

# SUSTAINABLE FINANCE — A BLUEPRINT FOR SEVERANCE TAXES IN THE MARCELLUS SHALE

*Ryan Pulver\**

## ABSTRACT

Since the implementation of hydraulic fracturing, natural gas extractors have been able to reach deposits of natural gas that were previously thought cost prohibitive or impossible. The Marcellus Shale, which covers much of the Mid-Atlantic region, has become a plentiful source of natural gas because of the implementation of hydraulic fracturing. The environmental concerns of hydraulic fracturing have been well publicized in both the media and academia. However, little has been discussed about the pragmatic and ancillary aspects of natural gas extraction in the Marcellus Shale region, namely severance taxes.

Severance taxes are excise taxes on the extraction of natural resources. The severance taxes fulfill many roles including general gubernatorial funding, environmental protection funding, and as a general deterrence to the extraction of the natural resource. Despite the broad utility of severance taxes, many states in the Marcellus Shale region have not enacted severance taxes on natural gas. With issues facing states in the Marcellus Shale region such as budgetary difficulties and environmental protection, this Article postures that at least one of these states will enact a severance tax on natural gas in the near future. This Article attempts to provide a survey of severance tax policies from high natural gas producing states that already have natural severance taxes in place. In doing so, this Article emphasizes certain severance tax policies in states with active natural gas extraction as beneficial and practical for states in the Marcellus Shale region that have not yet enacted a severance tax on natural gas. In addition to endorsing

---

\* Ryan Pulver is an attorney in Charleston, West Virginia where he focuses on tax law and public finance. Mr. Pulver earned his law degree from the West Virginia University College of Law and his bachelor's degree from the University of North Carolina at Chapel Hill. Mr. Pulver would like to thank his friend and colleague, Ian Henry, for his insightful remarks in writing this Article and his wife, Antoinette, for her endless support in his endeavors.

certain severance tax policies, this Article also discusses federal constraints on the states' enactment of severance taxes.

## I. INTRODUCTION

The Marcellus Shale is a large formation of sedimentary rock containing vast quantities of natural gas.<sup>1</sup> It extends from Tennessee to New York and Ohio to New Jersey, covering a significant portion of the Eastern United States.<sup>2</sup> Energy companies have flocked to the region to extract natural gas through the relatively new process of hydraulic fracturing.<sup>3</sup> Hydraulic fracturing has enabled energy companies to extract natural gas where it was thought to be impossible.<sup>4</sup> In the wake of hydraulic fracturing, states that have not been considered traditional wellsprings of natural gas have suddenly become plentiful sources.<sup>5</sup>

State governments have found their tax codes antiquated and insufficient to govern and capitalize on the rapidly growing natural gas extraction of the Marcellus Shale.<sup>6</sup> Pennsylvania<sup>7</sup>, Virginia<sup>8</sup>, New Jersey<sup>9</sup>,

<sup>1</sup> Itzhak E. Kornfeld, *Geology, The Marcellus Shale, Experts, and Dispute Resolution*, 116 W. VA. L. REV. 865, 898 (2014).

<sup>2</sup> *Id.*

<sup>3</sup> New York currently imposes a ban on hydraulic fracturing. See N.Y. Exec. Order No. 41 (Dec. 13, 2010), available at <http://www.governor.ny.gov/archive/paterson/executiveorders/E041.html>; see also John R. Nolon & Steven E. Gavin, *Hydrofracturing: State Preemption, Local Power, and Cooperative Governance*, 63 CASE W. RES. L. REV. 995, 997 (2013).

<sup>4</sup> See Kornfeld, *supra* note 1, at 866.

<sup>5</sup> See Nolon & Gavin, *supra* note 3, at 997–98. For example, the graph in Figure 1 illustrates the increase of annual gross natural gas withdrawals from Pennsylvania as measured in millions of cubic feet. See *infra* Figure 1.

<sup>6</sup> Jacquelyn Pless, *Oil and Gas Severance Taxes: States Work to Alleviate Fiscal Pressures Amid the Natural Gas Boom*, NATIONAL CONFERENCE OF STATE LEGISLATURES (Oct. 15, 2014), <http://www.ncsl.org/research/energy/oil-and-gas-severance-taxes.aspx>.

<sup>7</sup> Edward Rendell, the former governor of Pennsylvania, proposed severance tax on natural gas in 2009. Elizabeth Turgeon, "Goin' to Carolina in My Mind." *Prospects and Perils for Natural Gas Drilling in North Carolina*, 13 N.C. J. L. & TECH. 147, 178 (2011). However, no consensus was reached in the Pennsylvania legislature on enacting the tax. *Id.* In 2012, the Pennsylvania legislature amended the Oil and Gas Act with Act 13. Oil and Gas Act, 58 Pa. Cons. Stat. § 601.101, et seq. *repealed and amended by* 58 Pa.Cons.Stat. §§ 3201–3274 (2012). This enabled Pennsylvania to impose an impact fee on natural gas that was extracted via hydraulic fracturing. See 58 PA.CONSTAT. § 2302 (2014). The collection measures are adopted by each county, but collected by the state of Pennsylvania. See Nathaniel I. Holland, *Pennsylvania Oil and Gas Update*, 19 TEX. WESLEYAN L. REV. 539 (2013). Under Act 13, "counties have the authority to impose the fee on gas producers operating wells within their borders . . ." Nancy D. Perkins, *The Fracturing of Place: The Regulation of Marcellus Shale Development and the Subordination of Local Experience*, 23 FORDHAM ENVTL. L. REV. 44, 56 (2012). It is important

and New York<sup>10</sup>, all of which contain natural gas from the Marcellus Shale within their borders, do not currently impose a severance tax on the extraction of natural gas at the state level. There are two different goals behind the implementation of severance taxes, which generally fall into two categories: environmental protection and revenue generation.

The well-publicized environmental concerns of hydraulic fracturing<sup>11</sup> and state budget shortfalls<sup>12</sup> are incentives for state legislatures to enact natural gas severance taxes in states within the Marcellus Shale region, as they would serve as financial deterrents to politically charged hydraulic fracturing and as revenue generating mechanisms.<sup>13</sup> There is wide speculation that, in light of environmental protection and budgetary concerns, the enactment of severance taxes in these states is inevitable.<sup>14</sup> Thus, the important question regarding the natural gas severance tax in the Marcellus Shale region is likely not if, or even when, but how.<sup>15</sup>

This Article will first discuss the federal restraints on state-imposed severance taxes, then conduct a comparative analysis of the severance tax laws in historical natural gas producing states and states that are relatively new to natural gas extraction via hydraulic fracturing, assess the pros and

to note that the impact fee is only applied to natural gas that is extracted via hydraulic fracturing and not natural gas extracted by other means.

<sup>8</sup> *Study of Severance Tax*, VA. DEPT OF TAXATION, <http://www.tax.virginia.gov/site.cfm?alias=severance> (last updated Feb. 6, 2014).

<sup>9</sup> See Brent Johnson, *NJ Senate approves bill that would ban fracking waste*, NJ.COM (Sept. 17, 2014, 3:07 PM), [http://www.nj.com/politics/index.ssf/2014/05/nj\\_senate\\_approves\\_bill\\_that\\_would\\_ban\\_fracking\\_waste.html](http://www.nj.com/politics/index.ssf/2014/05/nj_senate_approves_bill_that_would_ban_fracking_waste.html).

<sup>10</sup> See *supra* text accompanying note 3.

<sup>11</sup> Environmental concerns include: "air pollution, groundwater depletion and contamination, surface-water pollution, soil erosion and sedimentation, visual blight, noise pollution, road congestion and destruction, and the deterioration of community character...escaped methane and other volatile organic compounds, exposure to ground-level ozone causing respiratory illness, chemical fires, lung disease in workers caused by the inhalation of silica dust, benzene pollution of the air near drilling sites, particulate matter from heavy trucks travelling on dirt roads, personal injury from seeping hydrochloric acid and solvents, earthquakes, and diesel fuel and toxic chemicals in ground water." Nolon & Gavin, *supra* note 3, at 998.

<sup>12</sup> See Meagan Baker, *Texas Oil and Gas Generate \$900 Million in New Tax Revenue*, ENERGY IN DEPTH (Aug. 6, 2013, 3:03 PM), <http://energyindepth.org/texas/texas-oil-and-gas-generate-900-million-in-new-tax-revenue>.

<sup>13</sup> See Alyssa W. Kovach, Note and Comment, *Fracking Wars: Severance Tax, the Solution that Makes Sense*, 32 TEMP. J. SCI. TECH. & ENVTL. L. 317, 328 (2013).

<sup>14</sup> See Jacquelyn Pless, *Oil and Gas Severance Taxes: States Work to Alleviate Fiscal Pressures Amid the Natural Gas Boom*, NAT'L CONF. OF ST. LEGISLATURES, <http://www.ncsl.org/research/energy/oil-and-gas-severance-taxes.aspx> (last updated Feb. 2012).

<sup>15</sup> See *id.*

cons of the different states' tax policies, and will conclude by prescribing suggestions for developing new severance tax systems for natural gas in the Marcellus Shale region. Embedded in the severance tax policy proposal is the notion that first purchasers should have a statutorily based protection against state treasuries, similar to *bona fide* purchasers<sup>16</sup> in real property transactions or holders in due course<sup>17</sup> under Article 3 of the Uniform Commercial Code. The purpose of this protection, as discussed *infra*, is to protect the severance tax from violating the United States' Constitution's Dormant Commerce and Due Process Clauses of the United States Constitution.<sup>18</sup> This Article also favors the use of natural gas volume as the tax base for severance taxes.<sup>19</sup> It should be noted that this Article does not seek to propose an amount or to attempt to quantify the extent of severance taxes. Rather, this Article seeks to outline the legal constraints on severance taxes and to provide pragmatic suggestions.

