legislative chambers and the governorship. From 2018 onward, the philanthropic group emerged to overshadow donations from traditional environmental NGOs and anchor an alternative donor-legislator community that fine-tunes donations to progressive bill sponsors, an apparently less effective approach. Given that donations overall grew immensely in the lead-up to the Virginia Clean Economy Act of 2020, what seems to be important is that oligarchic-scale donations entering the CEP ecosystem are crowding-out any residual influence of traditional NGOs within the CEP space in the state.

Keywords: Climate and energy policy in the US states; lobbying; campaign donations; veto-points; donor-legislator networks

Introduction

The literature on state-level CEP in the United States is abundant. Researchers use various methods to evaluate the determinants of climate policy adoption (Basseches et al. 2022; Trachtman 2020; Bromley-Trujillo and Poe 2020; Anzia 2019) and bill introductions (Bromley-Trujillo, Holman, and Sandoval 2019), in addition to demonstrating the importance of organized interest groups (Hall, Culhane, and Roberts 2024; Basseches 2023; Stokes 2020) to find that monopolistic and quasi-monopolistic investor-owned utility preferences tend overwhelmingly to shape states' CEP. Meanwhile, Bromley-Trujillo and Holman (2020) find that key industry players in the states shape CEP bill introductions, while Culhane, Hall, and Roberts (2021a, 2021b) show that even in states with relatively transparent lobbying disclosure laws and strong regulations governing lobbyist-legislator interactions, utility and allied interests deeply influence CEP bills. As yet, this literature has paid little heed to pioneering work in political theory that distinguishes between the policy preferences of oligarchs, that is, the wealthiest actors, from those of political elites, those bearing institutional power, and of everyday citizens (Winters and Page 2009; Winters 2011) [1]. By drawing attention to oligarchs' relationships with political elites, the theorists suggest that, even though pursuing opposing objectives, to whit, nominally regressive or progressive CEP outcomes, the presence of oligarchic actors in the policy process itself tends to crowd out any residual influence exerted by 'traditional' or 'bottom-up' NGOs and so, everyday citizens.

The Commonwealth of Virginia represents an interesting case to examine this relationship in the context of the CEP process for at least two reasons. The once segregationist 'Old Dominion' has, since the 2007-8 financial crisis and more so since the early 2010s, emerged as the quintessential "purple state" (Toscano and Kaine 2022, xviii). Moreover, politics in Virginia has long been conducted in accordance with "the Virginia Way," a mode of consensus-based pluralism said to be characterized by "governmental integrity, fiscal responsibility, and political compromise" among political elites (Toscano and Kaine 2022, 95) . This combination of purpleness and elite consensus allows us to consider changing patterns of interest group behavior relative to a changing political context against the backdrop of relatively fixed institutions, rules, and norms. It makes Virginia a good case for an exploratory single case study that should be useful to those interested in understanding the interplay of extreme wealth and power, weakly partisan elites, and 'traditional' public interest groups in subnational CEP fora.

We examine the case by studying how influence over CEP is exerted in Virginia over the 2015-2023 period, against the backdrop of what would emerge by 2020 as one major piece of legislation (the 2020 *Virginia Clean Economy Act*, VCEA). Cognizant of the difficulty of studying CEP at the subnational level using any single research method (Fischlein et al. 2014), we provide a mixed-methods research strategy. First, we draw on media reportage and long-form interviews [2] to provide qualitative

1. Winters and Page (2009) define oligarchs as the top 0.1 percent of the population by wealth and income. In Virginia, this would total around nine thousand people and encompass all members of the board of the IOU we examine here as well as the progressive philanthropist.

2. We requested interviews with 30 persons named in media reportage related to climate and energy policy in Virginia over the 2015-2023 period, of which eight accepted (Dominion Energy communications

insight into the complicated relationships between four actors: A. an 'oligarchic' actor, a monopolistic utility, Dominion Energy and its multiple subsidiaries (hereafter Dominion, see Galbraith (2020)); B. another 'oligarchic' actor, philanthropic group Clean Virginia, "founded [by a very wealthy 'asset manager'] in an attempt to offset the undue and harmful influence that Dominion Energy and other utility monopolies have over Virginia politics" [3]; C. a traditional citizen-driven environmental NGO network led by the state branch of the Sierra Club; and, D. political elites, which is to say, legislators in both chambers of Virginia government. Then, we combine quantitative analysis of the fail rate of climate and energy legislative bills with network analysis of the formation of legislator-donor communities around legislative veto-points (legislative committees) over the period of interest. We find that one important way in which Dominion and Clean VA pursue their policy preferences is by sustaining a high volume and intensity strategy of donations and lobbying. In contrast, traditional environmental groups use a seemingly less effective approach, targeting donations and lobbying to legislative bill sponsors. We do recognize that the apparent lack of effectiveness of traditional environmental groups might be a mere product of intrinsically motivated sponsors putting forth more progressive climate and energy bills, and/or such interests donating to relatively progressive legislators regardless of them sponsoring progressive bills. However, it also suggests that such groups invest a great deal of time and energy in expectation of yielding progressive CEP returns even as these opportunities shrink. As such, we note that an inadvertent consequence of the arrival of Clean Virginia in the CEP space in 2018 was to increase the volume and intensity of large-scale donations entering the CEP ecosystem overall and so, to crowd-out the hitherto albeit marginally effective influence of traditional NGOs. Hence, we conclude that what has been called Virginia's 'climate of capitulation' to a single set of fossil fuel and related oligarchic interests (Thomson 2017) is changing in content if not in form. What increasingly matters for CEP outcomes in the state is the sheer volume of oligarchic money entering the ecosystem, which appears to be displacing the albeit historically marginal influence exerted by citizen-based environmental NGOs.

A 'climate of capitulation?'

Initially, the somewhat relaxed regulatory environment associated with the Virginia Way deserves further elaboration. As in comparable jurisdictions, Virginia's regulation of lobbying and donations shapes researchers' capacity to identify the population of interest groups and the level of influence that they might exert through donations and/or lobbying (Gray and Lowery 1998; Strickland 2014; Ozymy 2010). However, while lobbying and donation regulations in the US states vary considerably (Newmark 2017), and noting that donations have risen across all states since the Supreme Court's

spokespersons declined to respond to three invitations, one legislator declined via counsel, four interview requests were declined by email, the remainder did not respond). Interviews were conducted via videophone, recorded, and transcribed. Three legislators (two D, one directly and one via aide, one R), two environmental activists, one environmental lawyer, one renewable energy trade association lobbyist, and one green investment lobbyist agreed to speak anonymously in line with UNIVERSITY'S Institutional Review Board policy for exempted investigations deemed 'not research' according to Federal guidelines. The interview schedule is available in an open-access repository.

