

Testimony of: Solomon Freilich, on behalf of Sunrise Movement Cleveland
To: Ohio Redistricting Commission
August 27, 2021 University of Akron

Fair Districts for Justice and Peace

Solomon Freilich is a 28-year-old climate change activist, nature photographer, and member of Sunrise Movement Cleveland. Sunrise Movement Cleveland is part of the Sunrise Movement, a youth-led movement to stop climate change and create millions of good-paying jobs in the process.

The recently-released Intergovernmental Panel on Climate Change (IPCC) report tells governments that the only way to avoid the worst-case scenario for global heating is by ending fossil fuel extraction, dramatically reducing methane emissions, quadrupling solar and wind capacity, and tripling renewable energy investments, all by 2030 (Atmos, 2021). “More than six in 10 (63%) Ohio voters support government action to address climate change” (Yale Program on Climate Communication, 2019). More than six in 10 Ohio voters believe expanding renewable energy should be Ohio’s number one energy priority! (Yale, 2019). However, in 2019, the Ohio legislature passed HB 6, making Ohio a leader among governments that are supercharging the climate crisis instead of ending it. “On July 21st, 2020, the FBI unveiled charges against the former speaker [of the Ohio House, Larry Householder,] and four political operatives for racketeering and bribery related to the passage of HB 6, and the effort to block citizens’ access to the ballot [ensuring a referendum to repeal HB 6 would fail]” (133rd Ohio General Assembly Scorecard, Ohio Environmental Council Action Fund, 2021). “According to federal prosecutors, the scandal was ‘likely the largest bribery, money laundering scheme ever perpetrated against the people of the state of Ohio’” (Ohio Environmental Council, 2021). A majority of Ohio voters oppose HB 6 (Yale, 2019).

We know that every political decision not only determines the conditions of our day-to-day reality, but whether we will have a livable future on a planet that’s already in peril. For too long, Ohio’s elected leaders have stolen from us our power to choose who best represents us. We do not have a representative democracy without that power. The Republican Party’s leaders have gerrymandered their way out of having to prove themselves capable to voters. They know they only have to prove themselves capable of taking extreme positions, like denying climate change, lest they lose elections to challengers from their own party.

There is proof that, in the last 8 years, as well as in the last 39, Ohio has been gerrymandered. There are statistical techniques for demonstrating the probability that a legislative district map was drawn to gerrymander a state or nation. The Princeton Gerrymandering Project, among others, uses these techniques, but it didn’t invent them. Some of the techniques that test for unequal opportunity, that are now applied to testing for gerrymandering, were invented in the 19th and early 20th centuries, such as “consistent advantage” i.e. “mean-median” (1895) and “t-test” i.e. “lopsided wins” (1908). It seems that what scientists and engineers accomplished in the second half of the 19th century and first half of the 20th century—like experimentally demonstrating the greenhouse effect (1859), suggesting a link between carbon dioxide levels

and temperature (1896), and suggesting that burning coal will, through the emitting of carbon dioxide, cause the atmosphere to heat up (1912)—could benefit us all, if only we could see it.

“In Ohio's 2012 election, Republicans won their districts with an average of 61.3% of the vote, and Democrats won their districts with an average of 69.2% of the vote. The difference between the two parties' win margins provides evidence that Ohio may be gerrymandered to gain an advantage for Republicans. The chance that this difference would have arisen by nonpartisan processes alone is 0.0000 (or 1 in 179903)” (Princeton Gerrymandering Project).

“In Ohio in 2018, the median Democratic vote share was 41.7%, the average Democratic vote share was 47.7%, and the difference was 6.0%. This difference provides evidence that Ohio may be gerrymandered to gain an advantage for Republicans. The chance that this difference would have arisen by nonpartisan processes alone is 0.0000 (or 1 in 212105)” (Princeton Gerrymandering Project).

Article XI, Section 6 of the Ohio Constitution states:

“The Ohio redistricting commission shall attempt to draw a general assembly district plan that meets all of the following standards:

(A) No general assembly district plan shall be drawn primarily to favor or disfavor a political party.

(B) The statewide proportion of districts whose voters, based on statewide state and federal partisan general election results during the last ten years, favor each political party shall correspond closely to the statewide preferences of the voters of Ohio.

