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The Fracturing of Place: The Regulation of Marcellus Shale Development and the Subordination of Local Experience

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THE FRACTURING OF PLACE: THE REGULATION OF MARCELLUS SHALE DEVELOPMENT AND THE SUBORDINATION OF LOCAL EXPERIENCE

*Nancy D. Perkins*¹

How is it that pretty soon I will only be able to buy one kind of light bulb while big national gas companies can operate at will in my backyard?

*Darlyn Brewer Hoffstot,
Resident of Westmoreland County, Pennsylvania*²

INTRODUCTION

In 2008, the media first reported natural gas production from the vast Marcellus Shale formation, a large portion of which lies beneath Pennsylvania.³ In the ensuing few years, Pennsylvania has faced an

1. Associate Dean and Professor of Law, Duquesne University School of Law. Also cited as Nancy Spyke. I wish to thank all of those who gave generously of their time to support this work in various ways: Dean Ken Gormley and Associate Dean Jane Moriarty of Duquesne Law School, Professor Marina Angel and the attendees at the 19th Annual CLE Conference – Update for Feminist Law Professors, and the editors and staff of this journal for organizing this symposium and giving me the opportunity to bring this project to fruition. I also thank Andrew Stiffler, Duquesne University School of Law J.D. Candidate 2013, for his valuable research assistance. Finally, I currently serve as a member of the Citizens Advisory Council to the Pennsylvania Department of Environmental Protection (CAC), and wish to inform readers that the ideas and opinions expressed in this Article are my own, and should not in any way be interpreted to reflect the opinion of the CAC itself or any of its members.

2. Darlyn Brewer Hoffstot, Op-Ed., *Invasion of the Marcellus Men*, PITT. POST-GAZETTE, Nov. 27, 2011, <http://old.post-gazette.com/pg/11331/1192453-109-0.stm>.

3. See GOVERNOR'S MARCELLUS SHALE ADVISORY COMM'N - REPORT 14, 19 (2011) [hereinafter MARCELLUS REPORT].

onslaught of energy companies eager to extract the gas using horizontal drilling and hydraulic fracturing,⁴ two technologies that have made drilling the shale economically feasible.⁵ As drilling permits have proliferated, massive well pads, towers, and impoundments have sprung up across the Commonwealth, generating concerns about air and water pollution, loss of green space, and the energy industry's political clout.⁶

Most Pennsylvanians agree that the economic benefits of natural gas development will likely outweigh its burdens,⁷ yet they have anxiously awaited legislation that will address the most pressing concerns associated with drilling. These include the need to impose an appropriate tax or impact fee on drilling companies; establish environmental regulations that adequately protect the Commonwealth's air, land, and waterways; and forge a workable partnership between state and local governments to manage the rapid development.⁸ In the waning days of 2011, both chambers of Pennsylvania's General Assembly passed bills to amend the

4. By the end of 2011 there were 3,000 drilling sites in the state, a number that some suggest could rise to as many as 50,000 in the next decade. Janice Crompton, *Local Leaders Oppose Shale Bill*, PITT. POST-GAZETTE, Dec. 15, 2011, <http://www.post-gazette.com/pg/11349/1196904-55-0.stm> (citing remarks by Pittsburgh Councilman Doug Shields).

5. See MARCELLUS REPORT, *supra* note 3, at 15, 18.

6. See, e.g., Don Hopey, *EPA Probing Washington County Shale Operations*, PITT. POST-GAZETTE, Feb. 13, 2012, <http://old.post-gazette.com/pg/12044/1209896-503-0.stm>; Janice Crompton, *Municipal Officials Decry State Control of Shale Drilling*, PITT. POST-GAZETTE, Dec. 14, 2011, <http://old.post-gazette.com/pg/11348/1196672-455-0.stm?cmpid=news.xml>.

7. Erich Schwartzel, *Poll Says Most in Pa. See More Pros than Cons in Shale Industry*, PITT. POST-GAZETTE, Nov. 16, 2011, <http://www.post-gazette.com/pg/11320/1190186-28.stm> (reporting that 41% believe the benefits of drilling outweigh the environmental harms, 33% feel drilling's harmful effects outweigh its benefits, and 26% believe the benefits and harms are equal).

8. See *id.* (noting public concern about taxing drilling companies and disclosure of ingredients in fracking fluid); see also Editorial, *Drill Bill: The Final Compromise Should Favor Pennsylvanians*, PITT. POST-GAZETTE, Nov. 27, 2011, <http://old.post-gazette.com/pg/11331/1192405-192.stm> (arguing for the higher assessment in the Senate bill) (hereinafter Editorial).