## II. SEVERANCE TAXES—A FOUNDATION

Severance taxes are often imposed by states or municipalities on the extraction of mineral resources from the earth, i.e. natural gas, coal, and oil.<sup>20</sup> Severance taxes can be used as a source of revenue and a means of environmental protection.<sup>21</sup> Proponents of implementing a severance tax are often driven by the prospective gains of a state's coffers, which can provide state treasuries with substantial increases in revenue.<sup>22</sup> That being said, environmental advocates are typically opponents of hydraulic fracturing and

---

<sup>16</sup> *Johnson v. Stull*, 303 S.W.2d 110, 118 (Mo. 1957) ("A bona fide purchaser is one who pays a valuable consideration, has no notice of outstanding rights of others, and who acts in good faith.")

<sup>17</sup> STEVEN H. GIFIS, *BARRON'S LAW DICTIONARY* 250 (6th ed. 2010) ("[O]ne must be a holder, who takes the negotiable instrument, for value, in good faith, without notice that it is overdue or has been dishonored or of any defense against or claim to it on the part of any person."); *see also id.* at 249-50 ("A holder in due course generally takes free of 'personal defenses' which the maker or any other prior party may have against the original payee or any subsequent holder but not free of 'real defenses' such as fraud in the factum, incapacity, duress, illegality, infancy, misrepresentation, etc.")

<sup>18</sup> U.S. CONST. art. I, § 8, cl. 3; U.S. CONST. amend. V.

<sup>19</sup> *See infra* Part IV.B.

<sup>20</sup> Dan Moody, Jr., Comment, *Natural Resource Taxation and the Commerce Clause—the Severance Tax and Taxes on Those Engaged in Gathering Natural Gas*, 30 TEX. L. REV. 96 (1951).

<sup>21</sup> *See supra* text accompanying notes 11-12.

<sup>22</sup> Pless, *supra* note 14.

generally favor severance taxes as an economic deterrent and a means to fund more research on the environmental effects of hydraulic fracturing.<sup>23</sup>

States often vary in the design of their severance tax policies. However, there are components that are present in all severance taxes: (1) tax base; (2) tax rate; and, (3) liability.<sup>24</sup> The tax base is the value or quantity of a taxable asset or activity.<sup>25</sup> For a severance tax, the tax base is often either the volume or units of the natural gas extracted<sup>26</sup> or the fair market value of the natural gas extracted.<sup>27</sup> The tax rate is either a certain percentage of the value of the tax base or a set monetary value per unit of natural gas.<sup>28</sup> In all of the states examined, the extractor of natural gas is primarily liable to the taxing authorities for the severance taxes.<sup>29</sup>

States vary, however, in the extent to which they hold other parties liable for the severance tax. For example, in some states, the extractor of the natural gas is liable for the severance tax and the first purchaser is liable *only if* they take possession within the state.<sup>30</sup> In other states, both the extractor *and* first purchaser are jointly and severally liable for the severance tax.<sup>31</sup> Tax laws that impose the liability on persons other than the extractor operate like a personal property lien on the natural gas itself.<sup>32</sup> The United States Constitution does not dictate the manner or form of severance taxes, and thus states have a great deal of autonomy in designing their severance tax policies.<sup>33</sup> As discussed *infra*, the United States Constitution *does* impose

---

<sup>23</sup> See Kovach, *supra* note 13 at, 321, 336, 339-41.

<sup>24</sup> See *infra* Part IV.A-C.

<sup>25</sup> *Tax Base*, INVESTOPEDIA, <http://www.investopedia.com/terms/t/taxbase.asp> (last visited October 11, 2014) (“The assessed value of a set of assets, investments or income streams that is subject to taxation, or the assessed value of a single asset that is subject to taxation. Anything that can be taxed has a tax base.”).

<sup>26</sup> See, e.g., LA. REV. STAT. ANN. § 47:633 (2014).

<sup>27</sup> See, e.g., TEX. TAX CODE ANN. § 201.052(a) (West 2001); *see id.* § 47:633.

<sup>28</sup> *Tax Rate*, INVESTOPEDIA, <http://www.investopedia.com/terms/t/taxrate.asp> (last visited Aug. 27, 2014).

<sup>29</sup> See *infra* Part III.

<sup>30</sup> See, e.g., *Endeavor Natural Gas, L.P. v. Magnum Hunter Prod., Inc.*, No. 13-06-352-CV, 2007 WL 4340870, at \*1 n.1 (Tex. App. Dec. 13, 2007).

<sup>31</sup> See, e.g., COLO. REV. STAT. ANN. § 39-29-111(1)(a) (West 2007).

<sup>32</sup> *Id.*

<sup>33</sup> Generally, the main constitutional restraints have been the Commerce Clause and the Due Process Clause. See, e.g., U.S. CONST. art. I, § 8, cl. 3; U.S. CONST. amend. V. However, a number of United States Supreme Court cases regarding the constitutionality of severance taxes have involved other constitutional provisions or doctrines, such as the Supremacy Clause and the Contract Clause. See U.S. CONST. art. VI, cl. 2; U.S. CONST. art. I, § 10, cl. 1. In *Maryland v. Louisiana*, the Court held that the Louisiana First-Use Tax was preempted by the National Gas Act. 451 U.S. 725 (1981). In *Exxon*

fundamental limits on severance tax policies; for example, the attenuated liability of the severance tax may subject the tax to Commerce Clause scrutiny.<sup>34</sup>

The Dormant Commerce Clause of the United States Constitution provides the greatest constraint on the design of the severance tax.<sup>35</sup> As Hellerstein<sup>36</sup> notes, “[b]ecause the resources are often destined for out-of-state consumption, taxpayers have challenged them under the Commerce Clause on the theory that the resource-rich states are unconstitutionally ‘exporting’ their tax burden to other states.”<sup>37</sup> The Supreme Court declared in *Commonwealth Edison Co. v. Montana*, “a state severance tax is not immunized from Commerce Clause scrutiny by a claim that the tax is imposed on goods prior to their entry into the stream of interstate commerce.”<sup>38</sup> The Court reasoned “there is no real distinction—in terms of economic effects—between severance taxes and other types of state taxes that have been subjected to Commerce Clause scrutiny.”<sup>39</sup> However, as discussed *infra*, courts have varied applications of the Commerce Clause.<sup>40</sup>

---

*Corp. v. Eagerton*, taxpayers used the Supremacy Clause and the Natural Gas Policy Act to challenge an Alabama statute that increased the state’s severance tax while concurrently barring producers from passing the increased tax on to consumers. 462 U.S. 176 (1983). “Congress passed the Natural Gas Act (“NGA”) in 1938, stating, “The business of transporting and selling natural gas for ultimate distribution to the public is affected with a public interest, and that Federal regulation in matters relating to the transportation of natural gas and sale thereof in interstate and foreign commerce is necessary in the public interest.” Alexandra B. Klass & Elizabeth J. Wilson, *Interstate Transmission Challenges for Renewable Energy: A Federalism Mismatch*, 65 VAND. L. REV. 1801 (2012). The National Gas Act largely empowers the Federal Energy Regulation Commission administrative power over the commercial aspect of natural gas production and the preemption discussed in *Maryland* was due to the excessive overreach of the Louisiana law rather than the pervasiveness of the Natural Gas Act into price regulation. The price restrictions in the Natural Gas Policy Act involved in *Exxon Corp.* have been repealed. Pub. L. No. 100-42 § 2(a), 101 Stat. 314 (repealed 1987).

<sup>34</sup> See *infra* Part IV.A.

<sup>35</sup> U.S. CONST. art. I, § 8, cl. 3. See also U.S. CONST. art. I, § 8, cl. 1-3. (“The Congress shall have power to lay and collect taxes, duties, imposts and excises, to pay the debts and provide for the common defense and general welfare of the United States; but all duties, imposts and excises shall be uniform throughout the United States . . . [t]o regulate commerce with foreign nations, and among the several states, and with the Indian tribes.”).

<sup>36</sup> Walter Hellerstein, Distinguished Research Professor & Francis Shackelford Distinguished Professor in Taxation Law, University of Georgia School of Law; A.B., Harvard University; J.D., University of Chicago.

<sup>37</sup> WALTER HELLERSTEIN, HELLERSTEIN & HELLERSTEIN: STATE TAXATION ¶ 4.18 (3d ed. 2014), available at 1999 WL 1398844, 1.

<sup>38</sup> *Commonwealth Edison Co. v. Montana*, 453 U.S. 609, 617 (1981).

<sup>39</sup> *Id.* at 616.

<sup>40</sup> See *infra* Part II.A.

In subjecting severance taxes to Commerce Clause scrutiny, the Court mandated that severance taxes must be compliant with the four-prong test as articulated in *Complete Auto v. Brady*.<sup>41</sup> Moreover, the United States Supreme Court has stated, “[a] state tax must be assessed in light of its actual effect considered in conjunction with other provisions of the State’s tax scheme.”<sup>42</sup> Consequently, the factors enumerated in *Complete Auto* are to be applied to the effect of the tax as a whole.<sup>43</sup> It must be noted that the imperatives set forth by *Complete Auto* operate as prohibitions for state legislatures. Although federal courts may strike down unconstitutional severance taxes, they are not empowered to repair severance taxes into constitutional compliance.<sup>44</sup> This emphasizes the critical importance of creating a constitutionally compliant severance tax from the onset, as federal courts may strike down the entire severance tax rather than simply correcting it.

#### *A. Constitutional Commerce Clause Restrictions on Severance Taxes*

In *Complete Auto*, the Supreme Court held that “[a] state tax is constitutional under the Dormant Commerce Clause if it is assessed against a taxpayer with whom the state has a substantial nexus, is fairly apportioned, is nondiscriminatory, and is fairly related to the services provided by the state.”<sup>45</sup> *Commonwealth Edison* applied the *Complete Auto* test and the application of the Commerce Clause to severance taxes.<sup>46</sup> Prior

---

<sup>41</sup> *Id.* at 617. See *Complete Auto Transit, Inc. v. Brady*, 430 U.S. 274 (1977) (applying four prong test as follows: (1) a substantial nexus with the taxing State, (2) is fairly apportioned, (3) does not discriminate against interstate commerce, and (4) is fairly related to the services provided by the State).