(C) General assembly districts shall be compact.”

I looked at the current general assembly district maps and it seemed to me that at least six house districts and six senate districts were not particularly compact. They are as follows: House Districts 57, 70, 72, 78, 81, and 91, and Senate Districts 2, 19, 20, 26, 27, and 30.

There are also statistical methods for determining compactness, and these can be applied to individual districts. I obtained these calculations for every current district of the Ohio general assembly, courtesy of Azavea, a geospatial benefit corporation. One method is called Polsby-Popper, which calculates the ratio of the area of the district to the area of a circle whose circumference is equal to the perimeter of the district. A value of 0 is the least compact. A value of 1 is the most compact. House Districts 78, 72, 57, 70, 81, and 91 have Polsby-Popper values of 0.16, 0.17, 0.20, 0.20, 0.29, and 0.33, respectively. The 10 most-compact Ohio House districts, based on this measure, all have Polsby-Popper values exceeding 0.48 and the highest is 0.78. The lowest value for all Ohio House districts is 0.07. Senate Districts 2, 20, 27, 19, 30, and 26 have Polsby-Popper values of 0.08, 0.19, 0.21, 0.22, 0.22, and 0.32, respectively. The 10 most-compact Ohio Senate districts, based on this measure, all have Polsby-Popper values exceeding 0.27 and the highest is 0.66. The lowest value for all Ohio Senate districts is 0.08.

The representatives of the twelve general assembly districts identified above should release a calendar of the climate emergency, with photos of their smiling faces, alongside descriptions of their contributions, so that Ohioans could see the joy in their faces, as they halt wind and solar development, increase fossil fuel extraction, increase utility rates, encourage fracking on public lands, force communities to build new construction with dangerous gas lines, deregulate all polluting industries, and make voting a lot harder for people who might take issue with their leaders taking 60 million dollars in bribes to block the exit, the one that saves us from more drowning in contaminated water, more breathing in poisonous air, and more toiling in dangerous workplaces for low pay.

133rd General Assembly

In a June 2019 letter to the Ohio Senate Energy & Utilities Committee, Andrea Chu, Regional Organizer with Food & Water Watch, wrote in opposition to HB 6:

“I urge you to oppose House Bill 6. As it stands now, it is a heinous piece of legislation that moves Ohio into the past, rather than the future. While other states like Illinois are embracing renewables, Ohio is being peddled a coal and nuclear bailout bill poised as a clean energy bill. HB 6 is misleadingly being called a “clean air” program, but in fact it does nothing for clean air. Instead of supporting real clean energy, it would make Ohioans pay for the inefficiencies of coal and nuclear plants, which are not clean or renewable in the least.

HB 6 would eliminate Ohio’s clean energy and energy efficiency standards, Ohio’s Renewable Portfolio Standard (RPS) and Energy Efficiency Resource Standard (EERS). These standards have saved Ohioans millions of dollars on energy, reduced energy waste and carbon emissions, and have provided many green jobs across the state...

In addition to gutting Ohio's clean energy and energy efficiency standards, HB 6 would bail out old coal and nuclear plants and shift the costs to consumers...

HB6 is two steps back in the wrong direction. We need a real renewable energy plan, one that prioritizes moving off of fossil fuels, making sure Ohio has good paying green jobs, and clean air and water for all...”

We now know that FirstEnergy bribed former Rep. Larry Householder, District 72, and made sure he became Speaker of the House, so that he would get his caucus to pass HB 6 (USA Today Network Ohio Bureau, 2021).

Larry Householder and Rep. Shane Wilkin (District 91) were named to the Ohio Environmental Council (OEC) Action Fund’s 133rd Ohio General Assembly Scorecard’s Polluters section, which contains three other names, all from the Ohio House. In the explanation part of that section, the OEC writes, “These legislators have consistently been a roadblock to improving Ohio’s environment, especially when it comes to moving Ohio into a clean energy future. They falsely pit economic prosperity and environmental protection against one another,

placing corporate polluter interests ahead of Ohioans. Most notably, former Speaker of the House Larry Householder was arrested for racketeering and bribery charges related to the passage of HB 6, and the effort to block the subsequent citizen referendum effort.”