3. See: https://www.cleanvirginia.org/about/founders-statement/

2010 *Citizens United* decision (Roache 2021), Virginia today sits in the bottom quartile of states in at least one measure of regulatory effectiveness. [4] Although Virginia enacted regulatory reforms in 2015 and in 2017/8, further new rules requiring the recording of committee votes and live-streaming and archiving of committee hearings in the wake of repeated corruption scandals, [5] at least one former progressive legislator has called publicly for "a massive overhaul, if not a total discard [of] the Virginia Way" (Toscano and Kaine 2022, 241; Hamza 2018). Moreover, in 2015 Virginia established the Conflict of Interest and Ethics Advisory Council (CIEAC) "to encourage and facilitate compliance with ... lobbying laws" and collect and make public lobbying-related disclosures (Roache 2021). Yet, "disclosure is the only form of regulation" governing both activities [6]. Even though Dominion voluntarily publishes lobbying and donation disclosures on its company website[7], the firm does not disclose the legislator who was lobbied on what policy in what direction (i.e., support or oppose a bill). Although there do exist limits on the money and gifts that a legislator can receive in the legislators' code of ethics [8], the code places no restrictions on how legislators and potential legislators can use leftover campaign funds (Lewis 2022) and there remain few limits on how legislators (or hopeful legislators) may engage with lobbyists or spend donated funds [9]. In her now seminal book-length study, environmental law scholar Vivian E. Thomson goes further. She characterizes the longstanding elite networks, weak popular sovereignty, largely behind-closed-doors legislative process, part-time practically unsalaried legislature with little professional support and the relatively short legislative 'season' which combine to sustain the Virginia Way as fostering a "climate of capitulation" to the state's richest and most powerful actors, Dominion and related fossil fuel interests (Thomson 2017).

Understood in this context, the depth of Dominion's involvement in Virginia politics cannot be overstated. Amidst public debate over the bills that would be

4. Virginia was ranked forty-sixth out of the fifty states for the low quality of its anti-corruption measures for public officials by the non-partisan *Center for Public Integrity*. See, https://www.coalitionforintegrity.org/swamp2020/

5. In addition, we note that committee hearing records and public testimony were to be recorded and archived beginning in 2020, though we were unable to locate these records. While we are grateful to legislative operations staff for pointing us to where these records were purportedly archived online, we found public testimony inaccessible. The inaccessibility of committee hearing records was suggested to be an IT error. We did not receive a response in our attempts to follow up with this issue from any IT personnel or operations staff in Richmond. Additionally, the CIEAC lobbyist database is searchable by principle or lobbyist name only rather than providing a total list. Lobbyist registrations are separate from state conflict of interest reports and only require name of principal hiring organization, employment type, and compensation, but do not require lobbyists to report who they lobby, on which bills or policies, or what position they are lobbying for. Conflict of interest reports for state employees, including delegates, require reporting any gifts or payment over $50 in value, but similarly do not require details of lobbying efforts.

6. On donations, see, https://www.vpap.org/money/; On lobbying, see, https://www.ncsl.org/ethics/lobbyist-activity-report-requirements and https://www.vpap.org/updates/3636-annual-lobbyist-disclosures/

7. https://www.dominionenergy.com/our-company/leadership-and-governance/political-contributions

8. Further, see, https://law.lis.virginia.gov/vacodepopularnames/general-assembly-conflicts-of-interests-act/

9. For the relevant state codes, see, State and Local Government Conflict of Interests Act (§2.2-3100 et seq.), the General Assembly Conflicts of Interests Act (§30-100 et seq.) and the lobbying laws in Article 3 of the Code of Virginia (§2.2-418 et seq.).

enacted in 2020, notably the VCEA, *The Washington Post* reported in 2018 that "There's an old line in Richmond [the state capitol] that Dominion writes everything but the law of gravity" (Schneider 2018). Historically, Dominion bears indirect ties to the Appomattox Trustees whom the Virginia General Assembly chartered in 1787 to maintain waterways. Later, under ownership of perhaps the original 'robber baron' oligarch Frank Jay Gould in 1925, it was renamed and granted status as a regulated monopoly as the Virginia Electric and Power Company (VEPCO). Today, Dominion supplies electricity to parts of Virginia, in addition to six other states and natural gas to parts of nine states [10] and is widely reported as the "top corporate political donor in Richmond" (Schneider 2017; Wilson 2020, 2021). The firm also maintains "a heavy presence on the boards of trustees for universities and other academic institutions [and in] addition to having its executives spread across numerous philanthropic boards, Dominion ... is a juggernaut in charitable giving, donating over $80 million to hundreds of organizations from 2015 to 2019 through the Dominion Energy Charitable Foundation" (Galbraith 2020, 12; Anderson et al. 2019). The *Post* also reports that Dominion's lobbying activity "features not only former lawmakers but lawyers from top Richmond firms. The company isn't so much a backroom operator as an open participant in state government." The firm "was so instrumental in shaping the [VCEA] legislation that its top lobbyist, the former [legislator] Jack Rust, testified during a [committee] hearing alongside the patron of the bill instead of during the time set aside for supporters and opponents" (Schneider 2018). Consider also public interest advocacy group *ProPublica*'s report on Dominion's "lobbying blitz" that "kicked into high gear" in the wake of the election of Democratic Party candidates "who campaigned against [it,] Virginia's largest public utility" before the 2018 election (Wilson 2021; Oliver 2021; Vogelsong 2022). The VCEA was also described by Democratic Governor Northam as "a landmark legislation that places Virginia, long among the worst states on clean energy, at the forefront of the fight against climate change. In addition to supporting offshore wind generation capacity it will also promote construction of solar energy and mandate utilities generate electricity without fossil fuels by 2050" (Wilson 2020). However, reportage also shows that coinciding with Dominion's so-called lobbying blitz were actions taken, allegedly

> at the behest of Dominion [whereby] a senior Northam administration official made last-minute changes to the legislation that increased the wind project's price tag by an estimated $2.5 billion. The tweaks meant more money for Dominion, because state law guarantees utilities roughly 10% profit on construction projects. Neither the environmental representatives who helped craft the bill nor the state senator who sponsored it said they were aware of the changes until after the legislature passed it (Wilson 2020).

