State Responses to Net Neutrality

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[19–03]

Acknowledgments

The author wishes to thank Commissioner emeritus **Travis Kavulla**
Elin Katz, Connecticut Consumer Counsel and President of NASUCA
Jon Banks, formerly of US Telecomm
Timothy Karr of Free Press
Cynthia G. Wilson-Frias, Deputy Chief of Legal Services for the Rhode Island Public Utilities Commission
Adam Bender, Communications Daily
Dr. Victor Glass, Rutgers University
Kenneth Mallory, Esq., Legislative Affairs Counsel at NARUC
Marianne Townsend and **Jason Well**, Public Utilities Commission of Ohio
Dr. Carl Pechman, National Regulatory Research Institute
and my indefatigable colleague, **Dr. Sherry Lichtenberg**, for her guidance and feedback throughout the writing process.

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List of Acronyms Used

AG Attorney General
BIAS Broadband Internet Access Service
CAF Consumer Access Funds
CPCN Certificates of Public Convenience and Necessity
EO Executive Order
FCC Federal Communications Commission
FTC Federal Trade Commission
ICA Internet Consumer Access
ISP Internet Service Provider
Mbps Megabits per second
NN Net Neutrality
PSC Public Service Commission
PUC Public Utility Commission
RIF Restoring Internet Freedom

I. State Actions in Support of Net Neutrality

Executive Summary

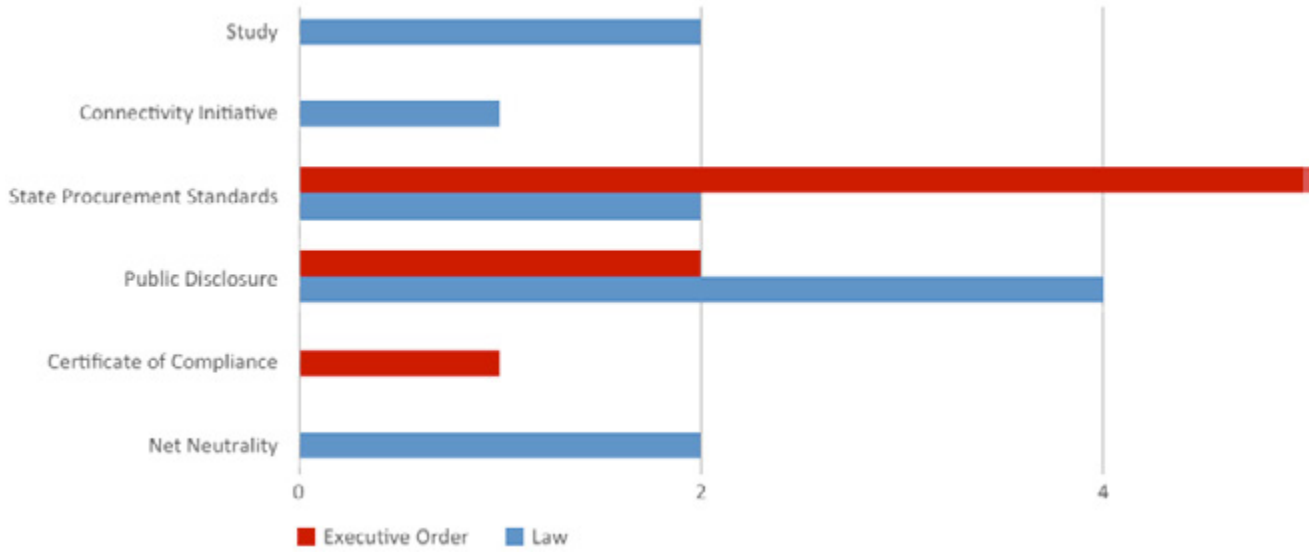
The Federal Communications Commission's (FCC) *Restoring Internet Freedom (RIF)* order was released in December 2017 and published in the Federal Register on February 22, 2018. The order redefines Broadband Internet Access Service (BIAS) as an information service, regulated under Title I of the Telecommunications Act, rescinds the Commission's 2015 *Open Internet* order to oversee Internet Service Providers[1] (ISPs) under Title II of the Act, and removes FCC oversight of net neutrality rules. State responses to the *RIF* order were immediate, although approaches have varied.

Thirty-six states have proposed or passed a resolution, bill, or executive order since the *RIF* order took effect. Six states (Hawaii, Montana, New Jersey, New York, Rhode Island, and Vermont) have addressed this change by issuing executive orders requiring, among other things, companies wishing to contract with state agencies to adhere to net neutrality rules. Thirty states have proposed legislation reinstating net neutrality rules or requiring state contractors to abide by them. Ten additional states initiated resolutions supporting net neutrality principles.

As of December 2018, nine states have implemented some form of protection for net neutrality (see **Figure 4**). This includes six executive orders, four laws, and one resolution. A review of bills that were introduced, and then died in committee at the end of legislative sessions, is a testament to the public interest in this topic. Thirty-five bills and resolutions did not pass because they were voted down, withdrawn by the sponsor, or died in committee. Although the number of successful outcomes is low relative to the number of proposed actions (25 percent of states have successfully implemented net neutrality proposals), the considerable number of states that have proposed legislation points to states' interest in this issue. Approximately 70 percent of states (including Washington, D.C.) have initiated some type of action to support net neutrality, although many bills died in committee. Current 2019 state legislative sessions have been similarly fruitful—22 states have proposed net neutrality actions in current legislative sessions.

For states that enacted net neutrality executive orders or laws, several patterns emerged. The most common type of policy mechanism used by states are state procurement standards, which most typically appear as a policy element in executive orders. Public disclosure mechanisms are the second most popular type of net neutrality protection and are usually found in net neutrality state laws. Studies for future actions and legislation enforcing

Figure 1: Number of State-Enacted Net Neutrality Policies in 2018



1 This order applied only to providers of BIAS and not edge providers, such as Microsoft or Facebook.

the FCC's 2015 bright line rules are also relatively common mechanisms for states to include in net neutrality laws. A review of policy mechanisms implemented in state net neutrality executive orders and laws follows.

Proposed state legislation and executive orders on net neutrality have tasked public utility commissions (PUCs) with different types of enforcement roles. Seventeen states proposed laws or passed executive orders that charge state PUCs with some form of net neutrality enforcement. Four states (New York, Oregon, Rhode Island, and Washington) have active laws or executive orders that require some type of enforcement actions from state PUCs. These PUC enforcement actions have taken three different approaches, requiring PUCs to: 1) evaluate and advise; 2) prescribe rules for implementation; or 3) provide notice to affected parties.

Although four states have passed laws enforcing net neutrality rules, ongoing legal challenges have slowed enforcement. California reached an agreement with the Department of Justice (DOJ) to delay implementation of its net neutrality law until the federal lawsuit is resolved, which could take years (Finley, 2018). Vermont reached a similar agreement to halt enforcement of its net neutrality law and executive order until the federal appeals court reaches a decision about the validity of the FCC's 2017 *RIF* order (Davis, 2019).

State legislative sessions in 2018 produced the first crop of legislation targeting the protection of net neutrality at the state level. Despite some state successes, many bills providing novel approaches to protecting net neutrality principles died in committee at the end of state sessions. Although these bills have no legal authority, they do represent potential roadmaps for future state actions in support of net neutrality.

While state legislators and attorneys general have led the development and implementation of net neutrality protections at the state level in the wake of the FCC's decision not to enforce net neutrality rules, state-level enforcement presents several challenges. Primarily, state-level enforcement of net neutrality creates a patchwork of regulation. For ISPs operating in multiple states, this increases the level of complexity associated with adhering to non-uniform local regulations and creates additional transaction costs for these businesses.

Additional information on states' actions on net neutrality, can be found in the appendix or online using NRRI's net neutrality tracker, at http://nrri.org/net-neutrality-tracker/.

II. Purpose of this Report

The growth of the internet over the past 30 years has been phenomenal. In 2000, about half of all American adults used the Internet, whereas today, that number has grown to roughly nine out of ten American adults (Pew Interest, 2018). Americans use the Internet for a variety of purposes, including commerce, education, accessing state and federal resources, connecting with friends and family, and paying bills. Growth in Internet usage has caused U.S. regulators to find unique solutions to previously unconsidered challenges that have cropped up out of this boom industry. This challenge can be seen in the shifting landscape of net neutrality regulation over the past two decades.

With this in mind, NRRI has set out to capture a snapshot of a unique regulatory environment that will continue to grow and shift. When NRRI began tracking state actions on net neutrality in early 2018, the question was: How will state actions on net neutrality impact state PUCs? The purpose of this report is to document the many unique approaches that states have adopted to protect net neutrality at the state level after federal net neutrality protections were removed with the *RIF* order of 2018.

NRRI developed the Net Neutrality State Action Tracker for the 2018 session of state legislatures and has documented the proposed, passed, and failed actions related to net neutrality. This report presents proposed and passed laws, executive orders, and PUC rules and dockets that relate to net neutrality policies as a means of providing a final snapshot of the net neutrality tracker's review of 2018. The 50 states and the District of Columbia are 51 unique policy laboratories, and the topic of net neutrality provides no exception. This tracker presents the many different proposed approaches to net neutrality. Although there is still potential for a federal-level resolution on this topic in the form of U.S. Congressional legislative action or a Supreme Court decision, this report attempts to capture a unique chapter in the regulatory history of Internet regulation currently taking place at the state level.

Neither the author nor the National Regulatory Research Institute promotes a particular policy position relating to net neutrality. The purpose of this document is to provide an overview of net neutrality policies that have been proposed for the benefit of future policymakers considering the issue.