HB 6 supporters (yes votes and co- or primary sponsors), of those representing districts identified above as non-compact:

Former Rep. Larry Householder (72), Rep. Dick Stein (57), Rep. James Hoops (81), Rep. Darrell Kick (70), Rep. Shane Wilkin (91), Sen. Theresa Gavarone (2), Sen. Tim Schaffer (20), Sen. Frank Hoagland (30), Sen. Dave Burke (26), Sen. Andrew Brenner (19)

HB 680, at least as initially conceived, would have made it more inconvenient, more confusing, and more expensive to vote. For further reading, see HB 680 Opponent Testimony to House State and Local Government Committee by Mia Lewis of Common Cause Ohio.

HB 680 supporters, of those representing districts identified above as non-compact:

Larry Householder, Ron Hood, Dick Stein, James Hoops, Darrell Kick, Shane Wilkin

SB 1 would have required that agencies reduce the regulations in the Ohio Administrative Code by 30%. We believe that forcing government to eliminate 30% of governing is outrageous. We note that the Ohio Administrative Code includes regulations against pollution. Ironically, SB 1’s proposed reduction in regulations would take quite a bit of government resources to implement. For further reading, see SB 1 Opponent Testimony to Senate Government Oversight & Reform Committee by Zach Schiller of Policy Matters Ohio.

SB 1 supporters, of those representing districts identified above as non-compact:

Larry Householder, Ron Hood, James Hoops, Dick Stein, Darrell Kick, Shane Wilkin, Sen. Theresa Gavarone, Sen. Tim Schaffer, Sen. Kristina Roegner (27), Sen. Frank Hoagland, Sen. Dave Burke, Sen. Andrew Brenner

HB 7 “creates water quality protection and preservation programs.” (Bill summary, legislature.ohio.gov)

HB 7 opponents, of those representing districts identified above as non-compact:

Ron Hood

HB 798 would have delayed HB 6 provisions, but wouldn’t have repealed HB 6. This doesn’t fix any of the problems caused by HB 6. The only way to do that is to repeal HB 6. For further reading, see HB 798 Opponent Testimony to House Select Committee on Energy Policy and Oversight by Grace Gulczynski of Sunrise Movement Dayton.

HB 798 supporters, of those representing districts identified above as non-compact:

Dick Stein, James Hoops

SB 234 would probably have ended wind energy development in the state, by giving townships the power to prohibit wind farms. For further reading, see SB 34 Opponent Testimony to Senate Energy & Public Utilities Committee by Miranda Leppla of Ohio Environmental Council Action Fund.

SB 234 supporters, of those representing districts identified above as non-compact:

Frank Hoagland, Dave Burke, Andrew Brenner

134th General Assembly

HB 201 is a ban on municipal natural gas bans. It's terrible that Ohioans are being forced to continue using a fossil fuel that is making people ill and exacerbating illnesses, while also making their houses and buildings susceptible to fires. For further reading, see HB 201 Opponent Testimony to House Energy and Natural Resources Committee by Daniel J. Sawmiller of the Natural Resources Defense Council.

HB 201 supporters, of those representing districts identified above as non-compact:

Larry Householder, Dick Stein, Shane Wilkin, Brian Stewart (Ron Hood's successor), Andrew Brenner, Theresa Gavarone, Frank Hoagland, Tim Schaffer, Kirstina Roegner, Darrell Kick

SB 52 would give locals the power to prohibit new solar or wind projects in their communities, despite the fact that they already had the ability to make their voices heard through a board that does not always rule in favor of new solar and wind projects and against locals' objections. No such local veto power exists for dirty energy projects. For further reading, see SB 52 Opponent Testimony to Senate Energy and Public Utilities Committee by Dave Simons of the Ohio Chapter of the Sierra Club Energy Committee.