More so, the State Corporation Commission (SCC) announced that Dominion customers would bear almost all the risks of the project if costs escalated, or the wind project failed (Wilson 2020). Note too that "[while] environmentalists and Dominion negotiated in the utility's office tower, the sponsors of the [VCEA], Delegate Rip

10. See, http://www.fundinguniverse.com/company-histories/dominion-resources-inc-history/

Sullivan (D-Fairfax County), and Sen. Jennifer McClellan (D-Richmond) [11], added language that declared *the wind farm 'in the public interest.'* Another addition to the bill went further. It said the SCC should find certain costs to be 'reasonably and prudently incurred"' (Wilson 2020, emphasis added).

Each of our legislator interviewees took pains to notify us that they had never accepted or had ceased accepting donations from Dominion Energy. Yet, not unexpectedly, all other interviewees questioned the fact that "public utilities are allowed to make political contributions" and concurred with the following opinion:

> It is no surprise to anyone that Dominion has a very strong influence in the legislature and historically in the governor's office over the years. And that's because it's a major donor, but they also have a significant number of lobbyists and they sponsor events and everything. So that's not exactly a secret to anyone ... I would say that most bills at the Virginia legislature don't come there by coincidence.

Note also that, unlike many utilities across the US states but in line with the findings of research on subnational CEP in Europe, where ostensibly progressive CEP underpins economic incentives for key players (Jänicke and Quitzow 2017), Dominion had already embraced the clean energy transition relatively early, around 2013, two years prior to the period of interest to this study but at the dawn of the 'purpling' of Virginia's electoral map (Pugh 2019). (Lipton 2022) Unsurprisingly then, Dominion tends to dominate the modern CEP arena in Virginia regardless of party control of government, including over the period we study [12]. However, this pattern appears to have changed with the arrival in 2018 of philanthropic group Clean Virginia. In the 2018-9 cycle, "Clean Virginia's contributions to all campaigns ... totaled $373,119" (Main 2024). However, Clean Virginia's "total contributions skyrocketed to more than $7 million over the 2021-22 cycle—but Dominion doled out over $7.6 million. In just the first year of the 2023-24 cycle, Clean Virginia's donations totaled over $8.5 million, while Dominion's exceeded $10.6 million."(Main 2024) Increasingly over the period we study, competition between these two extremely wealthy actors has displaced hitherto albeit one-sided competition between Dominion and traditional environmental groups, allowing us to detect emergent concomitant effects of oligarchic levels of wealth on the CEP ecosystem.

Data, Methods, and Analysis

This section describes the mixed methods employed to analyze the climate legislation and donations in VA over the 2015-2023 period. First, the data for all the methods and their gathering process is discussed. Then, we apply these methods and describe the results as they emerge stepwise.

11. Sen. McClellan served on the CIEAC in 2015 and 2020-2023

12. Dominion discusses the lack of competition in energy production and distribution in Virginia in its 2023 Annual Report. See, https://s2.q4cdn.com/510812146/files/doc_downloads/2024/2024/03/21/Dominion-Energy-2023-Annual-Report-and-Annual-Report-on-Form-10-K-1.pdf

Data Description

Climate and Energy Legislation Data

To start, we identified all 815 CEP bills that passed through one or both houses of the Virginia legislature over the 2015–2023 period. This period was chosen based on the fact that 2015 was the first year in which electoral 'purpleness' became evident. Data was manually downloaded, cleaned, and sorted from three publicly available sources, the Commonwealth of Virginia's Legislative Information Service (LIS) website (https://lis.virginia.gov/lis.htm), the Legiscan Virginia website (https://legiscan.com), and the Virginia Public Access Project (VPAP) website (https://www.vpap.org). The following was recorded about each bill: Bill ID, Year, File Date, Passage/Failure Date, Progressiveness, Committees the Bill goes through, Legislative steps the bill goes through (Committee of house 1 [introductory house], Floor 1, Committee 2, Floor 2, Governor), whether the bill was incorporated into another bill, whether the bill was revised, overall bill fate, and bill sponsors.

As do Culhane, Hall, and Roberts (2021a) in their study of the CEP terrain in another US state, Massachusetts, we rely on lists of priority legislation made public by the state branch of *The Sierra Club* for bills dated 2017–2022. We used priority legislation made by the similarly progressive organization *Metropolitan Washington Council of Local Governments* (MWCLG, coding this latter group of bills only "progressive" or "regressive") for 2015–2016, during which time the Club compiled no lists of priority legislation. For 2023, we used the list of priority legislation made public by the *Virginia Conservation Network* (VCN), of which the VA Sierra Club is a member. We define bills as progressive if they were supported by the VA Sierra Club, MWCLG, and/or VCN and regressive if opposed by that organization (between 2017–2023, the Sierra Club and VCN also adopted a "neutral" position on several bills). Based on the literature on the US federal government, we assume that the main veto-point in the legislative process is the committee stage (Kroszner and Stratmann 1996).

Legislator and Donations dataset

Lobbyists in Virginia are not compelled to report earnings or, as is the case in many other US and European jurisdictions, whether lobbyists work in support, opposition, or observe neutrality relative to a particular piece of legislation. While reporting is mandatory, some lobbyists do not report, others under-report, and still others, including Dominion, report in ways that critical observers suggest obfuscate the relationship between retainers, lobbyists and legislators (Wilson 2021) [13]. This opaqueness prohibits a quantitative focus on detecting any influence exerted by lobbyists. Hence, we undertook semi-structured interviews with key players, as identified in reportage, and consulted such reportage to provide insight into lobbying by Dominion and other interest groups, as we report momentarily.

We created a handful of datasets to tie together legislation, legislators, and donations. All of these were scraped using publicly available data (scraped from https:

13. We note that the Lobbying Disclosure and Registration Act requires lobbyists to complete two separate annual filings, registration, and disclosure. A review of the CIEAC lobbyist database reveals frequent cases of lobbyists with registrations but no disclosures filed, or disclosures of amounts under $10,000 despite being registered employed full time.

//www.vpap.org/). Our legislator dataset provides a description of each legislator containing: Name, VPAP and legislator ID's, Party, Chamber, Active/Retired, District, and First Year Elected. Our committee-legislator dataset lists the committee members and chair for a given committee per year. Our donation dataset and various assumptions is discussed in more detail below, but the dataset contains: Donor name, Donor industry, Legislator donated to, and Year. These datasets, in addition to our climate legislation dataset, allow us to construct a pipeline between bills and donations:

1. Bills pass or get rejected through committees (legislative dataset)
2. Committees contain a committee chair and committee members (committee-legislator dataset)
3. Legislators possess various traits that could influence political behavior (legislator dataset)
4. Legislators are given donations that could influence political behavior (donation dataset)

As such, we can explain bill outcome (re. 1) using legislator-specific characteristics (re. 3) and donations (re. 4) through an intermediary dataset tying legislators to committees deciding whether a bill passes (re. 2). We can also expand the analysis to observe how communities of donors might influence legislative outcomes.