III. Context

The United States has a history of supporting the free flow of information in the form of common carriage principles that ensure that companies do not discriminate in the way they transport goods, services, or data. The framework of this legal history helps to shape how policymakers consider the issue of net neutrality today, as the flow of information through the Internet is effectively an issue of how data travels from place to place. An overview of the legislative and regulatory historical context that colors the issue of how regulators approach Internet regulation follows.

A. Legislative and Regulatory Context

Although the topic of net neutrality is relatively new in the telecommunications space, there is a valuable historical precedent that helps contextualize the issue. At the beginning of the electronic communications era, Congress recognized the importance of ensuring that the party controlling the conduit of communications should not be allowed to provide discriminatory access to the medium of information. In 1860, Congress passed the Pacific Telegraph Act. This Act required telegraph companies to carry all traffic without preference to content. Section 3 of the Act mandated that: "messages received from any individual, company, or corporation, or from any telegraph line connecting with this line at either of its termini, shall be impartially transmitted in the order of their reception, excepting that the dispatches of the government shall have priority" (Pacific Telegraph Act, 1860).

The Pacific Telegraph Act, in conjunction with the 1887 passage of the Interstate Commerce Act, shapes our modern regulatory regime. The Interstate Commerce Act, which applied to railroads, mandates a "just and reasonable" standard for rates, and prohibited discrimination in the form of preferential rates for individual shippers, among other provisions (1887 Interstate Commerce Act). This act ensured that railroads transported people and goods in a manner that was agnostic to content, and established a precedent to operate in a "just and reasonable" manner.

One of the next historical milestones was the Communications Act of 1934, which has become a cornerstone statute that shaped information sharing. This act replaced the Federal Radio Commission with the Federal Communications Commission (FCC), which was given oversight of emerging communications technologies, including broadcast television and telephony. It also established categories of oversight that shaped the governance of communications entities. Particularly relevant here is Title II of the Communications Act of 1934. Industries regulated under Title II were required to be neutral in their transportation of data. This act was the first time that the common carriage mandate was applied to data, rather than just people and goods.

With the creation and growth of the Internet came many questions about how telecommunications rules would address newly emerging technologies. To address these issues, the FCC launched its Computer Inquiries in 1966. In its 1980 Computer Inquiry II decision, the Commission established categories for basic services (standard local and long distances services) and enhanced services (protocol conversion, data processing, information retrieval) (FCC, 2017, b.). Under the Computer Inquiry II decision, the Internet (at this time used mostly by academic institutions) was classified as an enhanced service.

In April of 1993, the European Organization for Nuclear Research (CERN) put the World Wide Web into the public domain (Grossman, 2018). This paved the way for a web that anyone with a computer could access. For reference, a 1995 survey conducted by the Pew Research Center, found that 14 percent of adults in the United States had access to the Internet at home, another 42 percent of U. S. adults surveyed had never heard of the Internet, and an additional 21 percent had only a vague idea what it was about (Fox and Lee, 2014).

In 1996, Congress amended the Communications Act of 1934 by passing the Telecommunications Act of 1996. This act promoted a light touch regulatory approach, to "promote competition and reduce regulation" (FCC, 2017, b). Congress delineated between more lightly regulated information services, and more heavily regulated telecommunications services. This act classified Internet services under Title I information services with the stated goal of encouraging the preservation of a competitive free market (FCC, 2017, b).

The Telecommunications Act of 1996 codified a distinction that would later become important: services that rely on the existence of the network (websites) were classified under Title I (information services) and the transmission of those services over the existing telephone network would remain Title II (common carrier). This distinction makes sense because websites do not transport data; they receive requests and respond, and ISPs transport those communications. However, in an attempt to reduce regulatory barriers to entry for both telecommunications and broadband companies, the 1996 Act made a clear distinction between traditional telecommunications and Internet, classifying the latter as an "information service," thereby adopting a light touch regulatory approach.

In the 1998 Stevens Report, the FCC reviewed the 1996 Act's definitions relating to emerging technologies, and determined that Internet access service was appropriately classified as a Title I information service (FCC, 2017, b). Then, in 2002, the FCC officially adopted a declaratory rulemaking process that classified cable modem service as an interstate information service, which does not provide a separate telecommunications service offering, and should, therefore, not be subject to common carrier regulation (FCC, 2002). The FCC cited the following guiding principles and policy goals in this rulemaking:

- Encourage the ubiquitous availability of broadband access to the Internet to all Americans;
- Ensure that broadband services exist in a minimal regulatory environment that promotes investment and innovation; and
- Develop and analytical framework that is consistent, to the extent possible, across multiple platforms (FCC, 2002).

One year after the FCC's Declaratory Ruling on Cable Modem service, Columbia Law School professor Tim Wu coined the term "Network Neutrality" (later shortened to net neutrality) in a 2003 paper, Network Neutrality, Broadband Discrimination. Professor Wu used the phrase "network neutrality" to describe "an Internet that does not favor one application (say, the world wide web), over others (say, email)" (Wu, 2003, p. 145). Wu's network neutrality proposal presented a more regulated vision of ISPs when compared with other evolving schema, and would become a popular approach.

The FCC first recognized the concept of net neutrality formally in 2004. FCC Chair Michael Powell supported the idea that consumers are entitled to Internet freedom, in his "Four Internet Freedoms" speech. These consumer 'freedoms' included:

1. The freedom to access the lawful content of their choice;
2. The freedom to run applications and services of their choice;
3. The freedom to connect their choice of legal devices that do not harm the network; and
4. The freedom to have competition among network, application, and content providers.

In 2005, the FCC unanimously endorsed Chair Powell's four Internet freedoms in the Internet Policy Statement (FCC, 2005). The FCC gave Chair Powell's four Internet freedoms legal force when the FCC fined a DSL provider in North Carolina named Madison River for blocking traffic to and from Vonage (a VoIP provider), and the FCC ordered the company to stop blocking Internet traffic. This action transformed the concept of net neutrality (articulated in Powell's four Internet freedoms) into a legally binding regime.

Figure 2: Examples of Net Neutrality Violations

2005: Madison River
North Carolina ISP provider blocked VOIP service provider Vonage. The FCC sanctioned Madison River.

2005-2007: Comcast blocked P2P technology
In 2005, Comcast began blocking peer-to-peer technologies such as BitTorrent and Gnutella. Investigations by the Associated Press and Electronic Frontier Foundation confirmed that Comcast was blocking or slowing file-sharing applications without customer knowledge.

2007-2009: AT&T
For a period of time, AT&T forced Apple to block Skype and other VOIP phone services on the iPhone.

2011: MetroPCS
In 2011, MetroPCS announced its plan to block video streaming over its 4G network from all sources other than YouTube.

2011-2013: Google Wallet
AT&T Sprint, and Verizon blocked the Google Wallet phone application. This app competed directly with a similar service called Isis which all three companies contributed towards.

2018: Skype throttled on Sprint Network
A smartphone application called "Wehe" tests Internet connections, and identified that Sprint was throttling 34 percent of Skype tests. Skype relies on Sprint's wireless Internet network, but competes with Sprint's calling services (Fortune, 2018).

Also in 2005, the Supreme Court overturned a federal court decision in the FCC v. Brand X case, which would have required cable companies to share their infrastructure with ISPs (FCC, 2017, b). This was a defining court case because it reinforced the FCC's definition of broadband cable as an information service (Title I) and, exempt from telecommunications regulations under Title II of the Telecommunications Act of 1996.

In 2007, Comcast (and later Cox Communications) was caught throttling traffic for users of the BitTorrent protocol. Throttling is an act in which a Broadband Internet Access Service (BIAS) "impairs or degrades lawful Internet traffic on the basis of content, application, or service" (Open Internet order, 2015, p. 284). Although BitTorrent is probably best known as a medium for pirating music and video content, there are legal uses for this information-sharing protocol. In 2008, the FCC ordered Comcast to stop throttling customers, and Comcast appealed this decision. The US Court of Appeals decision determined that the FCC lacked "any statutorily mandated responsibility" to enforce network neutrality rules, according to Judge David Tatel (Comcast Corporation v. FCC, 2010).

In response to the Court of Appeals decision, the FCC, under Chair Julius Genachowski, issued its first Open Internet order in 2010, using its Title I authority (other "auxiliary" legal authorities) to adopt three basic rules:

1. **Transparency.** Fixed and mobile broadband providers must disclose the network management practices, performance characteristics, and terms and conditions of their broadband services;
2. **No blocking.** Fixed broadband providers may not block lawful content, applications, services, or non-harmful devices; mobile broadband providers may not block lawful websites, or block applications that compete with their voice or video telephony services; and
3. **No unreasonable discrimination.** Fixed broadband providers may not unreasonably discriminate in transmitting lawful network traffic (FCC, 2010).

In support of its 2010 order, the FCC also highlighted the economic theory known as the "virtuous circle of innovation." The Commission used this theory to support its claim that encouraging net neutrality would improve broadband network expansion and technology innovation. The FCC's 2010 order explains:

> The Internet's openness…enables a virtuous circle of innovation in which new uses of the network—including new content, applications, services, and devices—lead to increased end-user demand for broadband, which drives network improvements, which in turn lead to further innovative network uses. Novel, improved, or lower-cost offerings introduced by content, application, service, and device providers spur end-user demand and encourage broadband providers to expand their networks and invest in new broadband technologies. (FCC, 2010, pp. 17910-11).