<sup>42</sup> *Maryland v. Louisiana*, 451 U.S. 725, 756 (1981).

<sup>43</sup> See *Commonwealth Edison*, 453 U.S. 609.

<sup>44</sup> *Nw. States Portland Cement Co. v. Minnesota*, 358 U.S. 450, 476 (1959) (Frankfurter, J., dissenting) (“At best, [the United States Supreme Court] can only act negatively; it can determine whether a specific tax is imposed in violation of the Commerce Clause. Such decisions must necessarily depend on the application of rough and ready legal concepts. We cannot make a detailed inquiry into the incidence of diverse economic burdens in order to determine the extent to which such burdens conflict with the necessities of national economic life. Neither can we devise appropriate standards for dividing national revenue on the basis of more or less abstract principles of constitutional law, which cannot be responsible to the subtleties of the interrelated economies of Nation and State.”).

<sup>45</sup> Julie Roman Lackner, *The Evolution and Future of Substantial Nexus in State Taxation of Corporate Income*, 48 B.C. L. REV. 1387, 1389 (2007) (citing *Complete Auto Transit, Inc. v. Brady*, 430 U.S. 274).

<sup>46</sup> *Commonwealth Edison*, 453 U.S. at 617.

to *Commonwealth Edison*, the Commerce Clause was not applicable to severance taxes stemming from the United States Supreme Court case *Heisler v. Thomas Colliery Co.*, and its progenies, which held that severance taxes do not impose an impermissible burden on interstate commerce because severance taxes are merely predicated on *intrastate* activity.<sup>47</sup> In applying *Complete Auto* in *Commonwealth Edison*, the Supreme Court stated that the two most salient prongs of the *Complete Auto* test for the purposes of the constitutionality of severance taxes under the Commerce Clause are (1) the substantial nexus and (2) the fair relation to the services provided by the state.<sup>48</sup> The *Commonwealth Edison* decision has led some to the conclusion that severance taxes are not vulnerable to Commerce Clause challenges based upon "the extent to which the resource (or the tax) is exported and regardless of its rate or amount."<sup>49</sup>

The substantial nexus prong has not been judicially determined with regard to severance taxes. Due to the inherent connection between the severed natural resource and the taxing state, there is a presumption of a substantial nexus between the taxpayer and the state.<sup>50</sup> Most of the concomitant constitutional cases have dealt with a particular state's attempt to impose the responsibility on an out-of-state enterprise to collect and remit sales and use taxes.<sup>51</sup> The sales and use tax cases have blazed a discernable trail for assessing substantial nexus; however, such utility is limited in assessing severance taxes for the mere fact that severance taxes are

---

<sup>47</sup> *Heisler v. Thomas Colliery Co.*, 260 U.S. 245 (1922). See *Hope Natural Gas Co. v. Hall*, 274 U.S. 284 (1927); *Oliver Iron Mining Co. v. Lord*, 262 U.S. 172 (1923).

<sup>48</sup> See generally *Commonwealth Edison*, 453 U.S. 609. Mike McGrath & Walter Hellerstein, *Reflections on Commonwealth Edison Co. v. Montana*, 43 Mont. L. Rev. 165, 175 (1982) ("[In *Commonwealth Edison Co.*] the taxpayer also asserted interstate discrimination, the third prong of *Complete Auto* because 90 percent of the coal mined in Montana [was] shipped out-of-state, the tax is tailored to fall on out-of-state consumers and therefore discriminates against interstate commerce."). However, because the fact that the domicile or residency of the taxpayer was not the discriminating factor of the severance tax, and, despite the overwhelming numbers showing out-of-state consumption, severer mining for in-state consumption were also subject to the severance tax, the Court held that the tax did not discriminate against interstate commerce. *Id.*

<sup>49</sup> McGrath & Hellerstein, *supra* note 48, at 175.

<sup>50</sup> *Commonwealth Edison*, 453 U.S. 609, 617 (citing *Commonwealth Edison Co. v. State*, 615 P.2d 847, 848 (Mont. 1980)).

<sup>51</sup> See generally *Quill Corp. v. N. Dakota*, 504 U.S. 298, 306 (1992); *Tyler Pipe Indus., Inc. v. Washington State Dep't of Revenue*, 483 U.S. 232 (1987). But see *Commonwealth Edison*, 453 U.S. 609.



inherently different from sales and use taxes.<sup>52</sup> State courts and, to a lesser extent, the United States Supreme Court have accepted the notion that the constitutional requirements under the Commerce Clause may vary by the type of tax imposed.<sup>53</sup> Therefore, in states where the severance tax liability falls upon both the producer *and* the first purchaser, as discussed *infra*, the existence of a substantial nexus is dubious if the first purchaser is not located within the taxing state.<sup>54</sup>

The most striking case for the purposes of assessing the existence of a substantial nexus pursuant to *Complete Auto* is *Tyler Pipe Industries, Inc. v. Washington State Department of Revenue*.<sup>55</sup> This case involved a business and occupation tax where the taxpayer sold large volumes of pipe and drainage products in Washington State. All of the products were manufactured out-of-state; the taxpayer did not maintain an office, nor did it own property, in the state; the taxpayer did not have any employees residing within the state; and out-of-state executives and independent contractors conducted sales.<sup>56</sup> The Supreme Court held that the existence of a substantial nexus was dependent upon whether the activities performed in the state on behalf of the taxpayer were significantly associated with the taxpayer's ability to establish and maintain a market in the state of Washington for its sales there.<sup>57</sup> The Court held that the taxpayer met this standard, and thus had a substantial nexus, because "sales representatives perform any local activities necessary for maintenance of [the taxpayer's] market and protection of its interests."<sup>58</sup>

The fourth prong of *Complete Auto* requires that the taxes collected be fairly related to the services provided by the state. The Court in *Commonwealth Edison* characterized this prong as an appendage to the first prong (substantial nexus):

---

<sup>52</sup> Cf. Consumption taxes (i.e., sales and use taxes) are different than excise taxes (i.e., severance taxes).

<sup>53</sup> See Tax Comm'r v. MBNA Am. Bank, N.A., 640 S.E.2d 226 (W. Va. 2006), *cert. denied*, 551 U.S. 1141 (2007).

<sup>54</sup> See *infra* Part IV.A.

<sup>55</sup> *Tyler Pipe Indus.*, 483 U.S. 232.

<sup>56</sup> *Id.* at 249.

<sup>57</sup> *Id.* at 250.

<sup>58</sup> *Id.* at 251.

[T]he fourth prong of the Complete Auto Transit test imposes the additional limitation that the measure of the tax must be reasonably related to the extent of the contact, since it is the activities or presence of the taxpayer in the State that may properly be made to bear a “just share of state tax burden . . . .”<sup>59</sup>

The Court further explained that because the severance tax is based on extraction of a natural resource and is measured as a percentage of its value, the “tax is in ‘proper proportion’ to appellants’ activities within the State and, therefore, to their ‘consequent enjoyment of the opportunities and protections which the State has afforded’ in connection with those activities.”<sup>60</sup> The Court of Appeals for the Ninth Circuit, in *Western Oil & Gas Association v. Cory*, has further stated that charges incurred to the state by out-of-state actors “cannot be disproportionate to the benefits conferred by the State.”<sup>61</sup> The utility of this case is limited, however, as none of the states in the Marcellus Shale region are subject to the authority of the Court of Appeals for the Ninth Circuit.

In its totality with regard to severance taxes, the Commerce Clause is restrictive on severance taxes since the taxpayer must have had voluntary contact with the state.<sup>62</sup> The Commerce Clause is rather lenient in terms of the extent or the measure of the tax in relation to those voluntary contacts.<sup>63</sup> In assessing the characteristics of severance taxes under the Commerce Clause, the liability of the taxpayer, not the measure of the tax, is the vital inquiry.

### *B. Constitutional Due Process Clause Restrictions on Severance Taxes*

In addition to these concerns that stem from the Commerce Clause, Due Process constraints must also be taken into account.<sup>64</sup> In *Quill Corp. v.*

<sup>59</sup> *Commonwealth Edison Co. v. Montana*, 453 U.S. 609 (1981) (citing *W. Live Stock v. Bureau of Revenue*, 303 U.S. 250, 254 (1938)).

<sup>60</sup> *Id.* at 626-27 (quoting *Gen. Motors Corp. v. Washington*, 377 U.S. 436 (1964)).

<sup>61</sup> *W. Oil & Gas Ass'n v. Cory*, 726 F.2d 1340, 1344 (9th Cir. 1984).

<sup>62</sup> *McGrath & Hellerstein*, *supra* note 48, at 175.

<sup>63</sup> *Id.*

<sup>64</sup> U.S. CONST. amend. V.