Regarding donations, we seek to overcome three reservations raised by Culhane, Hall, and Roberts (2021a):

1. most donations are from individuals, "making it impossible to trace support back to particular industries or organizations";
2. much of the volume of campaign donations "come from out of state PACS"; and,
3. "spending on lobbying typically outweighs donations" (Culhane, Hall, and Roberts 2021a).

We address these by excluding small donors (under $20k) (re. 1.); including data on donations by out of state actors, which is available in Virginia (re. 2.); and, recognizing that the gap between lobbying expenditures and donations is noticeable in Virginia, with donations exceeding lobbying by three to one (re. 3.).

Data Assumptions

Given these constraints, we assume that a politician will interpret continued donations by a single actor or group as a reward for past activity (Kroszner and Stratmann 1996), and focus the quantitative dimension of our study on donations rather than lobbying. We assume that donor influence is present, and look to identify patterns of donations that might suggest influence within some kind of "market" for public policy (Ansolabehere, De Figueiredo, and Snyder 2003). Conceptually, this means treating donations "as payments or investments by interest groups that are made in exchange for [policy] benefits that policymakers are poised to deliver" (Grossman and Helpman 1994; Hall and Deardorff 2006). This also means that interpreting the relationship as something of a "long term contract" (Snyder 1990, 1992) between donors, one type of "intense policy demander" [14] - , and legislators. As such, we expect that powerful

14. Intensity relative to other citizens being a function of status as a donor to legislators, see Reuning (2020)

interest groups should form around the most powerful legislators, and that the former "should repeatedly disburse their contributions to the same set of officeholders over time, and . . . steer their contributions toward officeholders who are best positioned to deliver the greatest 'lifetime service value' " [15]. This is because "officeholders are incentivized to interact repeatedly and develop a clear reputation because doing so presents a compelling way to increase the contributions they receive" (Chen 2019, 24; Kroszner and Stratmann 1996, 1166).

Still, we expect the wealthiest donors with an interest in CEP to consistently seek out powerful legislators, specifically our committee chairs, who sit on committees that address CEP. The objective is to detect emergent groups of donors and legislators, which we refer to as communities. We predict that these communities will coalesce around legislators based not only on party affiliation (Democratic or Republican Party) but more importantly by donor type. As a caveat, we recognize that a force larger than organized interest group influence could be shaping climate and energy bills. Hence, our task is not to prove that interest groups form networks of "intense policy demanders" (Reuning 2020; Bawn et al. 2012; Vogelsong 2022) that, by sustaining interest-based communities with legislators, shape the latter's choices. Rather, the task is to identify such communities and to show how they coalesce on legislators at veto-points in light of the assumption that our legislators seek to impress donors either by action or lack thereof. We therefore work with two units of analysis—climate and energy bills and interest communities—to identify one way in which donor-legislator relationships appear to have exerted influence on CEP in Virginia over the 2015-2023 period.

Legislative Analysis

Initially we identify the stage in the legislative process in which one of our select bills was tabled then discussed (eliminating committees that received fewer than 100 climate and energy bills). We then observe the bills' passage to the next stage in the legislative process or 'fail' in a given committee or chamber, or passage to the executive (which may veto or sign into law). This implies that four committees serve as primary veto-points. These are the Commerce and Labor (CL) and Agriculture and Natural Resources (ACNR) committees in both the lower and upper chambers [16]. Table 1, therefore provides a general overview of the trajectory of 815 CEP bills by year (2015-2023), showing both the numbers and percentages of bills surviving each stage of the legislative process. Table 2 shows CEP bill trajectories by progressive, regressive, and neutral labels. Note that, descriptively, the gross number of progressive CEP bills increased in the 2018-22 period, particularly in 2018 and 2022. Over this period, Democrats did not always hold both chambers and the governor's mansion, 'the trifecta' (see Table 3 for a more detailed makeup of the committee chair and party affiliation per year). However, reportage suggests Democratic Party ascendance, and the ascendance of progressives within the party, over this period (Oliver 2021;

15. Implying that 'ideology' plays little to no part in donor decisions (Chen 2019, 24)

16. The exact names of the committees vary over time. The chambers we identify as most salient to our study are the Commerce and Labor (hereafter, CL) committees of both houses and the Agriculture, Conservation and Natural Resources (hereafter, ACNR) committees of both houses.

Table 1. Table of legislative pathways of climate and energy legislation. It traces the number of bills that make it through each step in the legislative process, as well as the percent of bills that make it past that step. The steps that will be looked at are the Bill Introduction, Pass Committee in Chamber 1, Pass Floor in Chamber 1, Pass Committee in Chamber 2, Pass Floor in Chamber 2, Bill sent to Governor, and Signing into Law

All Bills	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bill Introduced	86 (100%)	74 (100%)	89 (100%)	100 (100%)	91 (100%)	89 (100%)	62 (100%)	119 (100%)	105 (100%)
Passed Committee 1	37 (43%)	28 (37%)	37 (41%)	29 (28%)	37 (40%)	54 (60%)	47 (75%)	56 (47%)	60 (57%)
Passed Floor 1	35 (40%)	28 (37%)	36 (40%)	28 (28%)	35 (38%)	54 (60%)	46 (74%)	56 (47%)	58 (55%)
Passed Committee 2	29 (33%)	26 (35%)	33 (37%)	27 (27%)	31 (34%)	45 (50%)	39 (62%)	42 (35%)	39 (37%)
Passed Floor 2	29 (33%)	26 (35%)	33 (37%)	26 (26%)	31 (34%)	45 (50%)	39 (62%)	40 (33%)	38 (36%)
Delivered to Governor	25 (29%)	26 (35%)	32 (35%)	23 (23%)	29 (31%)	41 (46%)	33 (53%)	40 (33%)	37 (35%)
Signed into Law	26 (30%)	24 (32%)	30 (33%)	24 (24%)	27 (29%)	42 (47%)	36 (58%)	38 (31%)	36 (34%)

Schneider 2020; Vogelsong 2022). Second, note that the pass rates of progressive legislation rose drastically during 2020-2021, when the Democrats did hold all three offices, from 30.6% to 50.3% during the trifecta years. Third, the number of regressive bills tends to be far fewer than the number of progressive bills until 2022, when we witness an uptick in the number of regressive bills introduced, a shift that coincides with the Republican capture of the House and Governorship. Finally, generally, Democrats pass progressive legislation more often than Republicans (p=0), and Republicans pass regressive legislation more often (p=0). This remains the case during the "split house" years (2022, 2023; p=0)[17].