Section 706 of the 1996 Telecommunications Act

The FCC is to "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans"

In 2011, Verizon filed a lawsuit against the FCC, claiming that the FCC had insufficient authority to enforce its new rules. This lawsuit was finally resolved in 2014, when the US Court of Appeals for the DC Circuit vacated portions of the 2010 Open Internet order (no blocking and no unreasonable discrimination), pointing to the FCC's classification of broadband providers under Title I of the Communications Act. The court upheld the FCC's 2010 Transparency rule. The 2014 court decision found that the FCC lacked sufficient authority to enforce net neutrality rules under Title I of the 1996 Telecommunications Act, but suggested that the FCC had the authority to regulate broadband under Title II of the Telecommunications Act of 1996.

After the D.C. Circuit's decision to vacate the no-blocking and no-unreasonable-discrimination rules, FCC Chair Tom Wheeler made another attempt to address net neutrality through rulemaking. When the FCC once again began the rulemaking process for a new net neutrality rule, the FCC first proposed two possible legal frameworks in its Notice of Inquiry for classifying and regulating broadband:

1. Relying on section 706 of the 1996 Act to adopt enforceable rules using the D.C. Circuit's "roadmap," or
2. Reclassifying broadband service under Title II (FCC, 2014).

In November of 2014, President Barack Obama made an open request that the FCC "reclassify consumer broadband service under Title II of the Telecommunications Act" (Obama, 2014). The FCC consequently adopted President Obama's proposed net neutrality rule framework. These rules cite the FCC's broader authority under Title II of the Telecommunications Act which gives the Commission the power to regulate anyone who offers "telecommunication services" for a fee, and on such services, the FCC is empowered to ban both "unjust" and "unreasonable" discrimination (FCC, 2015).

The FCC's 2015 rulemaking garnered outspoken public support—receiving 800,959 public comments on the proposed rulemaking docket, of which less than 1 percent of comments "were clearly opposed to net neutrality" (Lanon and Pendleton, 2014). The 2015 order also highlights the virtuous cycle argument, stating: "[t]he key insight of the virtuous cycle is that broadband providers have both the incentive and the ability to act as gatekeepers standing between edge providers and consumers. As gatekeepers, they can block access altogether; they can target competitors, including competitors in their own video services; and they can extract unfair tolls" (FCC, 2015, para. 20). Unlike earlier attempts to protect net neutrality, the 2015 Open Internet order withstood a legal challenge—the Court of Appeals for the D. C. Circuit upheld the FCC's Open Internet order in 2016.

Figure 3: Restoring Internet Freedom Order (2017)

- Restores the classification of broadband Internet access service as an "information service" under Title I of the Communications Act.
- Reinstates the classification of mobile broadband Internet access service as a private mobile service.
- Finds that the regulatory uncertainty created by utility-style Title II regulation has reduced Internet service provider (ISP) investment in networks, particularly among small ISPs serving rural consumers.
- Restores broadband consumer protection authority to the Federal Trade Commission (FTC), enabling it to apply its extensive expertise to provide uniform online protections against unfair, deceptive, and anticompetitive practices.

In December of 2017, the FCC, under Chair Ajit Pai, issued the *Restoring Internet Freedom* order, which reversed the 2015 Open Internet order, effective June 11, 2018. The order concluded that the 2015 net neutrality rule caused regulated ISPs to reduce investment in high-speed networks, slowing broadband deployment, and pointed to research (from the Information Technology and Innovation Foundation) that suggests a 5.6 percent decrease in broadband network investment in in 2015 and 2016 relative to 2013 and 2014 data[2] (Brake, 2017).

According to Chair Pai, the *Restoring Internet Freedom* order "provides a framework for protecting an open Internet while paving the way for better, faster, and cheaper Internet access for consumers" (FCC, 2017, a). The FCC's *RIF* order eliminates the FCC's 2015 bright line rules and restores broadband consumer protection authority to the Federal Trade Commission, which is tasked with consumer protection.[3]

In February of 2018, the first legal challenge to the *RIF* order emerged—the New York Attorney General coordinated with 22 states and the District of Columbia to petition for a review the FCC's *Restoring Internet Freedom* order. The case sought to vacate the FCC vote to repeal net neutrality, and is still pending as of this publication. For additional information on ongoing legal actions related net neutrality, see Section III on state responses.

B. NARUC on Net Neutrality, a State Regulatory Perspective

The National Association of Regulatory Utility Commissioners (NARUC) has supported policies to promote an open Internet since 2002, endorsing "access to the [I]nternet that is unrestricted as to viewpoint and that is provided without unreasonable discrimination as to lawful choice of content" (NARUC, 2017). NARUC's 2010 Resolution on Open Access to the Internet encouraged the FCC and/or Congress "to strive to be technologically neutral as possible, continue to give providers incentive for innovation and a fair return on their invest-

2 Not everyone agrees on the figures, for a counterargument on broadband infrastructure investment, see https://www.freepress.net/sites/default/files/2018-06/internet-access-and-online-video-markets-are-thriving-in-title-II-era.pdf.

3 The FTC differs from the FCC in that it cannot proactively enforce net neutrality rules, but must act in response to consumer complaints.

ment, without jeopardizing the goals of ensuring that all consumers have access to and use of affordable and reliable broadband services" (NARUC, 2010).

Most recently, NARUC and the City and County of San Francisco submitted a Joint Statement of Issues in the ongoing Mozilla v. FCC case in the U.S. Court of Appeals for the D.C. Circuit (the combined lawsuit that includes the state attorneys general suit). In this statement, the parties highlighted the following issues:

1. Whether the Order's preemption of state authority to enact net neutrality protections is inconsistent with the plain text of the statute, arbitrary and capricious, beyond the FCC's jurisdiction, not supported by substantial record evidence, an abuse of discretion, or otherwise not in accordance with the law?
2. Whether the FCC violated the notice and comment requirements of the Administrative Procedure Act by failing to provide adequate notice that the FCC was contemplating preemption?
3. Whether the Order's reclassification of Internet services is inconsistent with the plain text of the statute, arbitrary and capricious, beyond the FCC's jurisdiction, not supported by substantial record evidence, an abuse of discretion or otherwise not in accordance with the law?
4. Whether the Order's elimination of the open Internet rules is arbitrary and capricious, beyond the FCC's jurisdiction, not supported by substantial record evidence, an abuse of discretion or otherwise not in accordance with the law?
5. Whether the FCC failed to provide the "reasoned analysis" required by FCC v. Fox Television Stations, Inc., 556 U.S. 502, 514, 515 (2009) for an agency to reverse course?

IV. The State Response

The FCC *Restoring Internet Freedom* order was released in December 2017 and published in the Federal Register on February 22, 2018. States quickly responded to the FCC's *Restoring Internet Freedom* order by issuing executive orders and proposing resolutions and bills. In 2018, 36 states took some action to support net neutrality protection at the state level by either proposing a bill or resolution, or enacting an executive order. Additionally, many state attorneys general have joined the Mozilla v. FCC suit, arguing that the FCC did not adhere to the Administrative Procedures Act when it issued the *Restoring Internet Freedom* order (for more information on ongoing legal action, see section 4). An overview of state actions on net neutrality is provided in Figure 4.

Proposed state actions on net neutrality policies were introduced in many regions of the country. The West Coast region instituted the most net neutrality laws in 2018, and another cluster of executive orders on net neutrality were enacted in the northeastern section of the United States.

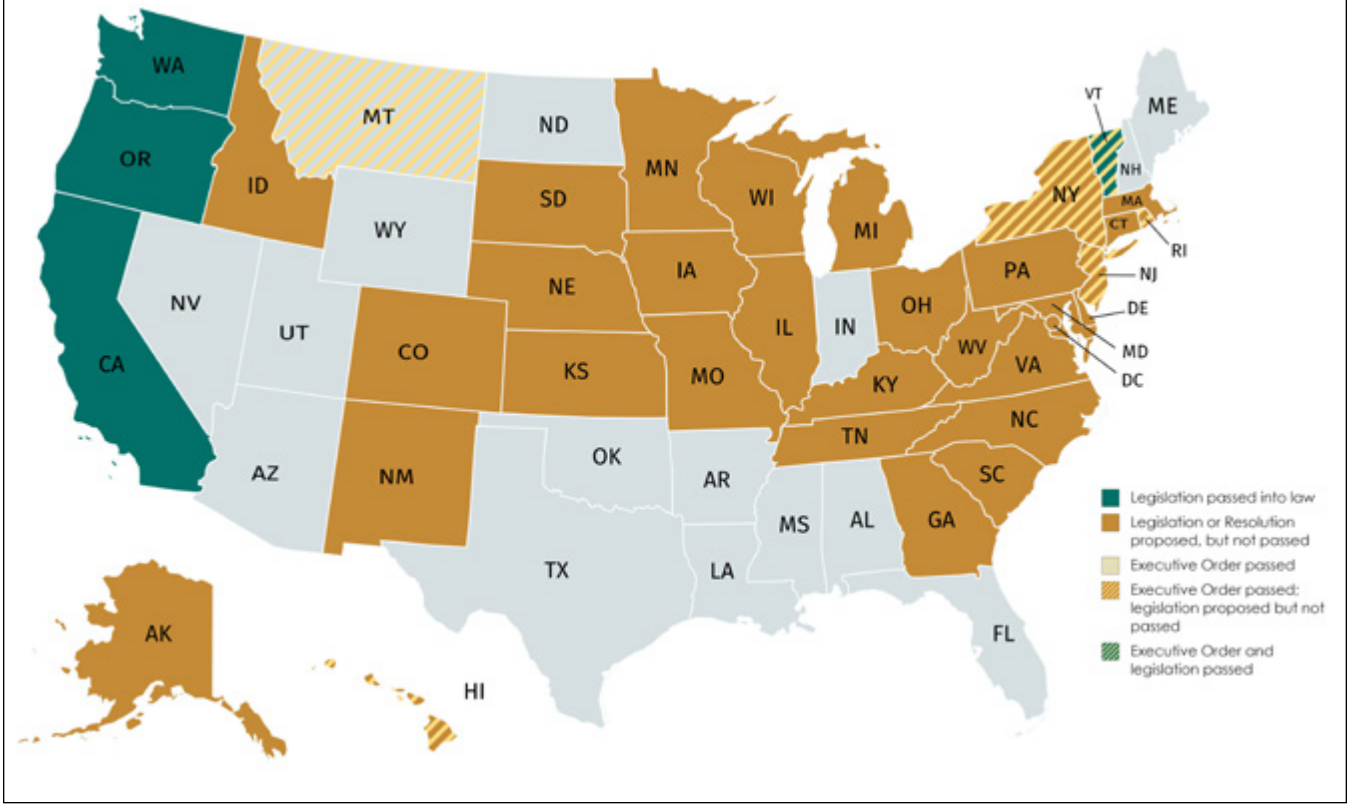
A. Executive Orders on Net Neutrality

Six governors have signed executive orders related to net neutrality (Hawaii, Montana, New Jersey, New York, Rhode Island, and Vermont). These orders uniformly mandate that state contracts be awarded solely to ISPs that adhere to net neutrality principles.