*North Dakota*, the Supreme Court proclaimed that “[t]he Due Process Clause ‘requires some definite link, some minimum connection, between a state and the person, property or transaction it seeks to tax’ . . . .”<sup>65</sup> The Court implemented this requirement by asserting that the jurisdictional requirements of *International Shoe v. Washington* and its progeny is the determinative test: “if a foreign corporation purposefully avails itself of the benefits of an economic market in the forum State, it may subject itself to the State’s *in personam* jurisdiction even if it has no physical presence in the State.”<sup>66</sup>

Since *Quill* was decided, the constitutional case law governing *in personam* jurisdiction has evolved.<sup>67</sup> In *J. McIntyre Mach., Ltd. v. Nicastro*, the Supreme Court held that because a foreign manufacturer had no office in the state, paid no taxes nor owned property in the state, and conducted no business in the state, the state did not have jurisdiction.<sup>68</sup> In order to establish the requisite contact for jurisdiction pursuant to *International Shoe* and its progeny, contact with a state vis-à-vis a parent enterprise’s subsidiaries is *not* sufficient.<sup>69</sup> In *Goodyear*, the Court stated that “[a] connection so limited between the forum and the foreign corporation . . . is an inadequate basis for the exercise of general jurisdiction . . . . Such a connection does not establish the ‘continuous and systematic’ affiliation necessary to empower . . . courts to entertain claims unrelated to the foreign corporation’s contacts with the State.”<sup>70</sup>

The restrictions imposed by the Constitution are largely encapsulated into the normative notion that states cannot lay claim to the property of a taxpayer who is not sufficiently connected to the state. Conversely, by creating some connection with a state, a taxpayer should be aware that his or her actions could result in constitutionally valid taxation. This appears particularly obvious in the severance tax context where a party extracts natural resources *from the taxing state*; the clarity of constitutionally valid

---

<sup>65</sup> *Quill Corp. v. N. Dakota*, 504 U.S. 298, 306 (1992) (quoting *Miller Bros. Co. v. Maryland*, 347 U.S. 340, 344-45 (1954)).

<sup>66</sup> *Id.* at 307.

<sup>67</sup> *Id.* at 298, 307.

<sup>68</sup> See *J. McIntyre Mach., Ltd. v. Nicastro*, 131 S. Ct. 2780, 2780-81 (2011).

<sup>69</sup> *Goodyear Dunlop Tires Operations, S.A. v. Brown*, 131 S. Ct. 2846, 2851 (2011).

<sup>70</sup> *Id.* at 2851.

severance taxation disappears where severance tax liability is imposed on a first purchaser who has not created a connection with the taxing state beyond purchasing natural gas that was sourced from the taxing state.<sup>71</sup>

Due Process Clause concerns have been raised in determining liability and the extent to which a state may extend its tax enforcement.<sup>72</sup> *Commonwealth Edison* is again relevant because, in the case, the taxpayers contended that the *amount* of the tax violated the Due Process Clause.<sup>73</sup> The Supreme Court stated in *Commonwealth Edison*, "there is no requirement under the Due Process Clause that the amount of general revenue taxes collected from a particular activity must be reasonably related to the value of the services provided to the activity."<sup>74</sup> In making this statement, the Court renounced the notion that the Due Process Clause requires any even exchange between the taxpayer and the state: the benefits bestowed by the state can be minimal in light of the tax burden held by the taxpayer.

By making a comparative assessment of different severance tax methodologies, the remainder of this Article aims to highlight the salient legal constraints on severance taxes from the Constitution, *as well as* related pragmatic considerations.

### III. POINTS OF COMPARISON: ASSESSING THE SEVERANCE TAX METHODOLOGIES OF STATES WITH ABUNDANCE OF NATURAL GAS.

#### *A. Texas*

Texas has historically been recognized for its abundant amounts of natural resources, and it has been a strong producer of natural gas since the 1960's.<sup>75</sup> The state is worth examining because its severance tax laws are not in response to new discoveries, and because it has benefited economically

---

<sup>71</sup> For example, if the natural gas is extracted from State A by a company from State B that sells the natural gas to a third party from State C who has not had any contact with State A beyond buying natural gas extracted at one time from State A.

<sup>72</sup> *Quill Corp. v. N. Dakota*, 504 U.S. 298, 298 (1992).

<sup>73</sup> *Commonwealth Edison Co. v. Montana*, 453 U.S. 609, 609, 622 (1981).

<sup>74</sup> *Id.* at 622.

<sup>75</sup> The graph in Figure 1 illustrates the increase of annual gross natural gas withdrawals from Texas as measured in millions of cubic feet in comparison with Pennsylvania. See *infra* Figure 1.

from its abundant natural resources.<sup>76</sup> Certainly, experience does not guarantee flawless severance tax policies, but as a leader in natural gas extraction, Texas does provide an optimal point of comparison with other states in assessing different severance tax policies.

The severance tax in Texas is known as the “Gas Production Tax.”<sup>77</sup> In Texas, the severance tax on natural gas is generally imposed on the producer at a 7.5 percent rate.<sup>78</sup> The tax base is the “market value of gas produced and saved in th[e] state by the producer.”<sup>79</sup> The Texas Administrative Code states that “[i]f gas is sold for cash only, then tax shall be computed on the producer’s gross cash receipts.”<sup>80</sup> However, the purchaser may reimburse the seller for the gas production tax without increasing the tax base.<sup>81</sup>

The Texas Court of Appeals stated, “[t]he appropriate base for calculating the tax, then, is the negotiated contract price between the purchaser and the producer . . . absent proof of bad faith, fraud or collusion.”<sup>82</sup> If the natural gas is not sold at the point of production, totaling the proceeds of the sale and deducting transportation, processing, and costs required for the sale costs can establish the market value for the purpose of determining the gas production tax.<sup>83</sup>

The producer, however, does not bear the sole responsibility for the payment of the tax. As the Texas Court of Appeals noted, “in Texas, [the] severance tax on natural gas or oil is payable by the producer, unless the purchaser takes delivery of the gas on the premises where it is produced, or

---

<sup>76</sup> See *infra* Figure 1; see also Tyler Cowen, *Why Texas Is Our Future*, TIME (Oct. 28, 2013), <http://time.com/80005/why-texas-is-our-future/>.

<sup>77</sup> TEX. TAX CODE ANN. § 201.051 (West 2008).

<sup>78</sup> TEX. TAX CODE ANN. § 201.052(a) (West 2008). A “producer” is defined as “a person who takes gas from the earth or water, a person who owns, controls, manages, or leases a gas well, or a person who owns an interest, including a royalty interest, in gas or its value, whether the gas is produced by the person owning the interest or by another on his behalf by lease, contract, or other arrangement.” TEX. TAX CODE ANN. § 201.001(5) (West 2008).

<sup>79</sup> TAX § 201.052(a).

<sup>80</sup> 34 TEX. ADMIN. CODE § 3.18(b) (2014).

<sup>81</sup> *Id.*

<sup>82</sup> *Dorchester Master Ltd. P’ship v. Bullock*, 794 S.W.2d 554, 556 (Tex. App. 1990) (citing *Calvert v. Union Producing Co.*, 402 S.W.2d 221, 225 (Tex. App. 1966)).

<sup>83</sup> *Dorchester Gas Producing Co. v. Bullock*, 668 S.W.2d 422, 424 (Tex. App. 1984); *Dorchester Master*, 794 S.W.2d at 556 (“The Comptroller has defined marketing costs to include the costs for compressing, dehydrating and sweetening the gas sold as well as the costs of delivering the gas to the purchaser.”).

unless the parties otherwise agree.”<sup>84</sup> The liability only attaches to the first purchaser if the first purchaser takes possession *in Texas*.<sup>85</sup> This loophole circumvents Commerce Clause and Due Process Clause concerns, as discussed *supra*, for two reasons: First, the first purchaser has a presumptive substantial nexus with Texas because the first purchaser was conducting business in Texas by purchasing natural gas *and* taking possession within the state. Therefore, the first, and arguably most important, prong of *Complete Auto* is fulfilled.<sup>86</sup> Second, by taking possession in Texas, the first purchaser is at least on notice that the natural gas is sourced from Texas. This would likely fulfill the “minimum link” that a state must have with an individual to impose a tax.<sup>87</sup>

The administration of the severance tax on natural gas is relatively straightforward in Texas. The gas production tax is due to the Texas Comptroller “on the 20th day of the second month following the month of production.”<sup>88</sup> The Texas Tax Code requires that the producers<sup>89</sup> and first purchasers of natural gas submit reports to the state comptroller on or before the date that the tax is due.<sup>90</sup> Moreover, the Texas Tax Code requires that if the reports illustrate that the producer or first purchaser owes additional funds for gas production tax purposes, those taxes must be paid with the submitted reports.<sup>91</sup>

Texas does provide for tax exemptions and credits for the gas production tax, most notably a *de minimus* credit.<sup>92</sup> In order to qualify for

<sup>84</sup> *Endeavor Natural Gas, L.P. v. Magnum Hunter Prod., Inc.*, No. 13-06-352-CV, 2007 WL 4340870, at \*8 n.1 (Tex. App. Dec. 13, 2007) (citing TEX. TAX CODE ANN. §§ 201.051, 201.204, 201.2041, 201.251, 202.051, 202.154, 202.155 (West 2008)).

<sup>85</sup> *See id.*

<sup>86</sup> *See supra* text accompanying note 41.

<sup>87</sup> *Quill Corp. v. N. Dakota*, 504 U.S. 298, 306 (1992).

<sup>88</sup> TEX. TAX CODE ANN. § 201.201 (West 2013).

<sup>89</sup> *Id.* § 201.203 (“[T]he producer shall file a report with the comptroller on forms prescribed by the comptroller. The report must contain the following information concerning gas produced during the month being reported: (1) the gross amount of gas produced that is subject to the tax imposed by this chapter; (2) the leases from which the gas was produced; (3) the names and addresses of the first purchasers of the gas; and (4) other information the comptroller may reasonably require.”).

<sup>90</sup> *Id.* § 201.2035 (“[T]he first purchaser must file a report with the comptroller on forms prescribed by the comptroller. The report must contain the following information concerning gas purchased from a producer during the month being reported: (1) the gross amount of gas purchased from each producer; (2) the price paid for the gas; (3) the leases from which the gas was produced; and (4) other information the comptroller may reasonably require.”).

<sup>91</sup> *See id.* §§ 201.203–201.2035.