SB 52 supporters, of those representing districts identified above as non-compact:

Andrew Brenner, Tim Schaffer, James Hoops, Kevin D. Miller (Larry Householder's successor), Shane Wilkin, Kristina Roegner, Theresa Gavarone, Dick Stein

Redistricting, if abused, threatens to destroy the foundation of democracy, the power of the people to choose their leaders and advance their principles. Can the people choose leaders who are able to put those principles into action? It depends on whether those leaders can govern based on those principles. It depends on to whom those leaders will listen: a powerful donor class or the people. We are faced with a climate emergency that we must act on today, but instead of adopting this mantle, our leaders are choosing to take actions with lifelong negative consequences for us all! Why? How can we ensure that the people's voice can echo through the halls of power? How can this commission ensure that, when the people send leaders to Columbus to fight for them, these leaders don't fight for donors and extremists instead? How can this commission ensure that, when the

people send leaders to Columbus to deliver justice—to keep fossil fuels in the ground, to end lead pollution, to hold corporations accountable for violations of our ecological rights, to hold police accountable for brutality against Black people, to protect workers’ rights, to give land back to indigenous Earth protectors, to end utility shut-offs, to stop evictions, to house the unhoused, to guarantee free healthcare to every resident, to create hundreds of thousands of jobs that don’t annihilate the planet, and to stop every threatened infringement on each citizen’s right to vote,—those leaders don’t build walls blocking every path to justice, instead?

We think this commission, starting today, can lay the groundwork for achieving these goals. They should follow the new constitutional requirements without any intent to retain or gain partisan advantage. They should make districts a lot more compact than they are in the current map. They should draw maps in such a way that the statewide preferences for political parties of Ohio voters should be fully apparent from who occupies the Ohio Statehouse. They should draw maps in such a way that elections for Ohio House and Ohio Senate seats can be competitive once again—in general elections, not *only primaries*. Voters—not FirstEnergy, and not legislators who don’t care what Ohioans think—need to be in charge of Ohio, so they can set a course for a future of justice and peace.

“Don't want to cause no sorrow
Don't want to cause no pain
I'm only gonna cause what I have to cause
Until this land is free of shame
'til this land is free of shame
So I'm a-gonna do what I have to do
Say what I have to say
And I'm gonna be what I have to be
Now won't you come on along with me?
Won't you come along with me?”

– From the song “Do What I Have To Do” by Phil Ochs

Appendix A: Compactness Measures

Common Compactness Measures Calculated for the Ohio House Districts Highlighted in this Testimony

District	Polsby-Popper	Schwartzberg	Area/Convex Hull	Reock
State House District 78	0.1590482708	0.3988085641	0.617973538	0.3309003819
State House District 72	0.1683525671	0.410307893	0.5288538613	0.3361914355
State House District 57	0.1950214374	0.4416123158	0.604002367	0.299136084
State House District 70	0.1991958185	0.4463135876	0.5079181117	0.2605835811
State House District 81	0.2903058152	0.5388003482	0.635065194	0.3399839506
State House District 91	0.3294599969	0.5739860598	0.7547193973	0.3455336335

Common Compactness Measures Calculated for the Ohio Senate Districts Highlighted in this Testimony

District	Polsby-Popper	Schwartzberg	Area/Convex Hull	Reock
State Senate District 2	0.08439536033	0.2905087956	0.4983118599	0.1883561556
State Senate District 20	0.1924315358	0.4386701903	0.685170626	0.3419838944
State Senate District 27	0.2090953513	0.4572694516	0.6681127376	0.3092917407
State Senate District 19	0.218094477	0.467005864	0.6377920675	0.3496543931
State Senate District 30	0.218765277	0.4677235049	0.6314302972	0.2613824684
State Senate District 26	0.3229569998	0.568293058	0.8020932238	0.3633732634

Appendix B: PlanScore Analysis

Everything in this appendix is a word-for-word quote from PlanScore's Ohio pages.

Ohio Senate

2012-2020 Redistricting Plan

2020

Efficiency Gap (R)

+9% Republican

Votes for Republican candidates were inefficient at a rate 9.4% lower than votes for Democratic candidates.

How Does This Plan Compare?

This plan is more skewed than 81% of the enacted plans we have analyzed nationwide.

Partisan Bias (R)

+14% Republican

Republicans would win 13.6% extra seats in a hypothetical, perfectly tied election.

How Does This Plan Compare?

This plan is more skewed than 97% of the enacted plans we have analyzed nationwide.

Mean-Median (R)

+5% Republican

The median Republican vote share was 5.3% higher than the mean Republican vote share.

How Does This Plan Compare?

This plan is more skewed than 89% of the enacted plans we have analyzed nationwide.

Declination (R)

+0.62 Republican

The Democratic mean vote share in districts they won was higher than the Republican mean vote share in districts they won.