All of the executive orders signed so far have included a description of net neutrality, and although they differ slightly, define net neutrality as no blocking, throttling, or paid prioritization.

Review of the executive orders identified four key features (contracting requirements, public disclosure requirements, emergency clauses, and further evaluation) that some or all governors included in their net neutrality provisions. Table 1 provides an overview of the different provisions of each state's executive order on net neutrality. Executive orders on net neutrality generally included one or more of the following elements.

Figure 4: State Actions on Net Neutrality in 2018



1. **State procurement requirements to adhere to net neutrality principles:** All six state executive orders on net neutrality require state entities to contract only with ISP providers that adhere to net neutrality rules.
2. **Public disclosure requirements:** Public disclosure requirements about network management practices were included in the executive orders on net neutrality for Montana and New Jersey These executive orders require ISPs contracting with state entities to publicly disclose their network management practices. This includes accurate information about cellular data and wireless broadband transport.
3. **Emergency clause:** Two states (Montana and Rhode Island) include emergency clauses that specify that these executive orders do not supersede any "obligation or authorization a provider of broadband Internet access service may have to address the needs of emergency communications of law enforcement, public safety, or national security authorities, consistent with or as permitted by applicable law, or limits the provider's ability to do so" (Montana Executive Order No. 6-2018).
4. **Tasks PUCs with evaluating or providing input on potential actions:** New York and Rhode Island[4]) include provisions in the states' executive orders that request the PUCs to evaluate and advise the governor on other potential actions that could be taken by the state to promote net neutrality.

Table 1: Elements of Net Neutrality Executive Orders

	State procurement requirements	Public disclosure requirements	Emergency clause about public safety	Tasks PUCs with evaluating or providing input
Hawaii	•			
Montana	•	•	•	
New Jersey	•	•		
New York	•			•
Rhode Island	•		•	•
Vermont	•			

Source: Author's construct

B. Legislative Resolutions

State legislative resolutions addressing net neutrality have been proposed in ten states[5], but only passed in one state during the 2018 legislative sessions (California). Generally, these resolutions have encouraged one or more of the following approaches to protecting net neutrality principles:

- Urging the United States Congress to overturn the FCC's RIF order (Alaska, Delaware),
- Urging Congress to intervene to protect net neutrality by codifying its principles in statute (California, passed; Delaware; Illinois; Missouri; Ohio),
- Declaring the strong opposition of the legislative body to the repeal of net neutrality as implemented by the FCC (District of Columbia),

4 Rhode Island has both a Public Utility Commission and a Division of Public Utilities and Carriers. Although two distinct regulatory bodies, the Commission and Division generally operate in concert. This is evidenced by the Division's status as an indispensable party in all Commission proceedings, and the Division's statutory charge to enforce all directives of the Commission. Both entities may conduct inquiries, investigations and hearings to effectuate their respective duties. Both may issue orders that have the force and effect of law (Rhode Island Public Utility Commission [website], http://www.ripuc.org/).

5 Alaska, California, Delaware, District of Columbia, Georgia, Illinois, Michigan, Missouri, New Mexico, and Ohio

- Encouraging the state's agencies to establish policies requiring recipients of state contracts to adhere to Internet neutrality principles (Georgia),
- Urging the state governor to issue an executive order requiring ISPs with state contracts to abide by net neutrality principles (Michigan), and
- Requesting the state's Congressional delegation to encourage a congressional review of the FCC's decision to repeal the net neutrality rule (New Mexico).

Proposed state legislative resolutions have generally not been successful, with the majority of these resolutions dying in committee with the closure of 2018 legislative sessions. California's resolution SR 74 stands as the only state net neutrality resolution passed during 2018 legislative sessions. .

C. Legislative Bills

Four states have passed laws protecting net neutrality principles (California, Oregon, Vermont, and Washington). Twenty-six states introduced bills that have either been voted down or died at the end of legislative sessions. Many state legislatures referred bills to study committees before the end of the 2018 legislative sessions, suggesting the potential for future legislative proposals after these committees have had the opportunity to review current proposals, and have provided additional insight into potential options going forward to their respective committees.

Of the bills that have passed, several approaches have been identified to support net neutrality and associated consumer protection issues. These approaches included procurement standards for ISPs wishing to contract with state agencies, public disclosure of networking practice requirements, and creating task forces to determine future actions. These policies are reviewed in greater detail below.

1. State Procurement Standard

Laws that establish state procurement standards for contracting with state governments operate in much the same way as executive orders that adopted this approach. These laws establish standards for utilities that would like to contract with state entities including: 1) no paid prioritization; 2) no blocking; and 3) no throttling. Most legislation including government procurement standards language also provided clear exceptions. Some examples of exceptions include:

- For significant public interest benefit (Vermont);
- If the ISP is the sole provider of fixed broadband Internet in a geographic location (Oregon);
- If the utility engages in non-competitive practices in the process of addressing unlawful activity (Oregon); or
- If the utility engages in non-competitive practices to support emergency communications, law enforcement, public safety, or national security authorities (Oregon).

2. Disclosure Requirements

All states with net neutrality laws have developed public disclosure requirements, associated with the new rules. Disclosure requirements for ISPs require companies to make information about network management practices publicly available. These requirements vary in the specific information required. States may require the publication of:

- network management practices (Vermont, Washington);
- performance characteristics (Vermont, Washington);
- commercial terms of the provider's broadband Internet access service sufficient for end users to verify that the service it provides does not:
    - engage in paid prioritization (Oregon, Vermont, Washington);
    - block lawful content, applications, services, or non-harmful devices (Oregon, Vermont, Washington);

- impair or degrade lawful Internet traffic (Oregon, Vermont, Washington);
- unreasonably interfere with or unreasonably disadvantage an end user's ability to select, access, and use the broadband Internet access service or lawful Internet content, applications, or services or devices of the end user's choice (Oregon, Vermont); or
- unreasonably interfere with or unreasonably disadvantage an edge provider's[6] ability to make devices or lawful content, applications, or services available to end users (Oregon).

In addition to providing information for consumers, these laws require that disclosures be made publicly available on easily accessible websites.

3. Certificate of Net Neutrality Compliance

Vermont's enforcement of net neutrality has included compliance tracking assistance from the Secretary of Administration. For this purpose, the Vermont state legislature developed a Certificate of Net Neutrality Compliance, which

> shall be granted to Internet Service Providers that receive the Secretary's approval that the ISP does not engage in any anti-competitive practices, and publicly discloses to consumers accurate information regarding network management practices, performance, and commercial terms of its broadband Internet access services sufficient for consumers to make informed decisions (Sect. 2. 3 V.S.A. § 348).

This certification process is then used as a requirement for Vermont's state procurement contracts. Vermont's certification approach is in many ways an outgrowth of similar government contracting policies. However, it is different in that it establishes an enforcement protocol for violations such as engaging in anti-competitive practices.

4. Net Neutrality Requirement

Both California and Washington take a very direct approach to net neutrality by specifying that groups engaged in the provision of broadband must adhere to net neutrality principles. Washington state specifies:

> (2) A person engaged in the provision of broadband internet access service in Washington state, insofar as the person is so engaged, may not: (a) Block lawful content, applications, services, or nonharmful devices, subject to reasonable network management; (b) Impair or degrade lawful internet traffic on the basis of internet content, application, or service, or use of a nonharmful device, subject to reasonable network management; or (c) Engage in paid prioritization. (Title 19 RCW, Sec.1 (2)).

Table 2: Legislative Components of 2018 State Net Neutrality Laws

	Net neutrality rules	Certificate of compliance	Public disclosure	State procurement standards	Connectivity initiatives	Study
California	•		•			
Oregon			•	•		•
Vermont		•	•	•	•	•
Washington	•		•			

*The Attorney General of Vermont shall review the network management practices of ISPs in VT and make a determination (to the extent possible) as to whether the provider's broadband internet access service complies with the open internet rules contained in the FCC's 2015 Open Internet Order. The AG shall disclose these findings on a publicly available, easily accessible website maintained by his or her office

6 An edge provider is considered "any individual or entity that provides an content, application service over the internet, and any individual or entity that provides a device used for accessing any content, application, or service over the internet" (FCC, 2014, p. 67).

California's proposal in SB 822 takes a similar approach, making it unlawful to engage in blocking, impairing, or degrading lawful Internet traffic, or paid prioritization (among other prohibitions).