<sup>92</sup> *See id.* §§ 201.58–60.

the credit, the producer must operate a “qualifying low-producing well.”<sup>93</sup> The credit varies from twenty-five percent to one hundred percent, depending “on the average taxable price of gas . . . during the previous three months based on various price indices available to producers . . . .”<sup>94</sup>

### B. West Virginia

West Virginia also provides a valuable point of comparison due to its extensive history as a traditional fossil fuel producer. Even though it is relatively new to natural gas<sup>95</sup>, West Virginia’s severance tax policies are a valuable point of comparison for states in the Marcellus Shale region that have not enacted a severance tax on natural gas because much of its production is attributed to the discovery of the Marcellus Shale.<sup>96</sup>

West Virginia refers to its severance tax on natural gas as the “Severance and Business Privilege Tax.”<sup>97</sup> The tax base is the gross value derived from the gross proceeds from the sale of the natural gas.<sup>98</sup> “Gross value” means:

[i]n the immediate vicinity, where severed, determined after application of post production processing generally applied by the industry to obtain commercially marketable or usable natural resource products[,] [t]he value of natural resource products

---

<sup>93</sup> *Id.* § 201.59.

<sup>94</sup> *Id.* § 201.59(b)-(f).

<sup>95</sup> See *infra* Figure 1 (representing the increase of annual gross natural gas withdrawals from West Virginia, pulled from *West Virginia Natural Gas Gross Withdrawals*, U.S. ENERGY INFO. ADMIN., <http://www.eia.gov/dnav/ng/hist/n9010wv2A.htm> (last released Oct. 31, 2014).), and Pennsylvania, pulled from *Pennsylvania Natural Gas Gross Withdrawals*, U.S. ENERGY INFO. ADMIN., <http://www.eia.gov/dnav/ng/hist/n9010pa2A.htm> (last released Oct. 31, 2014)).

<sup>96</sup> Kornfeld, *supra* note 1.

<sup>97</sup> W. VA. CODE § 11-13A-1 (2014).

<sup>98</sup> *Id.* § 11-13A-3c(b). See also 2004 WL 1416142, at \*6 (W.Va. Off. Hrg. App., Nov. 5, 2004) (“[G]ross proceeds’ means the value, whether in money or other property, actually proceeding from the sale or lease of tangible personal property, or from the sale or lease of tangible personal property, or from the rendering of services, without any deduction for the cost of property sold or leased or expenses of any kind.”). See also 2004 WL 1416142, at \*7 (W.Va. Off. Hrg. App., Nov. 5, 2004) (“The governing severance tax statute also explains that [f]or natural gas, gross value is the value of the natural gas at the wellhead immediately preceding transportation and transmission. Thus, the legislative regulations implementing the statute explain that [i]n order to arrive at the well-mouth value of such severance and production, transportation or transmission expenses incurred by producers of natural gas before its sale shall be allowed as a deduction from the gross proceeds of the sale of such gas.”) (internal citations omitted).

produced shall be determined by the gross proceeds of sales in every instance in which a bona fide sale of such products is made at the point where production ends, and whether sold at wholesale or retail.<sup>99</sup>

The tax rate is five percent.<sup>100</sup> West Virginia offers a tax credit against the Severance and Business Tax: each taxpayer is entitled to a five hundred dollar tax credit per year.<sup>101</sup> Annual taxes are due annually one month after the end of the taxable year.<sup>102</sup> Every responsible party must file an annual tax return for the entire taxable year.<sup>103</sup>

In comparison to Texas, the West Virginia severance tax is imposed on any party that is “in the business of severing, extracting, reducing to possession and producing for sale, profit or commercial use any other natural resource product . . . .”<sup>104</sup> Other parties besides the severer, extractor, *et cetera*, incur severance tax liabilities pursuant to § 11-13A-3c: they are “vested with title and ownership to part or all of the oil and gas, as personal property, immediately after its severance, extraction, reduction to possession and production (except royalty recipients in kind) . . . .”<sup>105</sup>

Evading Commerce Clause and Due Process Clause violations, this broad liability that expands past the extractors by requiring “immediate possession” after severance.<sup>106</sup> If one can take possession immediately after the severance was made, the four-prong test of *Complete Auto* will likely be fulfilled, specifically including the substantial nexus prong and the fair relation to the services provided in the state prong.<sup>107</sup> By taking possession in the state, there is an obvious nexus with the state, as the individual is presumptively in the state to purchase natural gas. Moreover, the necessary immediacy of taking possession after extraction protects the tax with regard

<sup>99</sup> W. VA. CODE § 110-13A-2.7 (2014).

<sup>100</sup> *Id.* § 11-13A-3c(b).

<sup>101</sup> *Id.* § 11-13A-10. It is “to be applied at the rate of forty-one dollars and sixty-seven cents per month for each month the taxpayer was engaged in business in this state during the taxable year exercising a privilege taxable under this article.” *Id.* § 11-13A-3c(c).

<sup>102</sup> W. VA. CODE § 11-13A-8 (2014).

<sup>103</sup> *Id.*

<sup>104</sup> *Id.* at § 11-13A-3c(a).

<sup>105</sup> *Id.* at §§ 11-13A-5, 11-13A-2(b)(9).

<sup>106</sup> *See id.* at § 11-13A-5.

<sup>107</sup> *Complete Auto Transit, Inc.*, *supra* note 41 and accompanying explanatory; *see id.* *See id.*



to the fourth prong of *Complete Auto*.<sup>108</sup> As the Court stated in *Commonwealth Edison Co.*, the “tax must be reasonably related to the extent of the contact.”<sup>109</sup> Much like the substantial nexus prong, the immediacy of possession creates a presumption that the one taking possession after extraction has at least some contacts with the state, which would allow the state to impose the severance tax on the individual.<sup>110</sup>

### C. Colorado

In comparison, Colorado is a valuable point of reference for primarily two reasons: (1) similar to many states in the Marcellus Shale region, Colorado has experienced a large increase in natural gas due to the use of hydraulic fracturing and (2) there are unique aspects to Colorado’s severance tax policies. The Colorado severance tax is imposed on each and every party engaged in the severance of natural gas.<sup>111</sup> As a Colorado Court of Appeals noted, “[t]he amount of tax paid is based on the total gross income derived from the sale of the natural resource.”<sup>112</sup> Colorado defines gross income as:

the net amount realized by the taxpayer for sale of the oil or gas, whether the sale occurs at the wellhead or after transportation, manufacturing, and processing of the product. Net amount shall be calculated on the basis of the gross lease revenues, less

---

<sup>108</sup> See *Complete Auto Transit, Inc.*, 430 U.S. at 274.

<sup>109</sup> *Commonwealth Edison Co. v. Montana*, 453 U.S. 609, 626 (1981).

<sup>110</sup> However, the West Virginia code does not define immediately. See W. VA. CODE ANN. § 11-13A-2 (West 2014). See *Commonwealth Edison*, 453 U.S. at 626. Moreover, much of the natural gas extracting is geographically close to state borders. See Itzhak E. Kornfeld, *Geology, The Marcellus Shale, Experts, and Dispute Resolution*, 116 W. Va. L. Rev. 865. A broad interpretation of “immediately” would allow the state’s Tax Department to impose the severance tax on an individual who took delivery within a small amount of time in another state. As discussed *infra*, such situations are problematic under the *Complete Auto* analysis. See *Complete Auto Transit*, 430 U.S. at 276. See *infra* Part IV.A. This inadequacy is the reason for the proposal for protections similar to holders in due course or bona fide purchasers. See *Complete Auto Transit*, 430 U.S. at 279.

<sup>111</sup> COLO. REV. STAT. ANN. § 39-29-105(1) (West 2008).

<sup>112</sup> *BP Am. Prod. Co. v. Colo. Dep’t of Revenue*, No. 12CA1897, 2013 WL 5947018, ¶ 2 (Colo. App. Nov. 7, 2013); see also *id.* at § 39-29-105(1)(a) (West 2008).

deductions for any transportation, manufacturing, and processing costs borne by the taxpayer.<sup>113</sup>

The Colorado severance tax, which has a basis on gross receipts, is subject to progressive rates.<sup>114</sup> The Colorado severance tax also has the ability to operate as a fiduciary tax.<sup>115</sup> Section 39-29-111 requires that “[e]very producer or purchaser who disburses funds that are owed to any person owning a working interest, a royalty interest, a production payment, or any other interest in any oil or gas produced in Colorado” withhold one percent of the value of the gross receipts to be disbursed and remitted to the Colorado Department of Revenue.<sup>116</sup> Severance taxes stemming from natural gas extraction must be paid annually along with the filing of the returns.<sup>117</sup>

Colorado imposes a broad severance tax liability that extends far beyond the extractor and encompasses multiple parties.<sup>118</sup> There are no statutorily imposed prerequisites that must be met in order for the state to impose severance tax liability beyond the extractor to the first purchaser, as evidenced in states such as West Virginia and Texas.<sup>119</sup> Colorado similarly does not have any qualifying language: liability extends to almost every party participating in the extraction and sale of the natural gas, regardless of state boundaries.<sup>120</sup> Due to this unchecked liability, in its current structure the Colorado severance tax risks being struck down by a federal court if

<sup>113</sup> COLO. REV. STAT. ANN. § 39-29-102 (3)(a) (West 2008). “Where the parties to the sale are related parties and the sales price is lower than the price for which that oil or gas could otherwise have been sold to a ready, willing, and able buyer and where the taxpayer was legally able to sell the oil or gas to such a buyer, gross income shall be determined by reference to comparable arms-length sales of like kind, quality, and quantity in the same field or area, less deductions for transportation, manufacturing, and processing done prior to the sale.”

<sup>114</sup> COLO. REV. STAT. ANN. § 39-29-105(1)(b) (West 2008). (The rates are as follows: 2% for gross receipts under \$25,000; 3% for gross receipts more than \$25,000 and under \$100,000; 4% for gross receipts more than \$100,000 and under \$300,000; and 5% for gross receipts \$300,000 and more.).

<sup>115</sup> See COLO. REV. STAT. ANN. § 39-29-111(1)(a) (West 2007).

<sup>116</sup> *Id.* A “producer” is defined as any “person producing or extracting oil shale or oil and gas deposits located within this state or the first purchaser of oil shale or oil and gas produced from deposits located within this state. *Id.* § 39-29-111(3) (West 2007).