How Does This Plan Compare?

This plan is more skewed than 91% of the enacted plans we have analyzed nationwide.

Efficiency Gap (R)

+5% Republican

Votes for Republican candidates were inefficient at a rate 4.8% lower than votes for Democratic candidates.

How Does This Plan Compare?

This plan is more skewed than 53% of the enacted plans we have analyzed nationwide.

Partisan Bias (R)

+6% Republican

Republicans would win 6.4% extra seats in a hypothetical, perfectly tied election.

How Does This Plan Compare?

This plan is more skewed than 66% of the enacted plans we have analyzed nationwide.

Mean-Median (R)

+3% Republican

The median Republican vote share was 2.9% higher than the mean Republican vote share.

How Does This Plan Compare?

This plan is more skewed than 66% of the enacted plans we have analyzed nationwide.

Declination (R)

+0.3 Republican

The Democratic mean vote share in districts they won was higher than the Republican mean vote share in districts they won.

How Does This Plan Compare?

This plan is more skewed than 65% of the enacted plans we have analyzed nationwide.

Efficiency Gap (R)

+6% Republican

Votes for Republican candidates were inefficient at a rate 5.8% lower than votes for Democratic candidates.

How Does This Plan Compare?

This plan is more skewed than 61% of the enacted plans we have analyzed nationwide.

Partisan Bias (R)

+11% Republican

Republicans would win 11.2% extra seats in a hypothetical, perfectly tied election.

How Does This Plan Compare?

This plan is more skewed than 94% of the enacted plans we have analyzed nationwide.

Mean-Median (R)

+6% Republican

The median Republican vote share was 5.9% higher than the mean Republican vote share.

How Does This Plan Compare?

This plan is more skewed than 94% of the enacted plans we have analyzed nationwide.

Declination (R)

+0.49 Republican

The Democratic mean vote share in districts they won was higher than the Republican mean vote share in districts they won.

How Does This Plan Compare?

This plan is more skewed than 81% of the enacted plans we have analyzed nationwide.

Efficiency Gap

+4% Democratic

This metric indicates a balanced plan. Votes for Democratic candidates were inefficient at a rate 3.5% lower than votes for Republican candidates.

How Does This Plan Compare?

No consistent skew was found in favor of either party. This plan is more skewed than 39% of the enacted plans we have analyzed nationwide.

Partisan Bias (D)

+5% Democratic

Democrats would win 5.2% extra seats in a hypothetical, perfectly tied election.

How Does This Plan Compare?

This plan is more skewed than 58% of the enacted plans we have analyzed nationwide.

Mean-Median (D)

+4% Democratic

The median Democratic vote share was 3.9% higher than the mean Democratic vote share.

How Does This Plan Compare?

This plan is more skewed than 75% of the enacted plans we have analyzed nationwide.