5. Study with Further Recommendations

Vermont's legislature tasked the Vermont Attorney General and several other stakeholders with submitting findings and recommendations in the form of a report or draft legislation for the Senate Committees on Finance and on Economic Development, Housing and General Affairs, House Committees on Energy and Technology, and on Commerce and Economic Development, reflecting whether and to what extent the state should enact net neutrality rules applicable to Internet service providers offering broadband Internet access service in Vermont (Sec. 8. 9 V.S.A. §2466c).

Among the topics that the legislature identified for consideration by the Attorney General are the following issues:

- The scope and status of federal law related to net neutrality and ISP regulation;
- The scope and status of net neutrality rules proposed or enacted in state and local jurisdictions;
- Methods for and recommendations pertaining to the enforcement of net neutrality requirements;
- The economic impact of federal or state changes to net neutrality policy, including to the extent practicable methods for and recommendations pertaining to tracking broadband investment and deployment in Vermont and otherwise monitoring market conditions in the state;
- The efficacy of requiring all state agency contracts with Internet Service Providers to include net neutrality protections;
- Proposed courses of action that balance the benefits to society that the communications industry brings with actual and potential harms the industry may pose to consumers; and
- Any other factors and considerations the attorney general deems relevant to making recommendations pursuant to this section (Sec. 8. 9 V.S.A. §2466c).

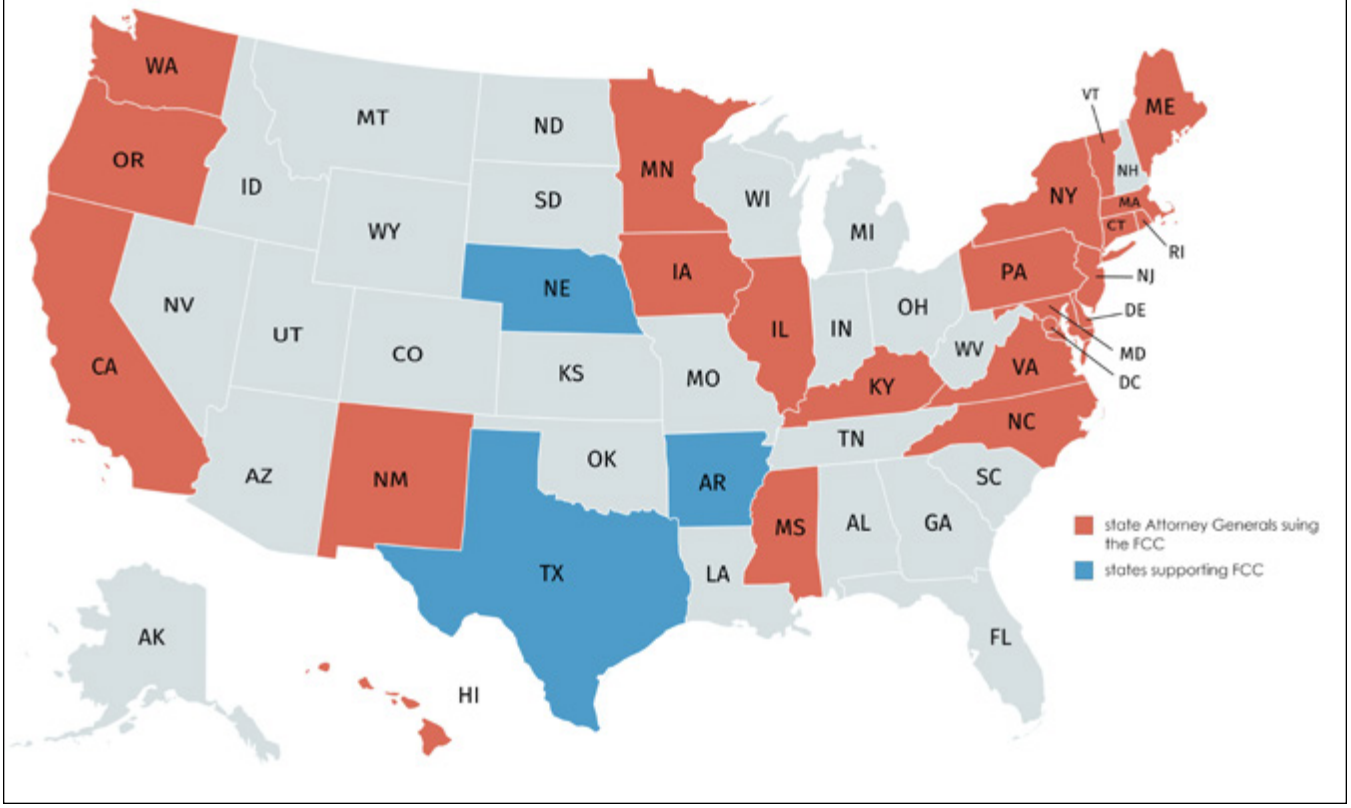
Assigning committees to further study potential remedies is another approach for states that have proposed, but not passed, legislation. Study committees are becoming more common, with two states proposing additional consideration. These study orders generally require a specific legislative committee to investigate prior proposed legislation, and provide recommendations from the study along with recommended draft legislation. As a result of these study orders, it seems plausible that additional legislation will be introduced during 2019 legislative sessions.

In addition to the approaches discussed above, states have proposed a number of novel options for supporting net neutrality efforts in bills that were not passed in 2018 legislative sessions. These novel proposals, which are labeled "promising practices" are highlighted in Section V of this paper.

D. Mozilla v. FCC

States have also challenged the FCC's *RIF* order in the courts. Twenty-two states and the District of Columbia have joined a lawsuit filed by New York's Attorney General. In addition to the suit filed by 22 state attorneys general, 11 other lawsuits were filed by different companies and digital rights groups. These 12 lawsuits have been consolidated with the state attorneys general suit in March of 2018 into one suit that will be heard by the federal appeals court in Mozilla v. FCC. This joint suit seeks a determination by the court that the 2017 *RIF* Order was "arbitrary, capricious, and an abuse of discretion within the meaning of the Administrative Procedure Act" (Protective Petition for Review, Case No. 17-18-1013). The focus of this legal action against the FCC is that the Commission cannot repeal net neutrality because its justifications for the repeal (that the original 2015 order was outside of the agency's purview) had already been ruled against in the D.C. Circuit decision made in 2016. This case was transferred from the 9th Circuit to the U.S. Court of Appeals for the D.C. Circuit because of the D.C. Circuit's history of considering related issues prior to the current proceedings.

Figure 5: States Involved in Net Neutrality Legal Challenge



Three additional states (Arkansas, Nebraska, and Texas) filed a friend-of-the-court (amicus curiae) brief supporting the FCC's decision and arguing that federal agencies have the right to reverse their policies after presidential elections result in administration changes in the Mozilla v. FCC case, stating:

> So long as an agency acts within its realm of authority, its decision to alter a policy decision—or even reverse course— is not subject to a special, enhanced standard of review… A federal agency is not obligated to engage additional processes when reversing course from a previous administration. Decision makers can reconsider the same data and come to a different conclusion resulting in another interpretation and decision (Davis, 2018).

In addition to the legal action in the Mozilla v. FCC case, the United States Attorney General filed a lawsuit on behalf of the FCC against the state of California. This suit alleges that California's Senate Bill 822, "unlawfully imposes burdens on the Federal Government's deregulatory approach to the Internet" (DOJ, 2018). Effectively, the Department of Justice is arguing that California's attempt to regulate net neutrality impacts interstate commerce.

The state of California reached a deal with the Department of Justice to delay implementation of the net neutrality law until the federal lawsuit could be resolved, which could take years (Finley, 2018). The state of Vermont reached a similar agreement to halt enforcement of its net neutrality law and executive order as of March 2019, until the federal appeals court reaches a decision about the validity of the FCC's 2017 *RIF* order (Davis, 2019).

E. Summary of All State Actions

As of December 2018, nine states have taken some action to protect net neutrality. This include six state executive orders, four state laws, and one state resolution. A review of the net neutrality bills that were introduced, but died, in committee at the end of state sessions are a testament to the public concern over this topic. Twenty-six bills and resolutions did not pass because they were voted down, withdrawn by the sponsor, or died in committee. Although the number of successful outcomes is low relative to the number of proposed actions (25 percent of states that proposed some type of net neutrality action are now implementing net neu-

trality protections), the considerable number of states that have proposed legislation points to states' interest in this issue. Sixty-eight percent of states (69.8 percent, including D.C.) have initiated some type of action to support net neutrality.

For states that enacted net neutrality executive orders or laws, several patterns emerged. The most common type of policy mechanisms used by states are procurement standards, which most often appeared in executive orders. Public disclosure mechanisms are the second most popular type of net neutrality protection and are most commonly found in net neutrality state laws. Studies for future actions and laws enforcing the FCC's 2015 bright line rules are also relatively common mechanisms for states to include in net neutrality laws. An overview of net neutrality policies that have been implemented is included in Figure 6.