Figure 1 offers a heuristic that indicates proportionally the trajectory of CEP bills we label progressive, regressive, and neutral over the 2015-2023 period. This leads us to compare legislation quantitatively in terms of progressiveness and yields interesting results. CEP bills we deem neutral are more likely to pass out of committee and into law (49.5%) than those deemed progressive (32.9%) and regressive (28.0%) to a statistically significant extent when compared to CEP bills overall (p-value=0.001)[18]. When excluding CEP bills labeled neutral, the difference becomes insignificant when looking at CEP bills overall (p=0.15). This lack of significance in rates of passage between progressive and regressive CEP bills holds for every year except 2018 (p=0.03) when there was a surge in proposed progressive climate legislation within a Republican-

17. p-values for this section were calculated based on conducting Pearson's Chi-squared test with Yates' continuity correction. Tables for such a test are constructed as bill characteristics (passed during trifecta, progressiveness, chamber party composition, etc.) vs bill fate (passed/died in chamber or died in committee/died elsewhere/passed into law)

18. Many of these neutral bills came from earlier years, particularly in 2015-2016 when relying on MWCOG priority bill lists, which had a different sampling and progressiveness measurement methodology.

Table 2. Tables of legislative pathways of progressive, neutral, and regressive climate legislation

Prog. Legislation	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bill Introduced	48 (100%)	44 (100%)	49 (100%)	84 (100%)	68 (100%)	72 (100%)	55 (100%)	86 (100%)	62 (100%)
Passed Committee 1	19 (39%)	12 (27%)	13 (26%)	21 (25%)	24 (35%)	47 (65%)	44 (80%)	35 (40%)	34 (54%)
Passed Floor 1	18 (37%)	12 (27%)	12 (24%)	20 (23%)	22 (32%)	47 (65%)	43 (78%)	35 (40%)	33 (53%)
Passed Committee 2	18 (37%)	11 (25%)	12 (24%)	19 (22%)	20 (29%)	40 (55%)	36 (65%)	28 (32%)	22 (35%)
Passed Floor 2	18 (37%)	11 (25%)	12 (24%)	18 (21%)	20 (29%)	40 (55%)	36 (65%)	28 (32%)	22 (35%)
Delivered to Governor	16 (33%)	11 (25%)	12 (24%)	16 (19%)	18 (26%)	36 (50%)	31 (56%)	28 (32%)	21 (33%)
Signed into Law	16 (33%)	9 (20%)	12 (24%)	18 (21%)	18 (26%)	37 (51%)	34 (61%)	26 (30%)	21 (33%)
Neut. Legislation	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bill Introduced	29 (100%)	19 (100%)	21 (100%)	8 (100%)	13 (100%)	6 (100%)	1 (100%)	1 (100%)	6 (100%)
Passed Committee 1	16 (55%)	11 (57%)	12 (57%)	4 (50%)	8 (61%)	5 (83%)	1 (100%)	1 (100%)	6 (100%)
Passed Floor 1	15 (51%)	11 (57%)	12 (57%)	4 (50%)	8 (61%)	5 (83%)	1 (100%)	1 (100%)	6 (100%)
Passed Committee 2	10 (34%)	11 (57%)	12 (57%)	4 (50%)	6 (46%)	5 (83%)	1 (100%)	1 (100%)	5 (83%)
Passed Floor 2	10 (34%)	11 (57%)	12 (57%)	4 (50%)	6 (46%)	5 (83%)	1 (100%)	1 (100%)	5 (83%)
Delivered to Governor	8 (27%)	11 (57%)	12 (57%)	3 (37%)	6 (46%)	5 (83%)	1 (100%)	1 (100%)	5 (83%)
Signed into Law	9 (31%)	11 (57%)	12 (57%)	3 (37%)	6 (46%)	5 (83%)	1 (100%)	1 (100%)	4 (66%)
Regr. Legislation	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bill Introduced	9 (100%)	11 (100%)	19 (100%)	8 (100%)	10 (100%)	11 (100%)	6 (100%)	32 (100%)	37 (100%)
Passed Committee 1	2 (22%)	5 (45%)	12 (63%)	4 (50%)	5 (50%)	2 (18%)	2 (33%)	20 (62%)	20 (54%)
Passed Floor 1	2 (22%)	5 (45%)	12 (63%)	4 (50%)	5 (50%)	2 (18%)	2 (33%)	20 (62%)	19 (51%)
Passed Committee 2	1 (11%)	4 (36%)	9 (47%)	4 (50%)	5 (50%)	0 (0%)	2 (33%)	13 (40%)	12 (32%)
Passed Floor 2	1 (11%)	4 (36%)	9 (47%)	4 (50%)	5 (50%)	0 (0%)	2 (33%)	11 (34%)	11 (29%)
Delivered to Governor	1 (11%)	4 (36%)	8 (42%)	4 (50%)	5 (50%)	0 (0%)	1 (16%)	11 (34%)	11 (29%)
Signed into Law	1 (11%)	4 (36%)	6 (31%)	3 (37%)	3 (30%)	0 (0%)	1 (16%)	11 (34%)	11 (29%)

Table 3. Table of committee chairs (Republican = Red, Democrat = Blue) for H-ACNR, H-CL, S-ACNR, S-CL between 2015-2023

Steve Landes (R)					Roslyn Tyler (D)		Glenn Davis (R)		H-ACNR
Bill Howell (R)					Eileen Filler-Corn (D)		Todd Gilbert(R)		H-CL
Steve Martin (R)					Louise Lucas (D)				S-ACNR
Ryan McDougle (R)					Mamie Locke (D)				S-CL
2015	2016	2017	2018	2019	2020	2021	2022	2023	