<sup>117</sup> COLO. REV. STAT. ANN. § 39-29-112(1) (West 2012). The taxes and returns are due on or before the 15th day of the fourth month following the end of the taxable year. *Id.*

<sup>118</sup> See *id.* at § 39-29-111(1)(a) (West 2007).

<sup>119</sup> See, e.g., W. VA. CODE ANN. § 11-13A-3a(a) (West 2010); W. VA. CODE ANN. § 11-13A-5(a) (West 2010).

<sup>120</sup> See COLO. REV. STAT. ANN. § 39-29-111(1)(a) (West 2007).

applied by the Colorado Department of Revenue in a manner that violates the Commerce Clause.<sup>121</sup>

Colorado does, however, have a *de minimus* exemption from the severance tax. If a well produces less than fifteen barrels of natural gas per day, and it has the capacity to produce 90,000 cubic feet or less of gas per day for the average of all producing days during the taxable year, the producer is not subject to the severance tax on those gross receipts.<sup>122</sup>

#### *D. Louisiana*

Louisiana, like Texas, is a historical producer of natural gas that precludes the method of hydraulic fracturing.<sup>123</sup> Indeed, Louisiana is a valuable benchmark because its severance taxes have been refined for decades; however, it is an even more useful point of comparison because of some of its innovative severance tax policies.

Louisiana imposes a severance tax on natural gas on the owners of the natural gas.<sup>124</sup> The Louisiana Revenue Code determines the rate based upon the pressure of the natural gas and the nature of the well.<sup>125</sup> It provides lower tax rates for natural gas extracted from incapable oil wells and incapable gas wells.<sup>126</sup> The current rate for non-incapable wells, i.e. the full rate, is approximately sixteen cents per thousand cubic feet of natural gas.<sup>127</sup> The lowest rate is for incapable oil-well gas, which is taxed at three cents per thousand cubic feet of natural gas.<sup>128</sup> These rates have a statutorily set floor and are adjusted annually according to a mathematical formula that

---

<sup>121</sup> See *supra* Part II.A; *infra* Part IV.A.

<sup>122</sup> COLO. REV. STAT. ANN. § 39-29-105(1)(b) (West 2008).

<sup>123</sup> See *infra* Figure 1.

<sup>124</sup> LA. REV. STAT. ANN. § 47:632 (West 2014); LA. REV. STAT. ANN. § 47:634 (West 2014) (“Owners” are defined as “owner at the time of severance”).

<sup>125</sup> LA. REV. STAT. ANN. § 47:633(9) (West 2012).

<sup>126</sup> LA. ADMIN. CODE tit. 61 § I.2903 (West 2014) (Incapable gas wells are defined as “a well classified by the Office of Conservation as a gas well which has been determined by the secretary to be incapable of producing an average of 250,000 cubic feet of gas per day, under operating conditions, throughout the entire taxable month”).

<sup>127</sup> See LA. REV. STAT. ANN. § 47:633(9)(d)(i) (West 2012).

<sup>128</sup> LA. REV. STAT. ANN. § 47:633(9)(b) (West 2012).

utilizes the New York Mercantile Exchange and the Secretary of Revenue's discretion.<sup>129</sup>

The Louisiana Revenue Code differs from many states by providing a severance tax reduction to incentivize environmental protection.<sup>130</sup> If a severer takes the "produced water" and injects it "into an oil and gas reservoir, from the same reservoir and field, for the purpose of increasing the recovery of hydrocarbons therefrom," the severance tax is reduced by twenty percent.<sup>131</sup>

The compliance aspects Louisiana's natural gas severance tax are different from the other states discussed *supra*. Under Section 47:638, if the severer has failed to pay the severance tax on the natural gas, the purchaser is obligated to withhold the value of the severance tax obligation and remit those funds to the state.<sup>132</sup> Additionally, if the purchaser is under a contract requiring the purchaser to pay the severer directly, the purchaser "is required to withhold the severance taxes from payments made to the owner and file the requisite reports and pay the taxes due."<sup>133</sup>

#### IV. SEVERANCE TAXES IN THE MARCELLUS SHALE: LIMITING FIRST-PURCHASER LIABILITY AND USING VOLUME TAX BASES TO MAXIMIZE ENVIRONMENTAL PROTECTION AND STABILIZE REVENUE.

After assessing the various severance tax methodologies in several natural gas-rich states, it is apparent that there are numerous approaches to engineering a *plausible* severance tax system. Despite the variances exhibited *supra*, not all of the severance tax schemes represent completely legal or pragmatic approaches in taxing private parties for their extraction of natural gas. In advocating for severance tax policies that are constitutionally compliant, do not stymie exploration and production, provide environmental protection, yet provide financial support to the state, this

---

<sup>129</sup> LA. REV. STAT. ANN. § 47:633(9)(d) (West 2012).

<sup>130</sup> LA. REV. STAT. ANN. § 47:633.5 (West 2012).

<sup>131</sup> *Id.*

<sup>132</sup> LA. REV. STAT. ANN. § 47:638 (West 2014).

<sup>133</sup> *McNamara v. Scurlock Oil Co.*, 545 So. 2d 1312, 1313 (La. App. 1 Cir. 1989) ("However, the person severing the natural resources is not released from liability for payment of the taxes." (citing LA. REV. STAT. ANN. § 47:638 (West 2014))).

Article separates various aspects necessary for a sustainable and utility-maximizing severance tax for the purposes of prescribing particular policies. As discussed *supra*, the importance of a constitutionally compliant severance tax lies in the federal courts' inability to correct violations since the courts only have the power to strike the severance tax down.<sup>134</sup>

### A. Liability

Determining the party or parties who bear the liability for the tax is a critical aspect in developing a severance tax, as overreaching liabilities have the possibility of rendering the tax unconstitutional pursuant to the Commerce Clause.<sup>135</sup> In some states, the party that extracts the natural gas is primarily liable for the severance tax; while in other states, the first purchaser of the natural gas also incurs a tax liability.<sup>136</sup> When coupled with reporting requirements for both the first purchaser and the producer, the notion of tax liability extending beyond the producer to the first purchaser appears a useful agent for accurate severance tax collection.<sup>137</sup>

Severance tax joint liability for the producer and the first purchaser are not constitutional violations *per se*; however, common situations may render such arrangements unconstitutional. As the Supreme Court stated in *Maryland v. Louisiana*, the constitutionality of a tax is predicated upon the holistic effects of the tax, not the explicit language in the statute.<sup>138</sup> For instance, if the producer, which operates in multiple states, extracts natural gas and subsequently delivers it to an out-of-state buyer who has not availed itself to the state seeking to impose the severance tax on the first purchaser, the taxing state's imposition of liability for the severance tax on the first purchaser would likely have Dormant Commerce Clause implications.<sup>139</sup>

For a state tax on a non-resident to be constitutionally compliant pursuant to the Dormant Commerce Clause, it must conform to the four-

---

<sup>134</sup> *Commonwealth Edison Co. v. Montana*, 453 U.S. 609, 628 (1981).

<sup>135</sup> *See supra* Part II.A.

<sup>136</sup> *See, e.g., Endeavor Natural Gas, L.P. v. Magnum Hunter Prod., Inc.*, 13-06-352-CV, 2007 WL 4340870 (Tex. App. Dec. 13, 2007); LA. REV. STAT. ANN. § 47:635 (West 2014); LA. REV. STAT. ANN. § 47:640 (West 2014).

<sup>137</sup> *See, e.g., W. VA. CODE* § 11-13A-8 (1985).

<sup>138</sup> *Maryland v. Louisiana*, 451 U.S. 725, 756 (1981).

<sup>139</sup> U.S. CONST. art. I, § 8, cl. 3.

prong test set forth in *Complete Auto*.<sup>140</sup> For severance taxes, the two prongs that pose the most difficulty are the “substantial nexus” prong and the “fair relation to services rendered by the state” prong.<sup>141</sup> Recall, substantial nexus depends upon whether the activities performed in the state on behalf of the taxpayer were significantly associated with the taxpayer’s ability to establish and maintain a market in the state.<sup>142</sup> In the example discussed *supra*, the out-of-state purchaser would likely not have a substantial nexus because the purchaser, if acting solely in the purchasing capacity, does not seek to maintain a market. Rather, it seeks to merely participate in the seller’s market to the extent that such participation is profitable. Such markets are not limited to the state and may be national/international markets. This is especially true in the case of an out-of-state first purchaser taking delivery out of state, where the first purchaser has not availed itself to the taxing state.

The fourth *Complete Auto* prong requires the tax to be in fair relation to the services rendered by the state. The imposition of the severance tax on the first purchaser in the aforementioned example fails to satisfy this prong.<sup>143</sup> As the Supreme Court has noted, the Commerce Clause does not require a *quid pro quo* exchange nor mandate that the benefits received by the taxpayer be *fair* in relation to the tax.<sup>144</sup> However, in the example of the out-of-state purchaser, the purchaser does not receive any *benefits* from the state; instead, the purchaser has only received *goods* from the state. Because the state fails to render *any* benefit, the fourth prong of *Complete Auto* provides a basis to strike down a severance tax that is imposed on a purchaser due to the *absence* of any benefit from the state, rather than the disparity of value.

Currently, Texas, West Virginia, Colorado, and Louisiana impose the severance tax on the first purchaser to varying extents, which can be problematic pursuant to the Commerce Clause. Under the safeguards as

---

<sup>140</sup> See *Commonwealth Edison Co. v. Montana*, 453 U.S. 609, 617 (1981); *Complete Auto Transit, Inc. v. Brady*, 430 U.S. 274 (1977) (applying four prong test as follows: (1) a substantial nexus with the taxing State, (2) is fairly apportioned, (3) does not discriminate against interstate commerce, and (4) is fairly related to the services provided by the State).

<sup>141</sup> See *Commonwealth Edison*, 453 U.S. at 617; *Complete Auto*, 430 U.S. 274.