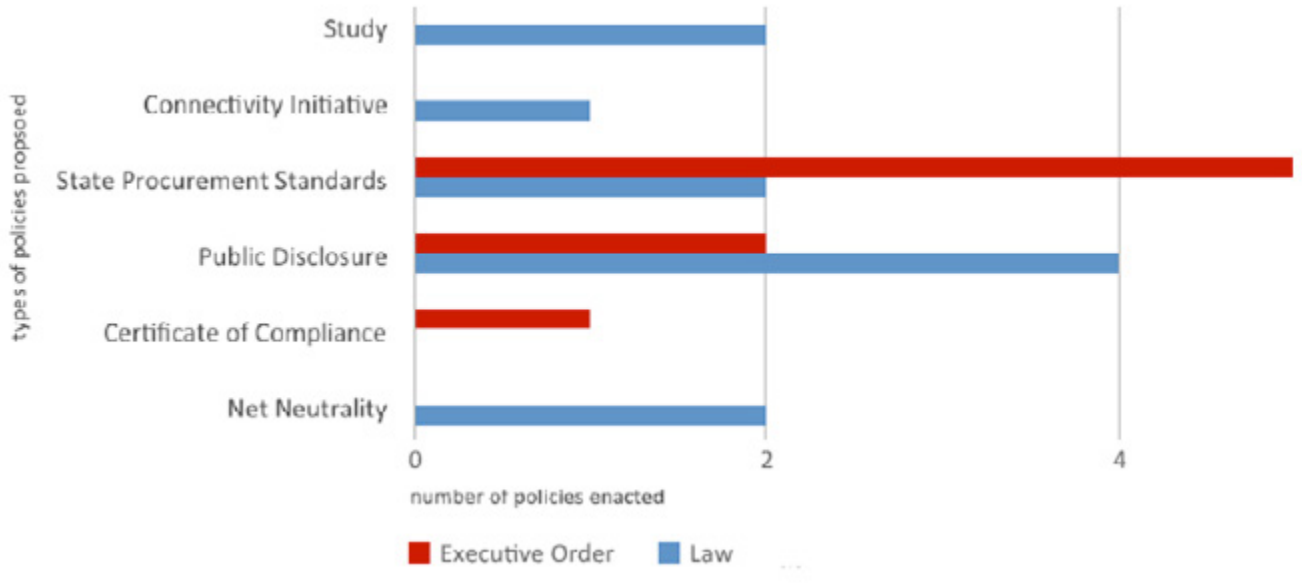
Table 3: Detailed Summary of State Actions on Net Neutrality

	Passed	**Did Not Pass**
Executive Order	HI, MT, NJ, NY, RI, VT (6)	
Bill	CA, OR, VT, WA (4)	AK, CO, CT, HI, GA, ID, IA, IL, KS, KY, MA, MD, MN, NC, NE, NJ, NM, NY, PA, RI, SC, SD, TN, VA, WV, WI (26)
Resolution	CA (1)	AK, DC, DE, GA, IL, MI, MO, NM, OH (9)
	Total successful actions: 11 actions, by 9 states	31 state actions have not passed*
36 States have proposed OR passed a resolution, bill, or executive order: AK, CA, CO, CT, DE, DC, GA, HI, ID, IL, IA, KS, KY, MD, MA, MI, MN, MO, MT, NE, NJ, NM, NY, NC, OH, OR, PA, RI, SC, SD, TN, VT, VA, WA, WV, WI		
Net Neutrality Law Suit	CA, CT, DE, HI, IL, IA, KY, ME, MD, MA, MN, MS, NJ, NM, NY, NC, OR, PA, RI, VT, VA, WA, DC **(21 states + DC)**	

* Illinois has both a bill and resolution pending, and was only counted once towards number of states

* AK, GA, and NM were each only counted once towards state action totals

Figure 6: Number of State-Enacted Net Neutrality Policies in 2018



V. Impacts on State Commissions

Proposed state legislation and executive orders on net neutrality have tasked PUCs with enforcement roles in several different capacities. Seventeen states proposed laws or passed executive orders that tasked state PUCs with some form of net neutrality enforcement, and four states (New York, Oregon, Rhode Island, and Washington) have active laws or executive orders that require some type of enforcement actions from state PUCs. Provided below is a brief overview of different methods that state legislatures have proposed that include PUCs as a part of efforts to support net neutrality protections.

The section below includes descriptions of different mechanisms for involving state PUCs in net neutrality enforcement actions that have been passed into law. Other methods for including PUCs have been proposed, but not passed, by state legislatures. These proposals will be discussed in greater detail in Section VI on Promising Practices.

A. Evaluate and advise

Two state governors (New York and Rhode Island[7]) have tasked regulatory bodies with evaluating and advising the state on potential actions to promote net neutrality through executive orders.

New York's executive order on net neutrality tasks the Department of Public Service to "evaluate potential actions to promote net neutrality in order to protect New Yorkers' access to a free and open internet" (NY Executive Order No. 175).

Rhode Island's executive order on net neutrality provides similar guidance, establishing the Division of Public Utilities Commission as an advisory body for developing appropriate state guidance, stating:

> As soon as practicable, the Division of Purchases, with input from the Division of Public Utilities Commission (DPUC), the Emergency management Administration (EMA), and the Division of Information Technology (DOIT), shall amend the State's procurement rules and regulations as necessary and appropriate to comply with this directive, and issue such policies and other guidance, and take such other steps as are determined to be necessary and appropriate, to ensure that this Order is appropriately implemented and enforced (Rhode Island Executive Order No. 18-02).

The Rhode Island executive order prescribes an additional role to the DPUC, stating: "The DPUC, in consultation with the DOIT, shall evaluate and advise the Governor on potential actions to promote net neutrality to protect Rhode Islanders' access to a free and open internet" (Rhode Island Executive Order No. 18-02).

The approaches adopted by New York and Rhode Island take advantage of their regulatory bodies' institutional knowledge of regulation within the telecommunications industry, to determine appropriate actions for these states.

B. Prescribe rules for implementing public disclosure requirements

Oregon's net neutrality law requires the Oregon Public Utilities Commission to develop a rule specifying the manner and form in which the public disclosures required under the new net neutrality law should be implemented. This public disclosure rule was adopted in conjunction with a procurement rule specifying that state entities may not contract with BIAS providers that engage in paid prioritization, blocking, or impairing or degrading lawful Internet traffic. The Oregon PUC opened docket No. AR-618 to comply with this law, and the Commission adopted the staff's recommendation for implementation on December 27, 2018 in Order No. 18-491. The new rules established by the Oregon PUC became effective on January 1, 2019.

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7 Rhode Island has both a Public Utility Commission and a Division of Public Utilities and Carriers. According to the RI PUC's website: although two distinct regulatory bodies, the Commission and Division generally operate in concert. This is evidenced by the Division's status as an indispensable party in all Commission proceedings, and the Division's statutory charge to enforce all directives of the Commission. Both entities may conduct inquiries, investigations and hearings to effectuate their respective duties. Both may issue orders that have the force and effect of law (Rhode Island Public Utility Commission [website]). http://www.ripuc.org/

The rule adopted by the Oregon PUC requires that public disclosures be in a form and manner that complies with 47 C.F.R. § 8.1(a); *Restoring Internet Freedom*, WC Docket No. 17-108, Declaratory Ruling, Report and Order, and Order, 33 FCC Rcd 311 (2018); and the FCC's Instructions for Internet Service Providers (OR, 860-250-0020-(1)).[8] The Oregon PUC further specifies in its new rules that if the requirements for BIAS providers' disclosures change under any federal law, rule, or guidance, the Commission will determine within 180 days of that change whether it is necessary to change the Commission's rules as a result (OR, 860-250-0020-(2)).

At least eight states proposed rules that would allow the PUC to prescribe appropriate rules and regulations for implementing net neutrality protections that ultimately did not pass state legislatures. These states include: Georgia; Idaho; Massachusetts; Minnesota; Nebraska; New York; Oregon; and Tennessee.

C. Provide notice of laws to affected parties

Washington HB 2282: Protecting an open internet in Washington state included the Washington Utilities and Transportation Commission (UTC) in a more limited capacity. This law requires ISPs to publicly disclose accurate information regarding network management practices, performance characteristics, and commercial terms to allow consumers to make informed purchasing decisions, and makes it illegal for ISPs to block, impair or degrade service, or engage in paid prioritization. While the enforcement of Washington's net neutrality law is deferred to the state's Office of the Attorney General, the Washington UTC is tasked with providing notice of the Washington act to affected parties, the chief clerk of the House of Representatives, the secretary of the senate, the Office of the Code Reviser, and others as deemed appropriate by the UTC.

While some state legislative and executive actions have tapped state PUCs for different aspects of enforcement relating to net neutrality, there are a variety of other state agencies tapped to support net neutrality enforcement throughout legislative proposals as well. The most common state agencies tapped to support net neutrality protection are:

- State Attorney General
- Broadband Development Corporation
- Department of Justice
- Department of Information Technology
- Agency of Digital Services
- Secretary of Administration
- Executive Office of Housing and Economic Development
- Department of Commerce

The various agencies involved with different states' proposals have the potential to add an additional layer of complexity to communications between agencies, and should be taken into consideration when legislatures are constructing enforcement mechanisms for new net neutrality proposals.

Table 4: 2018 Commission Involvement with Net Neutrality Executive Orders & Laws

	Evaluate & Advise	Prescribe Rules & Regulations	Provide Notice of Law to Affected Parties
New York (EO)	•		
Oregon (L)		•	
Rhode Island (EO)	•		
Washington (L)			•

(EO) indicates the use of an executive order (L) indicates a legislative mandate *Authors construct*

8 located at https://www.fcc.gov/disclosure-instructions-isps

VI. Proposed Legislation, Not Passed

State legislative sessions in 2018 produced the first crop of legislation targeting the protection of net neutrality at the state level. While there were some successes for net neutrality in the form of passed laws and executive orders, many bills providing novel approaches to protecting net neutrality principals died in committee at the end of the legislative sessions. While the bills that died in committee have no legal power, they do represent potential road-maps to state actions in support of net neutrality. Some of these proposed legislative approaches are described in the sections below.