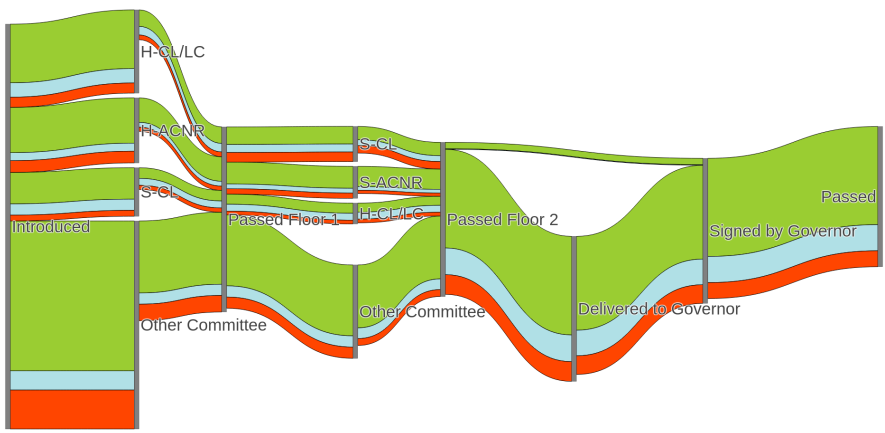

Figure 1. Sankey diagram showing the flow of bills through the legislative process, labeled progressive (green), neutral (blue), and regressive (red).

controlled congress, and 2020 (p=0.001) when, as we note above, progressive climate and energy bills passed in higher volumes. In 2021, the other year of the Democratic trifecta, we observe statistically insignificant differences in passing rates between progressive and regressive CEP bills (p=0.10). This we attribute to the lack of regressive CEP bills over that period. Now consider the committees themselves. For the bills that did not pass into law, 88.9% of them failed in either a House or Senate committee, with 86.2% of committee deaths occurring in a committee of the chamber where the bill was introduced.

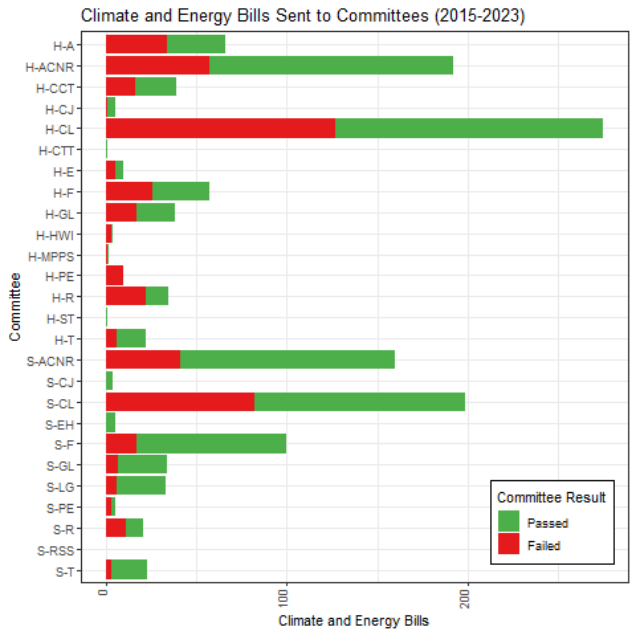

Figure 2. Climate and energy bills that go through each committee and the fates of the bills in those committees

Finally, Figure 2 shows the number of all bills sent to committee and the fates of those bills from 2015–2023, revealing the four main veto-points, the CL and ACNR committees in both houses. Compared with the 'pass rate' of bills, we observe a similar rate between the committees of both chambers but considerable differences across the committees within each house, with the CL committees in both chambers significantly more aggressive in killing climate and energy bills than are ACNR committees in both houses (see Table 4). Bills fail more often in the House CL committee than the other veto-point committees. The Senate CL committee presents a lower but statistically insignificant bill fail rate compared to other committees, though it does fail progressive legislation more often than average (p=0.02). The House ACNR and Senate ACNR committees pass CEP bills more often than other committees.

Hence, progressive CEP bills pass at a higher rate through Democratic Party legislator-controlled veto points. Notably, they most likely pass through the CL or

Table 4. Table of veto-point committee and overall committee statistics regarding bill passage rate. The "All Committees" row is obtained by combining the number of bills that passed/failed per committee and serves as a "baseline" for how often bills die on average. Significance is calculated using Pearson's Chi-Squared test on the bills passed and failed in a specific committee versus the bills passed and failed in all other committees. For example, H-CL significance is determined by comparing the bills passed and failed by H-CL against the bills passed and failed by non-H-CL committees

Committee	Bills Passed	Bills Failed	Bills Received	Pass Rate	Significance ($p < 0.05$)
H-CL	148	127	275	53.9%	0.0005*
S-CL	117	82	199	58.8%	0.20
H-ACNR	135	57	192	70.3%	0.031*
S-ACNR	119	41	160	74.4%	0.0022*
All Committees	846	355	1341	63.1%	

ACNR committees of both houses, of which CL is likelier to fail bills overall and progressive bills. And, progressive CEP bills fail or simply fall into neglect when Republican Party legislators control these committees, which tracks findings on the impact of Republican Party control of veto points on the success of CEP elsewhere (Bromley-Trujillo and Poe 2020). As we suggest above, progressive CEP bills are more likely to pass into law if they were proposed during periods of Democratic Party control (most notably during the 'trifecta'). Perhaps more significant factor influencing bill passage, however, is the volume of donations, donor identity, and the status of the donee – be they committee chair, committee member, or bill sponsor.

Community Detection

To observe donor influence on CEP bills, we use donations to create a bipartite network of legislators and donors. We later determine communities within the network and explore the patterns of community donations to legislators and infer from this an impact on the outcome of CEP bills. Important to our argument is Winters' invocation of political theory to distinguish oligarchs, those in the top 0.1 percent of the wealth and income distribution, from elites, whose power and influence rests on institutions, exemplarily, elected representatives (see above, Footnote 1) (Winters 2011, 26ff). Therefore, here, we treat donors as oligarchs, and elites as legislators. This distinction, we believe, helps to support our claim that influence flows from the former to the latter, who work assiduously to manage their reputations with the former via the legislature (and arguably, although beyond the scope of this piece, executive office). In this image of the policy process, everyday citizens exert marginal if any effect and only then, if their preferences are represented by organized groups such as what we call NGOs. Given the demonstrated importance of committees, we focus interpretation here on donations to what are perhaps an elite of the elite, committee members (hereafter, legislators). Using data scraped from the VPAP website, as in the above legislative analysis, we matched career-historic donations through 2023 with legislators on committees during our period of interest (2015–2023). This approach allows for full context on the assumption that what we infer as influence can occur years before or after the bill is seen, as per the political science literature argument that donors

work with a 'reward and retain' strategy. Hence our claim above that legislators seek to impress donors. Since 2015, with a large uptick after 2018, overall donations have more than doubled (note that donation amounts tend to fluctuate, tracking the legislature's biennial calendar). This upsurge suggests that the aforementioned period of purpleness has focused CEP-interested donor attention on the legislative process in VA, a claim reflected in media reportage (Moomaw 2021; Main 2024) and our interviews.