Declination

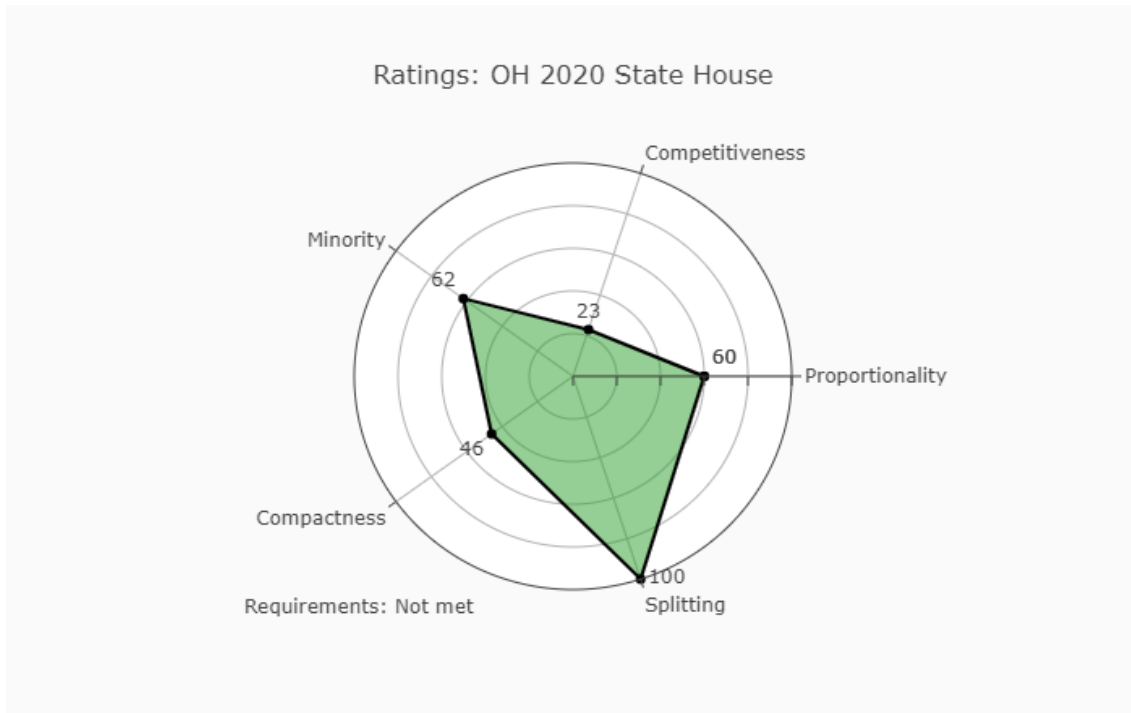
+0.15 Democratic

This metric indicates a balanced plan. The Republican mean vote share in districts they won was higher than the Democratic mean vote share in districts they won.

How Does This Plan Compare?

No consistent skew was found in favor of either party. This plan is more skewed than 35% of the enacted plans we have analyzed nationwide.

Appendix C: Dave's Redistricting (davesredistricting.org) Selected Analysis



Requirements i

Redistricting maps must typically satisfy four constraints.

Check		Description
• Complete	✓	All precincts are assigned to districts
• Contiguous	✓	All precincts in districts are connected
• Free of holes	✓	No districts are embedded in others
• Equal population	✗	Districts have roughly equal populations

Rating

- This map may not meet basic requirements.

Notes

- Several water-only precincts are unassigned including: 39093ZZZZZZ, 39007ZZZZZZ, 39035ZZZZZZ, and 39085ZZZZZZ.
- The 34.21% population deviation is greater than the 10% threshold tolerated by the courts.
- For more information on redistricting in Ohio, see Brennan Center for Justice: [Ohio Guide to Redistricting](#), Princeton Gerrymandering Project: [Ohio Redistricting Reform](#), and Ballotpedia: [Redistricting in Ohio](#).

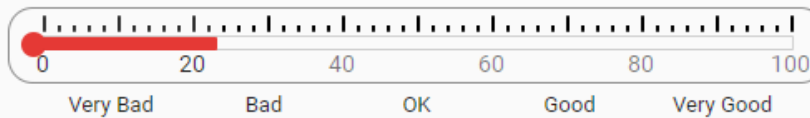
Competitiveness



All else equal, prefer maps that are more competitive.

Metric	Description
• Competitiveness	17.36% The percentage of competitive districts. Bigger is better.

Rating



Notes

- Unlike the partisan lean note in district Statistics that simply counts the number of districts in the 45–55% range, this competitiveness metric uses a probability distribution with the tails approaching zero at 40% and 60%. Hence, an ideally competitive set of districts has a ~75% competitiveness.

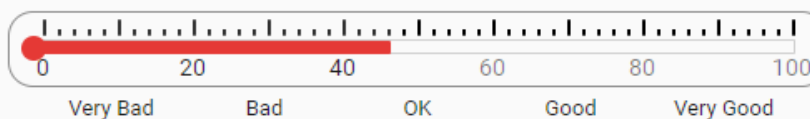
Compactness



All else equal, prefer maps with districts that are more compact.

Metric	Description
• Reock	0.3645 Measures how dispersed district shapes are. Bigger is better.
• Polsby-Popper	0.2798 Measures how indented district shapes are. Bigger is better.