A. State Procurement Preference for ISPs adhering to net neutrality

Whereas state procurement standards requiring government entities to contract with ISPs that adhered to net neutrality practices were part of several executive orders in 2018, Colorado's approach provided a lighter-touch alternative. Colorado HB 1312 proposed a requirement for government procurement of Internet. These proposed contracting standards would only require that governmental bodies contracting for broadband give a preference to ISPs that certify to the governmental body that they will not engage in any of the practices associated with violations of net neutrality. This approach, while similar to the contracting requirements proposed and enforced by other states, only requires governmental entities to show a "preference" for ISPs adhering to net neutrality principles.

B. Service Provider Registry

The Massachusetts state legislature proposed MA S2610 that would have required the Department of Telecommunications and Cable (DTC) to organize a registry of state Internet service providers. This registry would have allowed customers and prospective customers to compare service providers based on the ISP's track record on net neutrality and customer privacy. The DTC would have been tasked with grading ISPs on a provider's Internet service quality, adherence to net neutrality standards, and consumer privacy practices. These grades would be made available in the proposed registry. ISPs would have been required to disclose their grade to potential customers before entering into an agreement, and then annually thereafter. The proposed law would have also required this information to be publicly disclosed on ISP websites.

Massachusetts used a novel approach because the proposed law would have aggregated metrics for net neutrality adherence into one repository for ease of residential customer use. Other public disclosure requirements passed in 2018 required that ISPs make information about network practices available on their own websites. This puts the onus on customers to seek out information from a variety of different places. With the registry, information would have been available in one central location, and this information would have been presented as an A-F grade, making comparison between different companies easier for busy consumers.

C. Creation of a Broadband Development Corporation

Alaska House Bill 246 proposed the creation of the Alaska Broadband Development Corporation, for the purpose of:

> "(1) increasing and improving the availability, affordability, and performance of broadband data services and broadband Internet access services in unserved and underserved areas of the state by lessening the barriers to entry posed by a lack of sufficient and affordable access to high-speed, low-latency connectivity between unserved and underserved customer areas and fiber-optic cables that connect to the Internet in the state; and (2) facilitating the development of competitive options for customers in unserved and underserved areas."

Towards these goals, Alaska HB 246 would have tasked the newly created Alaska Broadband Development Corporation to provide or support affordable access to high-speed Internet in areas that are unserved or underserved in a coordinated manner that ensures the efficient use of funds. House Bill 246 proposed a Broadband Development Commission that would be established within the Alaska Department of Administration, but would be designated as an eligible telecommunications carrier by the Regulatory Commission of Alaska.

Other states, such as Minnesota, Colorado, and West Virginia, have developed State Broadband Councils[9]. These councils are generally not directly connected with state PUCs, which has the potential to make communications and planning efforts more burdensome.

D. Certificate of Convenience & Necessity tied to Net Neutrality Compliance

Hawaii, Massachusetts, New Jersey, and Vermont have proposed systems in which an ISP's ability to receive a Certificate of Public Convenience and Necessity (CPCNs) is tied to compliance metrics for net neutrality.

Proposed 2018 Hawaii House Bill 2256 included three major provisions that: 1) required providers of broadband to be transparent with network management practices; 2) prohibited providers from blocking, throttling, or paid prioritization; and 3) required an applicant of a broadband-related permit seeking state-granted or county-granted rights to attach small cell or other broadband wireless communication devices to utility poles to comply with certain practices supporting net neutrality. This last provision, which made pole attachment CPCNs contingent on ISP compliance with net neutrality principles, presented another approach to state level enforcement of net neutrality through local mechanisms.

New Jersey proposed a similar measure, Senate Bill 2458, which adopted the CPCN approach, and provided additional clarification regarding enforcement responsibilities and parameters. This bill directed the New Jersey Board of Public Utilities to:

> prohibit an Internet service provider from installing broadband telecommunications infrastructure on any pole or post located on or over any highway or any right-of-way, or on any underground facility, belonging to a public utility or cable television company, unless the ISP: 1) publicly discloses to customers located in this State accurate information regarding the network management practices and performance, and commercial terms of its Internet service; 2) does not engage in paid prioritization; and 3) permits customers located in this State to access all lawful Internet content, applications, and services, and to use non-harmful Internet-enabled devices, without discrimination and without the impairment or degradation of Internet access speeds, subject to reasonable network management (NJ SB2458, 2018).

Massachusetts Senate bill 2389 used similar language, stating:

> (c) The department shall establish a process for broadband internet access service providers to certify that they will not engage in practices inconsistent with subsection (b), limit state-conferred benefits to broadband internet access service providers, limit applicability to pole attachment rules to broadband internet access service providers that adhere to subsection (b), and review state-conferred benefits such as easements and taxes.

Vermont H 0680 included similar provisions. The bill proposed to amend Sec. 3. 30 V.S.A. § 209(i), to include a section that specified that entities seeking to attach facilities for the purpose of providing BIAS, have attained a certificate of net neutrality compliance.

E. Disqualifies ISPs from receiving money from the state high cost fund if the ISP engages in discriminatory practices

Proposed Colorado HB1312 would disqualify ISPs who engage in blocking, paid prioritization, throttling bandwidth or otherwise impairing or degrading lawful Internet traffic, or not providing transparency from receiving money from the state's high-cost support mechanism. There are positives and negatives to this approach. While this proposal had the potential to discourage buildout to the customers most in need of support, companies who have already accepted federal Connect America Fund money are already committed to building out service in the areas for which they received funding, so ISPs would be leaving money on the table if they did not adhere to net neutrality principles.

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9 For additional information on Broadband Councils see http://nrri.org/download/nrri-14-11-municipal-broadband/

F. Establishes a PUC task force for the creation of a state-owned public utility company to provide Internet services

House Bill 1995 in Hawaii proposed the creation of a task force within the Hawaii PUC that would provide guidance to the legislature about the costs and benefits of a state-provided internet service through a state-run public utility company. The bill noted the success of municipal ISPs, citing Chattanooga, Tennessee, and Sandy, Oregon, as examples of the "concrete, societal benefits to treating internet service like a public utility" (HB 1995, Part III, Sect. 4). Hawaii's proposed task force would consider questions relating to:

> (1) The financial cost of building and managing an Internet service network and the number of Internet service subscribers that would be necessary to offset outlay costs;
>
> (2) Options to mitigate the costs associated with setting up or managing an Internet service network;
>
> (3) The effect of a public utility Internet service provider on competition and the price paid by consumers for Internet service;
>
> (4) The effect of a public utility Internet service provider on users' access to the Internet, particularly for users accessing the Internet in communities that are unserved or underserved by private Internet service providers;
>
> (5) The regulatory framework that would allow the public utility company to operate without discouraging private sector job creation and investment; and
>
> (6) The industries that would benefit from having both public and private Internet service providers available within the state (HB 1995, Part III, Section 5).

Although this proposal does not directly relate to state regulation of net neutrality, the proposed bill made a clear argument for the societal benefits of free Internet, and presented a public utility company as one possible means of addressing Internet access concerns posed by the 2017 *RIF* order.

G. Commission Jurisdiction over ISPs

Proposed Alaska House Bill 384 amended the definition of a utility in Section 1. of AS 42.05.990(6) to include broadband Internet access as a service regulated by the Regulatory Commission of Alaska. This effectively would have given the Regulatory Commission of Alaska jurisdiction over ISPs in the state. While this did not specify required actions relating to net neutrality, it did provide oversight, and would have made future actions relating to net neutrality or possibly Internet privacy easier to enact.

H. PUC enforces civil penalty for noncompliance

Three states (Connecticut, Georgia, and Tennessee) proposed bills that would have allowed state PUCs to enforce civil penalties for ISPs not adhering to state net neutrality rules.

Connecticut Senate Bill No. 336 included amendments which would have given the Connecticut Public Utilities Regulatory Authority (PURA) oversight of net neutrality. Specifically, this bill would have given the PURA the authority to receive and record complaints about ISPs and conduct hearings related to failed net neutrality compliance. Additionally, this bill would have provided the PURA with enforcement power over net neutrality rules by levying civil penalties against groups not in compliance with the state's proposed net neutrality law.

Georgia SB 310 recommended similar actions, endowing the Georgia Public Service Commission with the exclusive power and authority to prescribe rules and regulations for implementation of the proposed state net neutrality rules. This proposal was particularly interesting as both Georgia and Tennessee have passed laws prohibiting oversight of IP-enabled services.

> I. PSC shall administer fund for Internet consumer access (for net neutrality penalties)

Two states (Massachusetts and Tennessee) have proposed Consumer Access Funds (CAFs) (MA S2389 and TN HB 1755) to defray the cost of net neutrality oversight. Tennessee's proposed net neutrality bill would, among other actions, have created an Internet CAF, where penalties for ISPs that had violated the state's net neutral-

ity principles would be deposited. The fines associated with the Internet CAF could be used to cover the Tennessee Public Utility Commission's costs for administering the proposed bill. Proposed House Bill 1755 also tasked the Tennessee Public Utility Commission with promulgating rules that establish a process for certifying that ISPs are adhering to net neutrality principles. The Commission would be authorized to issue an order imposing a civil penalty of up to a maximum of $2,000 for each day that a violation occurs (TN HB 1755).

I. Final Thoughts

While the net neutrality proposals from this section never advanced from proposed bills to law, they do provide a robust foundation for future legislation. From developing new mechanisms for protecting net neutrality to providing refined approaches to already popular proposals, these unpassed bills advance a larger conversation about the values protected in these bills, and the many possible pathways to achieving the goal of an open Internet. Proposed legislation also helps to illustrate the many different ways that states have considered supporting net neutrality principles. The variety in approaches proposed by different states makes it clear that states have not adopted a one-size-fits-all approach to net neutrality, but have instead considered what outcomes and values they want to support and protect.