Focusing only on prolific donors with extensive donations across multiple legislators, we narrowed down our donor sample to those that made at least $150,000 in donations but donated less than 60% of their donations to a favored politician. We note that, in the era of 'populism', small donations are increasingly important but arguably cancel each other out. Also, as Culhane, Hall, and Roberts (2021a) note, it is likely impossible (or at least beyond the scope of this argument) to identify the objective of each small donation but, we argue that it is an exercise in informed interpretation to do this with big donations too. Following political scientists Kroszner and Stratmann (2005), we see it as safe to assume that big donors are aware of legislators' desire to maintain a reputation with them. The second condition filters out most donors from the Real Estate industry, on the presumption that donations from this sector are likely oriented toward site-specific issues, such as beneficial property development rule changes and/or special zoning rules or dispensations (Virginia being a Dillon's Rule state). The resulting sample of 0.8% of donors donated 65.3% of all donations to our legislators.

This approach allows us to focus on relatively large donations to legislators, all else remaining equal. We predict that donations from the largest donors in a community will flow to legislators according to their party and propensity to sit on a committee that debates CEP bills. Depending on the degree of partisan control of the legislature and/or executive, and on the intensity of donations to these legislators, however, progressive bills will tend to pass committee and be enacted when the intensity of donations from utility industry and related groups is lowest. Although this is potentially an obvious point, we remind the reader that Dominion has since 2013 been a supporter of ostensibly progressive CEP, as will be shown momentarily, since 2015 at least, when Democrats appear to be in the ascendant electorally. This effect, we conjecture, counteracts any residual partisan cleavage effect among legislators.

Figure 3 serves as a heuristic for the arguments that follow and shows career-historic donations to 2015-2023 committee members. We first identify the donors using the Industry Group categorization as developed by Culhane, Hall, and Roberts (2021a)—*Agriculture*; *Transportation*; *Real Estate*; *Alternative Energy*; and, *Miscellaneous Environmental*, including environmental planning and resource efforts outside these established categories, such as non-coal quarries and waste disposal—and subsequently detect our own communities. Note the two major groups within the network, one clustered around Dominion and one, smaller yet noticeable, around environmental groups and, notably, philanthropic group Clean Virginia.

Going a step further, we now identify the donors by community. We apply the Spinglass clustering algorithm (Csárdi et al. 2024) to detect four donor-legislator communities (See Table 5). The largest is led by Dominion Energy (DE-Comm),

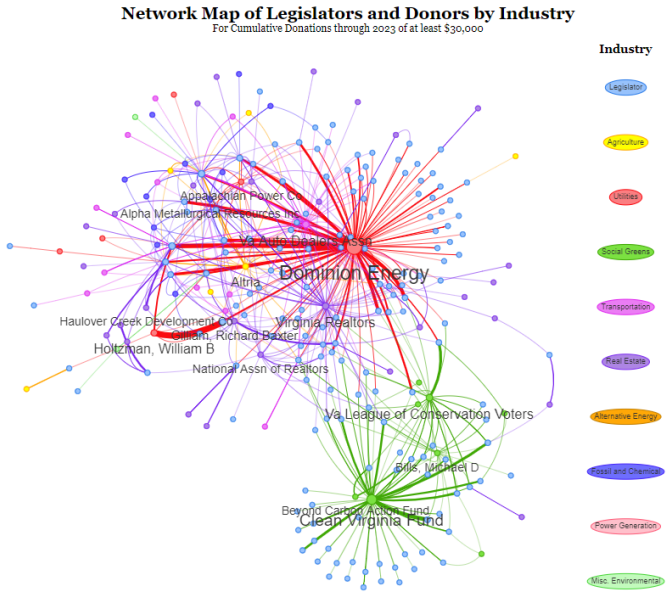

Figure 3. Bipartite network map of legislators and donors

Table 5. Table of communities and statistics of legislators, donors, and donations in said communities

	DE-Comm	Green-Comm	Holtzman-Comm	Sr-Comm
Legislator Count	80	64	28	58
Party	21 D, 1 I, 58 R	62 D, 1 I, 1 R	28 R	18 D, 40 R
Chamber	68 H, 12 S	52 H, 12 S	20 H, 8 S	35 H, 23 S
Mean First Year Elected	2015	2015	2009	2000
Prolific Donor Count	19	29	32	33
Total Donations	$44.8 million	$24.3 million	$13.7 million	$11.3 million

the second largest by (Social) Greens (Green-Comm), a designation we propose to encompass both traditional environmental NGOs and Clean Virginia, the third by Mr. William Holtzman, the founder and president of the Holtzman Corporation and Holtzman Oil Company (H-Comm) and major donor to a single Republican legislator, Mr Holtzman's daughter, and the fourth comprised of senior legislators, with 7 of the 8 most senior legislators and by far the lowest average first year elected (Sr-Comm) visible in any cluster. DE-Comm includes significantly more committee-member legislators than Green-Comm, and the donor-members of DE-Comm outspend those of Green-Comm by a factor of almost two-to-one early in the period of concern. Green-Comm is an outlier insofar as its donor-members donate largely to Democrats while donor-members in each of the other three communities donate mainly but by no means exclusively to Republicans. As noted above, Clean Virginia, which proposed somewhat successfully a 'pledge' from legislators not to accept donations

from Dominion, ramped up its donations from 2018, almost matching donations from the utility by the end of the period we study.