<sup>142</sup> *Tyler Pipe Indus. v. Wash. State Dep’t of Revenue*, 483 U.S. 232 (1987).

<sup>143</sup> See *Commonwealth Edison*, 453 U.S. at 617.

<sup>144</sup> See *id.* at 619.

proposed *infra*, states may be able to constitutionally impose severance tax liability on individuals who purchase the natural gas from the severing party. The safeguards would require essential factors, such as notice on the part of the first purchaser, for the state to extend liability. For example, notice would be *indicia* that the taxpayer knowingly availed itself to the natural resources of the state and that the first purchaser had a substantial nexus as required by *Complete Auto*. Moreover, notice may also address Due Process Concerns.<sup>145</sup>

As stated *supra*, the Due Process Clause requires that the state have “some definite link, some minimum connection, between a state and the person, property or transaction it seeks to tax.”<sup>146</sup> There is likely such a connection if the first purchaser procured the natural gas from a state seeking to impose the severance tax on the first purchaser. The Due Process analysis, however, does not end with merely searching for a “link.” The Court further opined that in order for the state to impose a tax on a non-resident, the non-resident must purposely avail itself to the state.<sup>147</sup>

If the first purchaser had no prior notice that the purchased natural gas was extracted from a state that imposes joint severance tax, the first purchaser did not purposefully avail itself to any link or connection with the state because “purposefully” requires some measure of volition, and consequently, knowledge.<sup>148</sup> In this case, the first purchaser did not have knowledge, and therefore, did not “purposefully” avail itself to the state. Consequently, if the state sought severance taxes from the first purchaser, it would violate the Due Process Clause.<sup>149</sup>

Imposing joint liability on the extractor and the first purchaser certainly improves the likelihood that the tax will be paid and also accountability. Joint liability gives the state an additional party to pursue if the extractor does not pay or is unable to pay the severance tax on the natural gas. Imposing severance tax liability on the first purchaser also

---

<sup>145</sup> U.S. CONST. amend. V.

<sup>146</sup> See *Quill Corp. v. N. Dakota*, 504 U.S. 298, 306 (1992) (quoting *Miller Bros. Co. v. Maryland*, 347 U.S. 340, 344-45 (1954)).

<sup>147</sup> *Quill Corp. v. N. Dakota*, 504 U.S. 298, 306 (1992) (citing *Miller Bros. Co. v. Maryland*, 347 U.S. 340, 344-45 (1954)).

<sup>148</sup> *Id.* (citing *Burger King Corp. v. Rudzewicz*, 471 U.S. 462 (1985)).

<sup>149</sup> *Id.* at 307.

improves the accuracy of the accounting of natural gas and accompanying severance tax. Generally, first purchasers, as well as the extractors, must file a severance tax return.<sup>150</sup> This provides tax collectors with points of comparison to ensure that both the first purchaser and the extractor are reporting the extraction and sale of natural gas accurately.

Despite the improved reporting accuracy and tax collections stemming from joint liability for the severance tax of natural gas, the constitutional provisions discussed *supra* present obstacles for any state tax department that is engineering a severance tax system that seeks to place liability and obligations beyond the extractor.<sup>151</sup> To address the conflict between the Constitution and the states' need for accuracy and revenue generation, states creating new severance tax systems should create a release value similar to bona fide purchasers or holders in due course.<sup>152</sup>

As discussed above, *bona fide* purchasers and holders in due course are special classifications for purchasers of real property and commercial paper that provide purchasers, who acquired the real property or commercial paper under certain auspices, legal protections against other parties claiming an interest in the property or the commercial paper.<sup>153</sup> Generally, *bona fide* purchasers and holders in due course must (1) pay value for the property or commercial paper, (2) without notice of other claims, and (3) take in good faith.<sup>154</sup> By having such protection in the severance tax system, states could maintain the additional accuracy and revenue collection of the first purchaser liability while avoiding the pitfalls of Commerce Clause and Due Process Clause scrutiny.<sup>155</sup>

*Bona fide* purchasers and holders in due course receive no notice and take in good faith, so they generally do not avail themselves to the claims of other interested parties.<sup>156</sup> This is often the case with the state in regards to severance taxes under the Commerce Clause: a purchaser who has not availed itself to the taxing state, except for unknowingly purchasing the

---

<sup>150</sup> See, e.g., W. VA. CODE § 11-13A-8 (2014).

<sup>151</sup> See *Complete Auto Transit, Inc. v. Brady*, 430 U.S. 274, 288-89 (1977); *Quill Corp. v. N. Dakota*, 504 U.S. 298, 306 (1992).

<sup>152</sup> See GIFIS, *supra* note 16, at 249-50; U.S. CONST. art. I, § 8, cl. 3; U.S. CONST. amend. V.

<sup>153</sup> See GIFIS, *supra* note 16, at 249-50; U.S. CONST. art. I, § 8, cl. 3; U.S. CONST. amend. V.

<sup>154</sup> See GIFIS, *supra* note 16, at 249-50; U.S. CONST. art. I, § 8, cl. 3; U.S. CONST. amend. V.

<sup>155</sup> See *supra* Parts II.A-B.

<sup>156</sup> See *supra* GIFIS, note 16, 249-50; U.S. CONST. art. I, § 8, cl. 3; U.S. CONST. amend. V.



natural gas sourced from the state, has taken the natural gas in good faith and does not know that the natural gas is subject to severance taxation. Without availing itself to the state, the purchaser likely lacks any requisite nexus or connection with the state as required by the Commerce Clause.

Due Process Clause concerns arise by imposing the severance tax on an unknowing purchaser. The state could avoid Due Process violations by utilizing a classification for purchasers in the mold of *bona fide* purchasers or holders in due course.<sup>157</sup> As discussed in *Quill*, the important aspect of the Due Process regarding state taxation is notice to the party whom the state seeks to tax.<sup>158</sup> If a purchaser takes *with notice* or in bad faith with regard to the severance tax obligation, the purchaser has some notion that the natural gas being purchased is not free of claims.

### B. Tax Base

The tax base for the severance tax is typically some monetary value of the natural gas or the volume of the gas extracted.<sup>159</sup> This Article advocates for the volume methodology similar to that utilized by Louisiana because it does not have as many costs and hindrances on compliance.<sup>160</sup> Additionally, as discussed *infra*, it provides the state with a more predictable revenue stream, as opposed to fluctuating market prices.

The tax base (the monetary value of the natural gas) is often determined in two ways: (1) the fair market value of the natural gas, or (2) the contract price for the natural gas.<sup>161</sup> Perhaps the greatest benefit to using the fair market value of the natural gas when extracted as the tax base is the potential upside in terms of revenue when the price of natural gas is high. Conversely, the price may be low at times, resulting in decreased revenue collected by the state. The severance tax revenues would depend

---

<sup>157</sup> *Quill Corp. v. N. Dakota*, 504 U.S. 298, 307 (1992) (citing *Burger King Corp. v. Rudzewicz*, 471 U.S. 462 (1985)).

<sup>158</sup> *Id.*

<sup>159</sup> See, e.g., LA. REV. STAT. ANN. § 47:633(9)(d)(i) (West 2013); TEX. TAX CODE ANN. § 201.052 (West 2013).

<sup>160</sup> See LA. REV. STAT. ANN. § 47:633(9)(d)(i) (West 2013).

<sup>161</sup> Compare W. VA. CODE R. § 110-13A-2.7, -3 (2014) (using “gross value” of natural gas, or market value, for calculating tax), with *Dorchester Master Ltd. P’ship v. Bullock*, 794 S.W.2d 554, 556 (Tex. App. 1990) (holding that the base for calculating severance tax should be contract price).

directly on the value of natural gas. Because natural gas can be collected and sold at a later date, natural gas companies would be incentivized to extract more natural gas when prices are low and sell when prices are high. This could not only disrupt the natural gas market, but also depress severance tax revenues from extraction during periods of low natural gas prices.<sup>162</sup>

There are also costs and benefits to using contract or transaction pricing to determine the severance tax base. By attaching the severance tax base to the contract or transaction price, the state would be taxing the actual fair market value of the natural gas in real time.<sup>163</sup> Therefore, if the state wanted to predicate its severance tax on the value of the natural gas, the contract price would provide the most accurate figure in terms of economic reality. Contract prices, however, do not necessarily represent the economically predicated price. Contract terms may be only a portion of the deal and there may be "under the table" dealings concerning other terms, consequences, and benefits, that are not reflected in the contract price. In sum, contract prices are subject to manipulation and, therefore, susceptible to improper adjustments incentivized by tax savings.

Setting the tax base to the volume of extracted natural gas provides the most predictable tax base.<sup>164</sup> Additionally, using the volume of natural gas does not subject the state's coffers to a revenue drought if natural gas prices are low. The main drawback, however, is that it does not offer the same volume of tax dollars during periods when natural gas prices are high, which would provide a higher tax base.

From an environmental protection standpoint, a volume tax base can be viewed as the most pragmatic. A volume tax base creates a constant price per unit of natural gas extracted. The severance tax, if predicated upon a volume base, remains the same regardless of the highs and lows of the natural gas market. Because the severance tax remains constant, the

---

<sup>162</sup> There may be market regulations as a backstop, but that is outside of the scope of this article. Moreover, if such market manipulation would result, tax revenues could fall despite natural gas prices rising.

<sup>163</sup> This *assumes* that each transaction actually is at arm's length and reflects the demand and supply of the natural gas to the extent that the price is *pereto optimal*.

<sup>164</sup> Volume tax bases do not fluctuate like market prices because volumes are measurements not subject to changes via supply and demand.

economic deterrent from extracting natural gas remains constant and subject to one variable that is controlled by the state: the tax rate itself.