Commonwealth's Oil and Gas Act to address these issues, and more.⁹ On February 9, 2012, the final bill, House Bill 1950, was sent to Governor Tom Corbett.¹⁰ He signed the bill into law on February 14, 2012.¹¹

Of the provisions included in the law, perhaps none are more contentious than those clarifying the authority of Pennsylvania's municipalities to manage natural gas development. The legislation, now known as Act 13, preempts local ordinances that regulate gas well operations,¹² and further provides that local land use ordinances "shall allow for the reasonable development" of the Marcellus Shale.¹³ These provisions make clear that Pennsylvania's municipalities may not regulate the environmental aspects of shale drilling operations,¹⁴ and must permit gas extraction operations within their borders.¹⁵

When first proposed, the bill's restrictions met with immediate outcry from local government officials even though the law fell short of Governor Tom Corbett's initial desire for total state control of Marcellus development.¹⁶ Officials opposed what they believed to be a "one-size fits all" approach and described the House and Senate

9. See generally H.B. 1950, Gen. Assemb., Sess. of 2012 (Pa. 2011). Pennsylvania's Oil and Gas Act is codified at 58 P.S. §§ 601.101-601.605 (2010).

10. Laura Olson, *Shale Bill Heads to Governor*, PITT. POST-GAZETTE, Feb. 9, 2012, <http://www.post-gazette.com/pg/12040/1209030-503-0.stm>.

11. See *Bill Information: Regular Session 2011-2012, House Bill 1950*, PENNSYLVANIA GENERAL ASSEMBLY, http://www.legis.state.pa.us/cfdocs/billinfo/bill_history.cfm?year=2011&sind=0&body=H&type=B&bn=1950. (last visited April 22, 2012).

12. H.B. 1950 § 3302.

13. H.B. 1950 § 3304.

14. H.B. 1950 § 3303.

15. H.B. 1950 § 3304(b). Activities associated with impoundment areas, compressor stations and processing plants can, however, be banned from certain zoning districts. H.B. 1950 § 3304(b)(5).

16. Editorial, *supra* note 8. Pennsylvanians have serious questions about the influence the gas industry has over the Governor. See Schwartzel, *supra* note 7 (reporting that 60% of Pennsylvanians "'strongly agree' or 'somewhat agree' that the governor's decisions on gas taxation and regulation are influenced too much by gas companies.").

bills as “indefensible corporate welfare”¹⁷ They also claimed that their opposition was about threats to sovereignty rather than politics, and they vowed to fight to prevent drilling companies from getting a free ride.¹⁸

This Article takes aim at the preemption and reasonable development provisions of the new law from a different standpoint. It argues that the loss of local control is an affront to a feminist understanding of sustainable development that is skeptical of science, embraces intersectionality and situatedness, and encourages coalition-building and solidarity. As thousands of well pads transform hundreds of thousands of acres of Pennsylvania’s land in the coming years, shale will be cracked open deep below the earth, local vistas will be scarred, waterways will be stressed, and the peace and quiet of the Commonwealth’s communities will be shattered by seismic testing, round-the-clock drilling operations, and the constant coming and going of large diesel-fueled trucks. This fracturing of place will occur in the backyards of people like Darlyn Hoffstot,¹⁹ facilitated by a law that subordinates the concerns of those most affected by the drilling while elevating the economic interests of the state and energy industry. This hierarchy and its hegemonic dynamic create a structure that is ripe for feminist critique.

The pages that follow briefly describe how Marcellus shale gas is extracted, and review provisions of the new legislation. This Article then discusses the core tenets of sustainable development and explores feminist leanings that hold the promise of informing both the process and substance of sustainability. Ultimately, this Article argues that the preemption and reasonable development provisions of Pennsylvania’s shale legislation fail to measure up to a feminism-inspired understanding of sustainability, and arguably ignore sustainable development altogether. In offering this thesis, the author hopes to demonstrate the flexibility of feminist thought and reveal opportunities for its application in development decision-making.

17. Crompton, *supra* note 6 (noting opposition by environmental groups as well).

18. *Id.*

19. *See supra* text accompanying note 2.

I. HORIZONTAL DRILLING, HYDRAULIC FRACTURING, AND THE MARCELLUS SHALE

The vast Marcellus Shale lies more than a mile beneath the surface of the nation's mid-Atlantic region.²⁰ Embedded in the shale is an enormous amount of natural gas that promises to provide the nation with a clean-burning fuel for electric power and heat for up to fifteen years.²¹ States such as Pennsylvania, which overlie major portions of the Marcellus,²² are poised to experience an energy "boom without a bust," in part because another substantial formation, the Utica Shale, lies 2,000 feet below the Marcellus.²³

The recovery of shale gas involves a state-of-the-art extraction process. After boring vertically to a depth that reaches the formation, a horizontal drilling technique curves the direction of the bore, allowing it to run horizontally through the shale for several thousand feet.²⁴ Multiple wells can be drilled from a single well pad.²⁵ Once the horizontal well is complete, a fluid is pumped into the well at

20. Ian Urbina, *Regulation Lax as Gas Well's' Tainted Water Hits Rivers*, N.Y. TIMES, Feb. 26, 2011, <http://www.nytimes.com/2011/02/27/us/27gas.html?ref=ianurbina&pagewanted=print>.