Regression Analysis

Table 6. Four regression models estimating the logarithmic donation amount to legislators from each of the four communities. Factors considered fall into two categories: general and legislator-specific characteristics. General factors are the year and whether the committee at the time is under Republican control. Legislator-specific factors are first year elected (an indicator of experience), party affiliation, chamber, committee position, and the number of CEP bills the legislator saw and sponsored

	DE-Comm		Green-Comm		H-Comm		Sr-Comm	
(Intercept)	-2.6		3.1		-75.8	·	163.0	***
Year	0.0114		-0.0007		0.0610	**	-0.0584	***
Under Rep. Control	-0.16	*	0.01		0.23	·	-0.05	
First Year Elected	-0.0083	*	0.0009		-0.0230	***	-0.0215	***
Is Republican	0.22	***	-0.85	***	0.71	***	0.47	***
In Senate	0.28	***	0.18	*	0.75	***	0.45	***
Is Committee Chair	0.18	*	0.38	***	0.33	*	0.22	*
# of Bills Seen	0.007	***	0.003		-0.004		0.023	***
# of Bills Sponsored	-0.027	***	0.026	***	0.001		-0.008	

With communities established we now relate donations from them to legislators in Table 6. Being a senator and a committee chair are both significantly correlated with more donations from all four communities, suggesting a common trend of more donations going to those with more individual influence. Similarly, the negative correlation with *First Year Elected* indicates a trend of more donations going to relatively more senior legislators. It is possible that Green-Comm donations exhibit this tendency as well but its donors recognize the value of offsetting this effect by donating to younger, more progressive legislators. The factor for party affiliation, *Is Republican*, further demonstrates the apparent division of communities between Green-Comm and the other three communities, with Green-Comm donating more to Democrats and the others donating more to Republicans. We note too that H-Comm and Sr-Comm have less impact than DE-Comm and its donors potentially focus on other legislative issues. The two CEP bill-specific factors suggest a difference in strategies between DE-Comm and Green-Comm. Donors in DE-Comm target legislators that see more CEP bills. That is, they target individuals who have more of a say on whether a CEP bill passes. On the other hand, Green-Comm focuses on bill sponsors, thus targeting individuals who have the ability to introduce a greater amount of more progressive bills, which nevertheless as the above mentioned legislative analysis shows, fails more often relative to regressive bills..

Taking a closer look at the most important committees, we compare career donation patterns to all members of the veto-points in Figure 4 . We track donations over the period of interest following the logic of Kroszner and Stratmann (2005) that donors aim to both reward and retain. DE-Comm dominates donations to both CL committees, while donor-members of Greens-Comm donate more readily to the

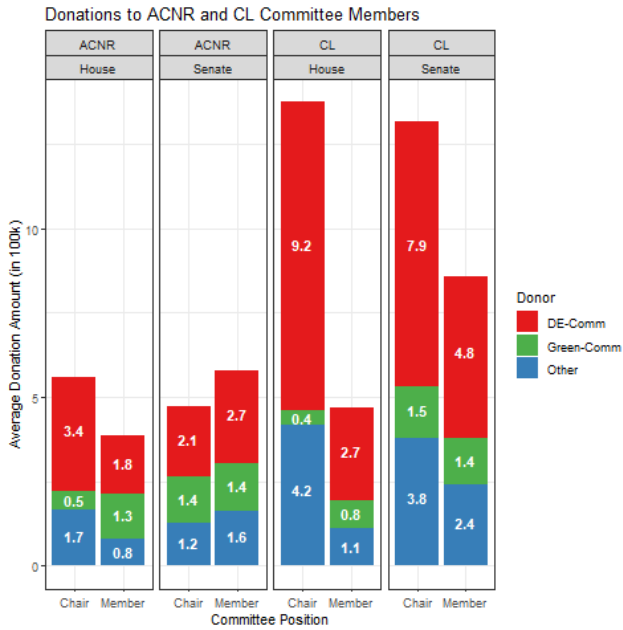

Figure 4. Average chair and member donations of CL and ACNR committee veto-points 2015-2023 in both chambers

ACNR committees. Recall the discrepancy between the pass rates of bills through these committees (as seen in Table 4), showing the CL committees had a lower pass rate than the ACNR.

Table 7. Table of regression model estimating the bill outcome when seen by committees. This is evaluated using the committee chair's party, legislative chamber, and the average logarithmic donation amount to committee members from DE-Comm and Green-Comm

	Estimate	p-value	
(Intercept)	1.79	0.3261	
Chair Is Republican	-0.45	0.0104	*
In Senate	0.63	0.0003	***
DE-Comm Donations	-1.30	0.0001	***
Green-Comm Donations	1.19	0.0018	**

We expand on this line of thinking by estimating whether a bill passes through a committee or not, as shown in Table 7. While a Republican-controlled committee is less likely to pass a bill, the community donations were found to be significant factors as well, with DE-Comm donations correlating with a lower pass rate and Green-Comm donations correlating with a higher pass rate. So even when accounting for party control, donations showed a relationship with the outcome of a bill that corresponds to community goals. More so, we can see that, whether originating with Dominion or

Clean Virginia, oligarchic donors to appear to "exert ... determined influence upon" elites who in this analysis do appear to be "helping to produce oligarchic outcomes" (Winters 2011, 18) in the state of Virginia CEP arena.

Conclusion

By drawing attention to oligarchs' relationships with political elites, we confirm the findings of Kroszner and Stratmann (2005) that large donations function as incentives to legislators, who in response tend to make choices that reflect a desire to undertake some kind of reputation or image management relative to donors that includes but goes beyond tit for tat. What we describe here as Dominion's overall high-volume donation strategy, coupled with tactics that target potentially highly impactful bills such as the VCEA, implies that it is the volume of donations received by Republican legislators overall and from donors in DE-Comm which cancels out any detectable partisan donation effect. This, we propose, is also an effect of the tendency of donors in DE-Comm to focus on Committee Chairs and legislators sitting on the most relevant committees. However, donors to Green-Comm do also appear to direct their donations to Democratic Party committee members and chairs and especially those who tend to sponsor more CEP bills. Even though such a situation could be an effect of progressively-minded sponsors more aggressively pursuing progressive CEP bills, and donor-members of Green-Comm donating to more progressive legislators regardless of them sponsoring progressive bills, it does suggest that the combination of high volume with high intensity strategy with an emphasis on key committees did once represent a significant difference in Dominion's approach, apropos that undertaken by traditional environmental groups. One that until around 2018, tilted the entire CEP process in Dominion's favor regardless of partisanship. Increasingly, however, with the entry of Clean Virginia as a similarly high volume, high intensity donor, it is the overall volume of money entering the CEP ecosystem that appears to matter most. Considering these findings, we suggest that what Thomson (2017) calls the state's 'climate of capitulation' is changing in content if not in form. Big donors, Dominion and Clean Virginia alike, point a proverbial fire hose of donations at legislators, canceling both any residual partisan effect on legislator choices and any residual influence exerted by environmental NGOs acting alone. Combined with tactics relating to specific legislation and overwhelmingly targeting senior legislators, notably committee chairs of the most powerful committees, our findings suggest that even as utility industry preferences continue to overwhelmingly shape climate and energy policy in Virginia, what increasingly matters for CEP outcomes in the state is the sheer volume of oligarchic money entering the CEP ecosystem.

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