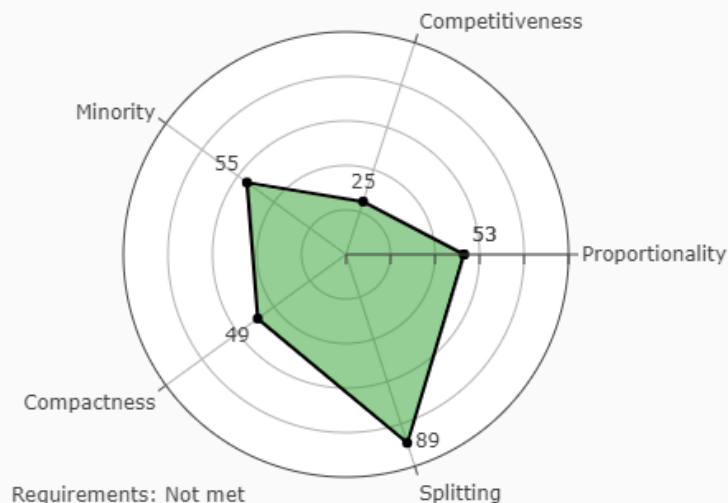
Rating



Notes

- In contrast, using a common "know it when you see it" understanding of compactness (KIWYSI), people intuitively judge the compactness of these districts to be 46 of 100. See [How to Measure Legislative District Compactness If You Only Know it When You See It](#) for details.
- Compact districts aren't always fair. To the extent that a state's political geography has a significant urban-rural political divide, maps with more compact districts tend to be less proportional, and maps that are more proportional tend to have less compact districts.

Ratings: OH 2020 State Senate



Requirements



Redistricting maps must typically satisfy four constraints.

Check		Description
• Complete	✓	All precincts are assigned to districts
• Contiguous	✓	All precincts in districts are connected
• Free of holes	✓	No districts are embedded in others
• Equal population	✗	Districts have roughly equal populations

Rating

- This map may not meet basic requirements.

Notes

- Several water-only precincts are unassigned including: 39093ZZZZZZ, 39007ZZZZZZ, 39035ZZZZZZ, and 39085ZZZZZZ.
- The 25.26% population deviation is greater than the 10% threshold tolerated by the courts.
- For more information on redistricting in Ohio, see Brennan Center for Justice: [Ohio Guide to Redistricting](#), Princeton Gerrymandering Project: [Ohio Redistricting Reform](#), and Ballotpedia: [Redistricting in Ohio](#).

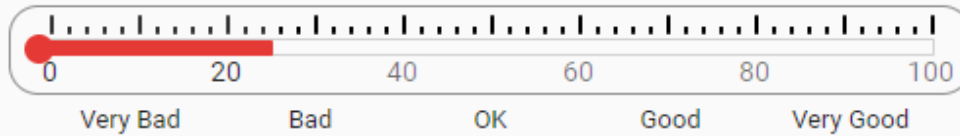
Competitiveness



All else equal, prefer maps that are more competitive.

Metric	Description
• Competitiveness	18.68% The percentage of competitive districts. Bigger is better.

Rating



Notes

- Unlike the partisan lean note in district Statistics that simply counts the number of districts in the 45–55% range, this competitiveness metric uses a probability distribution with the tails approaching zero at 40% and 60%. Hence, an ideally competitive set of districts has a ~75% competitiveness.

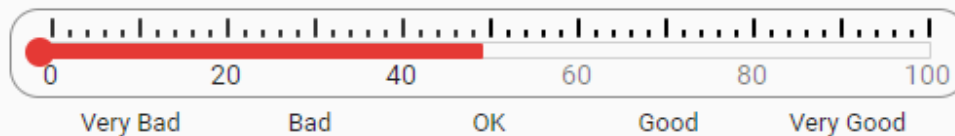
Compactness



All else equal, prefer maps with districts that are more compact.

Metric		Description
• Reock	0.3843	Measures how dispersed district shapes are. Bigger is better.
• Polsby-Popper	0.2725	Measures how indented district shapes are. Bigger is better.

Rating



Notes

- In contrast, using a common "know it when you see it" understanding of compactness (KIWYSI), people intuitively judge the compactness of these districts to be 45 of 100. See [How to Measure Legislative District Compactness If You Only Know it When You See It](#) for details.
- Compact districts aren't always fair. To the extent that a state's political geography has a significant urban-rural political divide, maps with more compact districts tend to be less proportional, and maps that are more proportional tend to have less compact districts.

Everything in this appendix is a screenshot of Dave's Redistricting, so all sentences are attributable to Dave's Redistricting.

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