VII. Conclusion

The history of regulation of the telecommunications industry provides vital context for the current state of net neutrality. The United States' history of supporting common carriage laws, and the application of this concept to telecommunications in the 1860 Pacific Telegraph Act, along with the Communications Act of 1934, have shaped how Americans share information. The precedent of "just and reasonable" service, established by the 1887 Interstate Commerce Act, has fashioned the standards for regulation as well. The decision in the Telecommunications Act of 1996 to take a light touch approach to Internet regulation and later decisions proposing more stringent regulation have created a climate of regulatory uncertainty. After the 1996 Act was passed, the FCC implemented several different approaches to creating enforceable net neutrality rules, and a series of lawsuits followed. In 2016, the Court of Appeals for the DC Circuit upheld the FCC's 2015 formulation of net neutrality rules after almost a decade of back and forth. The FCC's *Restoring Internet Freedom* order removes the FCC's 2015 bright line rules, and restores broadband consumer protection authority to the Federal Trade Commission, which is tasked with consumer protection, but only after the fact. In that regard, the FTC differs from the FCC in that it cannot proactively enforce net neutrality rules, but must act in response to consumer complaints.

After the release of the 2017 *Restoring Internet Freedom* order, states quickly responded to the *RIF* order by issuing executive orders and proposing state-level resolutions and bills. In 2018, 35 states plus the District of Columbia took some type of action to support net neutrality protection at the state level by either proposing a bill or resolution, or enacting an executive order. Of states with proposed legislation, four states passed laws, six state governors enacted executive orders, and one state passed a resolution to protect net neutrality, bringing the total of successful state actions to eleven in nine states. These state actions on net neutrality policies were proposed in many regions of the country. The West Coast region proposed the largest number of net neutrality laws in 2018, and another cluster enacted in the northeastern section of the United States.

Six governors have signed executive orders related to net neutrality (Hawaii, Montana, New Jersey, New York, Rhode Island, and Vermont). These orders uniformly mandate that state contracts be awarded solely to ISPs that adhere to net neutrality principles. Review of the executive orders identified four key features (contracting requirements, public disclosure requirements, emergency clauses, and further evaluation) that some or all governors included in the net neutrality provisions.

State legislative resolutions addressing net neutrality were proposed in ten states, but passed only in California. Proposed state legislative resolutions generally died in committee at the end of the 2018 legislative sessions. California's resolution SR 74, which encouraged the United States Congress to intervene to protect net neutrality by codifying its principles in statute, stands as the only state net neutrality resolution passed during 2018 legislative sessions.

Four states passed laws protecting net neutrality principles in the 2018 legislative sessions (California, Oregon, Vermont, and Washington). Another 26 states introduced bills which either failed or had not passed by the end of legislative sessions. Of the bills that passed, the most commonly deployed policy mechanism was public disclosure of networking practices, which all passed laws included. Establishing bright line net neutrality rules, and developing state procurement standards were also common.

State Attorneys General have also taken action to support net neutrality, and are currently part of the consolidated suit Mozilla v. FCC. This joint suit seeks a determination by the Court that the 2017 *Restoring Internet Freedom* order was "arbitrary, capricious, and an abuse of discretion within the meaning of the Administrative Procedure Act" (Protective Petition for Review, Case No. 17-18-1013). The focus of this legal action against the FCC is that the Commission cannot repeal net neutrality because its justifications for the repeal (that the original 2015 order was outside of the agency's purview) had already been ruled against in the D.C. court decision made in 2016. Not all states support the restoration of the 2015 net neutrality rules. Arkansas, Nebraska, and Texas filed an amicus curiae brief arguing that federal agencies have the right to reverse their policies after presidential elections result in administration changes (Davis, 2018).

More recently, the United States Attorney General filed a lawsuit on behalf of the FCC against the state of California, alleging that California's Senate Bill 822, "unlawfully imposes burdens on the Federal Government's deregulatory approach to the Internet" (DOJ, 2018). Effectively, the Department of Justice is making an argument about California's attempt to regulate what the Department of Justice is calling interstate commerce. The state of California reached a deal with the Department of Justice to delay implementation of the net neutrality law until the federal lawsuit could be resolved, which could take years (Finley, 2018). The state of Vermont reached a similar agreement to halt enforcement of its net neutrality law and executive order as of March 2019, until the federal appeals court reaches a decision about the validity of the FCC's 2017 *Restoring Internet Freedom* order (Davis, 2019). These actions by the DOJ may have had a chilling effect on other states considering passing net neutrality laws.

The future of net neutrality now stands at a cross roads, with many possible pathways ahead of it. Legal action currently pending in court has the potential to reverse the FCC's course, and the Save the Internet Act of 2019, currently working its way through Congress, could also provide the legal mandate for the FCC to restore its 2015 Open Internet order, although Senate Majority Leader McConnell has said he will not bring the bill to the floor for a vote, making its passage unlikely (Rozsa, 2019). Regardless of outcome, state actions on net neutrality have produced a variety of different proposals for a state-by-state schema for maintaining open Internet. Current 2019 state legislative sessions have been similarly fruitful— 22 states have proposed net neutrality actions in current legislative sessions.

Some believe that this patchwork approach to Internet regulation has the potential to prove taxing for ISPs operating in multiple states who would be faced with differing regulatory schema. Switching costs associated with adhering to different rules established in neighboring states could require significant time and resources to ensure differing state-level compliance. Some states have also voiced a preference for a federal solution in proposed and passed resolutions which most commonly push for net neutrality enforcement at the federal level either through a new Congressional mandate, or restoration of the FCC's 2015 rules.

The rationale for why states are working to implement state-level net neutrality rules can be found in many enacted and proposed state laws. These bills and laws cite the importance of Internet for education, commerce, and health. Rationale for state level net neutrality laws focuses on consumer protection and maintaining a competitive online environment that will allow rural areas to engage and profit from online opportunities. These bills also point to the Internet as vital for accessing state support resources. Regardless of the argument, the message remains clear: citizens benefit from an open Internet infrastructure, where winners and losers are not predetermined. The issue of net neutrality remains very topical. Eighty-three percent of respondents to a recent University of Maryland survey opposed the repeal of the FCC's 2015 Open Internet order rules when educated about the pros and cons for both sides of the issue (University of Maryland, 2017).

NRRI's review of proposed state-level net neutrality laws has highlighted several trends relating to net neutrality policies. These proposals have spanned a spectrum from "light touch" approaches to encouraging net neutrality by allowing consumers to make informed decisions in the case of the certification proposal put forward in Massachusetts, to more severe approaches such as assessing civil penalties for noncompliance with net neutrality rules.

Although the story of net neutrality is evolving quickly, it is important to appreciate the enormous strides that the US as a whole has made toward faster broadband connectivity in the past twelve years. According to Akamai's State of the Internet Report during the first quarter of 2017, broadband speeds increased from an average peak connection speed of 23.4 Mbps to 86.5 Mbps from 2012 to 2017 (NCTA, 2017 a; Akamai, 2017, p. 24). From 2007 to 2017, the cost of moving bits from their source to houses dropped 90 percent per bit[10]. Over the past decade, broadband Internet speeds have grown faster, while decreasing in price. This fact is illustrated by the boom in content streaming in the form of pictures, music, and videos. The U.S. still has a long way to go to ensure that Americans' access to the Internet continues to expand, while also ensuring access to Internet that is unrestricted as to viewpoint, and without unreasonable discrimination.

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IX. Appendix A: Links to State Net Neutrality Actions

Executive Orders

Hawaii	Executive Order No. 18-02
Montana	Executive Order No. 6-2018
New Jersey	Executive Order No. 9
New York	Executive Order No. 175
Rhode Island	Executive Order 18-02
Vermont	Executive Order No. 2-18

Resolutions

Alaska	SJR12 HJR 31
California	SR74 - passed
Delaware	SCR 44
District of Columbia	PR22-06-91
Georgia	HR1161
Illinois	SR 1196 / HB 5094
Michigan	SR 0131
Missouri	HCR 84
New Mexico	SJM 17
Ohio	HCR18

Legislation

Alaska	HB 277 SB160	HB 246	HB 384
California	SB460 SB 822 - passed	AB 1999	
Colorado	HB 1312		
Connecticut	SB 2	HB 5260	SB 336
Georgia	SB 310		
Hawaii	HB 1995 SB 2088	SB 2644	HB 2256
Idaho	HB 425		
Illinois	SB 2816	SB 5094	HB4819
Iowa	HF 2287	SF 2286	
Kansas	HB 2682		
Kentucky	HB 418		
Maryland	SB 287	HB 1654	HB 1655
Massachusetts	HB 4222 HB 4151	SB 2389 SB 2610	SB 2336 HB 4684
Minnesota	S 2880	HF 3033	
Nebraska	LB 856		
New Jersey	SB 1577 Assembly No. 2131 Assembly, No. 2132 Assembly, No. 2139 SB 1802		
New Mexico	SB 39	SB 155	
New York	AB 9059 AB 8882	SB 7175 AB 9057	SB 7183 AB 1958
North Carolina	SB 736		
Oregon	HB 4155 - passed		
Pennsylvania	H 2062	SB 1033	
Rhode Island	HB 7076	S 2008	HB 7422
South Carolina	HB 4614	HB 4706	
South Dakota	SB 195		
Tennessee	HB 2405/2449 HB 1755/ SB 1756		SB 2183 HB 2253
Vermont	HB 680	S 289 - passed	
Virginia	HB 705		
Washington	HB 2282 - passed SB 6423	HB 2284	SB 6446
West Virginia	HB 4399	SB 396	
Wisconsin	SB 743 AB 909	SB 740	AB 908


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