### C. Tax Rate, Exemptions, and Credits

States are generally free to determine the tax rate for the purposes of a severance tax.<sup>165</sup> The tax rate and exemptions should, therefore, be largely a product of the state's need for revenue and disposition towards environmental protection. The rate, when assessed under a volume-based severance tax system, appears similar to the concept of royalties in that the severer pays a specific cost per unit of natural gas extracted.<sup>166</sup> Progressive rates, as implemented in Colorado, provide an interesting method for using the tax rate as a means of extraction deterrence: the more a party extracts, the higher the rate of the tax.<sup>167</sup> Colorado, however, bases its tax on the monetary value rather than volume.<sup>168</sup> The progressive rates are based upon the amount of money realized from the sale of natural gas. Essentially, severance tax rates are higher when the amount of money earned from the sale of the natural gas is greater.<sup>169</sup> If a state implements a new volume-based severance tax with progressive rates, rates need to increase based upon the amount severed because volume of natural gas severed is the only metric to predicate increases in tax rates. This gives the state complete power to determine either the funds required for state's budget or the appropriate deterrence to natural gas extraction as a means of environmental protection.

Along with setting tax rates, states utilize tax exemptions to achieve certain goals. The type of exemption implemented most commonly is the *de minimus* exemption, in which a producer does not incur severance tax liabilities unless the producer extracts an amount of gas above a certain

---

<sup>165</sup> See Mike McGrath & Walter Hellerstein, *Reflections on Commonwealth Edison Co. v. Montana*, 43 Mont. L. Rev. 165, 175 (1982) (discussing the implications of *Commonwealth Edison Co. v. Montana*, 453 U.S. 609 (1981), as it applies to state severance tax survival under commerce clause scrutiny).

<sup>166</sup> Compare this with systems using monetary values as the base of severance taxes, where the rate is a percentage of the *value* of the natural gas.

<sup>167</sup> See *supra* text accompanying note 114.

<sup>168</sup> BP Am. Prod. Co. v. Colo. Dep't of Revenue, No. 12CA1987, 2013 COA 147, ¶2 (Colo. Ct. App. Nov. 7, 2013), *cert. granted*, No. 13SC996 (Colo. Sept. 2, 2014); see also COLO. REV. STAT. § 39-29-105(1) (2014) (effective Aug. 5, 2008).

<sup>169</sup> COLO. REV. STAT. § 39-29-105(1)(b) (2014) (effective Aug. 5, 2008).

threshold.<sup>170</sup> A *de minimus* exemption provides a number of benefits. First, it gives producers leeway to assess a drilling site to determine if extracting natural gas from the site can be profitable without adding the additional costs of an exploratory stage. Second, it relieves the state of the administrative costs of assessing all the severance tax returns where only a small amount of natural gas is extracted with correspondingly negligible tax revenues.

Finally, tax credits provide benefits for both states and natural gas producers. Perhaps the most practical tax credit that a state in the Marcellus Shale should consider is the environmental protection credit Louisiana offers to extractors.<sup>171</sup> In Louisiana, if a natural gas extractor disposes of the water used in the extraction process in an environmentally conscious manner, as prescribed by the Louisiana Revenue Code, the severance tax liability is reduced by twenty percent.<sup>172</sup> The shortcoming of this credit is that it requires validation by the Louisiana Department of Natural Resources, thereby requiring interagency cooperation, communication, and the potential for an increase in bureaucracy, which in turn may cause errors, delays, and other difficulties.<sup>173</sup>

For a state in the Marcellus Shale crafting a severance tax on natural gas, Louisiana's severance tax credit may not be a perfect blueprint to follow, given that particular states may have different, individualized goals. Nevertheless, it illustrates a method by which the severance tax code may be used to further environmentally friendly extraction practices. States without a current severance tax on natural gas, such as Pennsylvania, Virginia, New Jersey, or New York, could use a similar credit system as a means of encouraging environmental protection and pricing out environmentally hazardous practices and parties from the natural gas market.

---

<sup>170</sup> See, e.g., TEX. TAX CODE ANN. § 201.058-.060 (West 2013); LA. ADMIN. CODE tit. 61, § I.2903 (2003).

<sup>171</sup> See LA. REV. STAT. ANN. § 47:633.5 (2013).

<sup>172</sup> *Id.* § 47:633.5(C).

<sup>173</sup> *Id.* § 47:633.5(D).

## V. CONCLUSION

Unlike Texas, West Virginia, Colorado, Louisiana, and numerous other states, Pennsylvania, New Jersey, New York, and Virginia have not yet enacted state severance taxes on the extraction of natural gas. New York and New Jersey currently have a moratorium on hydraulic fracturing, which is the primary method of extracting natural gas from the Marcellus Shale. Virginia allows for local governments to impose severance taxes on the extraction of natural gas, but does not have a state-imposed severance tax. Lastly, Pennsylvania imposes an impact fee on hydraulic fracturing, but does not impose a severance tax on natural gas that is extracted using other means.

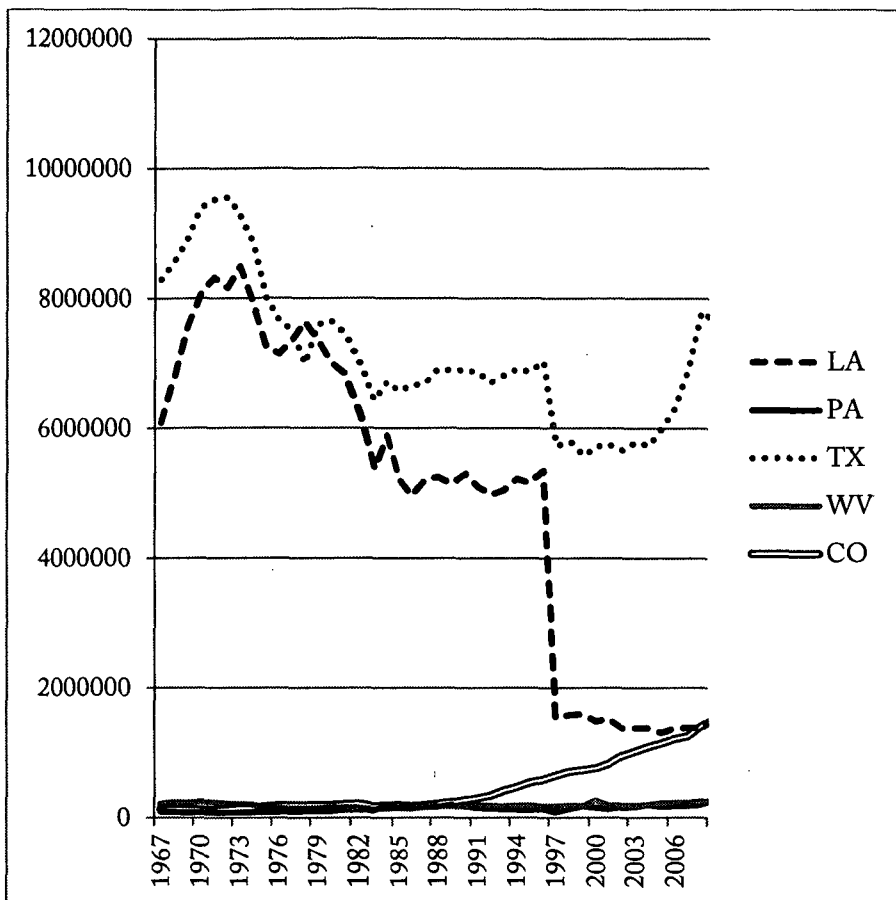
At least one of these states in the Marcellus Shale will consider enacting a severance tax to aid in budgetary woes or as a means of environmental protection. The most constitutionally compliant severance tax policy would not impose liability on subsequent purchasers without a safe harbor similar to those found with *bona fide* purchasers or holders in due course. Moreover, in order to both control the revenue stream from the severance tax and have full discretion over extraction to address environmental concerns, a volume-based tax base is the ideal option. It gives the state full discretion to determine the exact tax rate based on its needs for revenue or environmental protection, rather than falling victim to low natural gas prices.

For the most optimal severance tax, the tax rate must be made pursuant to the needs of the individual state. Using progressive rates as implemented by Colorado, a state has the power to disincentivize large extractions of natural gas as a means of environmental protection. Credits and exemptions are illustrations of other tax policies that may alternatively be used to incentivize desired aspects of natural gas extraction.

Ultimately, individual states will need to decide how they would like to maximize natural gas extraction for both budgetary purposes and environmental purposes. A state enacting a new severance tax, however, should be aware of the policies of other states and must recognize the constraints of the Constitution, as federal courts are not enabled to repair faulty severance tax policies, but may only strike them down in totality.

## APPENDIX

Figure 1



Information was gathered from *U.S. Natural Gas Gross Withdrawals and Production*, U.S. ENERGY INFO. ADMIN. (Sept. 30, 2014), [http://www.eia.gov/dnav/ng/ng\\_prod\\_sum\\_dc\\_u\\_NUS\\_m.htm](http://www.eia.gov/dnav/ng/ng_prod_sum_dc_u_NUS_m.htm); *Colorado Natural Gas Withdrawals*, U.S. ENERGY INFO. ADMIN. (Sept. 30, 2014), <http://www.eia.gov/dnav/ng/hist/n9010co2A.htm>; *Louisiana Natural Gas Withdrawals*, U.S. ENERGY INFO. ADMIN. (Sept. 30, 2014), <http://www.eia.gov/dnav/ng/hist/n9010la2A.htm>; *Pennsylvania Natural Gas Withdrawals*, U.S. ENERGY INFO. ADMIN. (Sept. 30, 2014), <http://www.eia.gov/dnav/ng/hist/n9010pa2A.htm>; *Texas Natural Gas Withdrawals*, U.S. ENERGY INFO. ADMIN. (Sept. 30, 2014), <http://www.eia.gov/dnav/ng/hist/n9010tx2A.htm>; *West Virginia Natural Gas Withdrawals*, U.S. ENERGY INFO. ADMIN. (Sept. 30, 2014), <http://www.eia.gov/dnav/ng/hist/n9010wv2A.htm>.