21. *Id.* But see Erich Schwartzel, *Marcellus Shale Gas Estimate Plummet*, PITT. POST-GAZETTE, Jan. 24, 2012, <http://www.post-gazette.com/pg/12024/1205614-503.stm> (reporting U.S. Energy Department figures that lower the estimate of gas in the Marcellus shale from 410 trillion cubic feet to 141 trillion cubic feet). A major advantage of natural gas is that it burns more cleanly than coal. Urbina, *supra* note 20.

22. See MARCELLUS REPORT, *supra* note 3, at 19.

23. Bill Toland, *A Boom Without a Bust? For Now, the Future Is Bright for Shale Economics*, PITT. POST-GAZETTE, Feb. 27, 2011, <http://old.post-gazette.com/pg/11058/1128036-85.stm> (explaining that Consol Energy is already looking into drilling the Utica Shale, which will require advanced drilling technologies due to its depth).

24. The New York State Department of Environmental Conservation (NYDEC) website provides a significant amount of information about the Marcellus and the horizontal drilling technique. See generally, *Marcellus Shale*, NYDEC, <http://www.dec.ny.gov/energy/46288.html> (last visited April 24, 2012) [hereinafter NYDEC website].

25. These are known as multi-pad wells. NYDEC, REVISED DRAFT SUPPLEMENTAL GENERIC ENVIRONMENTAL IMPACT STATEMENT ON THE OIL, GAS, AND SOLUTION MINING REGULATORY PROGRAM, Executive Summary 1 (2011) [hereinafter NY IMPACT STATEMENT].

high pressure, which pushes through perforations in the horizontal well bore, fracturing the shale and releasing the natural gas for recovery.²⁶

This process, known as hydraulic fracturing, or “fracking,” requires huge amounts of water.²⁷ A typical well bore may use up to 7.8 million gallons of water for a single multiple fracking procedure. The water is either brought to the well pad by truck or piped directly from a water source.²⁸ Before being pumped into the well bore, the water is mixed with a “proppant” to keep the shale fissures propped open while the gas is released.²⁹ The fracking fluid also contains numerous chemicals, which may include biocides, friction reducers, gels, and other substances that reduce corrosion and otherwise facilitate the fracking process.³⁰ After the fracking process, the fracking fluid – now known as flowback – returns to the surface, generating as much as 2.7 million gallons of fluid per well.³¹

Many of the environmental concerns associated with gas drilling deal with water, due to substantial water withdrawals, stormwater runoff, impoundment failures, and spills and leaks that threaten groundwater.³² Studies have concluded that groundwater contamination caused by leaks from the well bore itself is unlikely;³³ however, the disposal of flowback poses environmental risks if it is not pretreated.³⁴ In Pennsylvania, state officials have recommended that wastewater treatment facilities do not accept drilling wastewater

26. NYDEC website, *supra* note 24.

27. *Id.* (stating that a single well may use up to one million gallons of water).

28. NY IMPACT STATEMENT, *supra* note 25, at 8. One estimate of water use for high-volume hydro-fracking reports it could reach nine billion gallons annually. *Id.* at 9.

29. *Id.* at 8 (explaining that sand is commonly used as a proppant).

30. *Id.*

31. *Id.*

32. *Id.* at 9.

33. *Id.* at 11 (relying on the experiences of fifteen states).

34. *Id.* at 12. See also Ian Urbina, *Chemicals Were Injected into Wells*, *Report Says*, N.Y. TIMES, Apr. 16, 2011, <http://www.nytimes.com/2011/04/17/science/earth/17gas.html?ref=ianurbina&pagewanted> (noting that an investigation by Democrats in the U.S. Congress revealed that “hundreds of millions of gallons of hazardous or carcinogenic chemicals” have been injected into wells, and that drilling companies themselves “cannot identify” some of the ingredients in fracking fluids).

in order to prevent flowback from being discharged into the Commonwealth's rivers and streams without adequate pretreatment.³⁵ The fact that the Marcellus Shale is higher in radioactivity than other formations raises additional concerns about the management of flowback, especially when it contains drill cuttings.³⁶

Threats to water quality dominate the list of environmental issues associated with Marcellus development, but there are biodiversity and air concerns as well. Drilling facilities and their operations threaten wildlife by fragmenting habitat, destroying public lands, and introducing invasive species.³⁷ In Pennsylvania, up to 90,000 acres of forest may be cleared by drilling operations, much of it in portions of the state where large forests are likely to be fragmented.³⁸ Drilling operations may also compromise national ambient air quality standards for nitrogen dioxide and particulate matter.³⁹

Although the impacts and risks associated with natural gas development are generally the same for every operation, those impacts may be more or less controversial, depending on where

35. Laura Olson & David Templeton, *EPA to Control Fracking Fluids Disposal*, PITT. POST-GAZETTE, Oct. 21, 2011, <http://www.post-gazette.com/pg/11294/1183693-113-0.stm>.

36. NY IMPACT STATEMENT, *supra* note 25, at 13. Flowback is brought to water treatment plants and ultimately discharged into rivers. Public health experts suggest that the treatment plants should conduct daily tests for radioactive compounds such as radium, barium, and strontium. Ian Urbina, *E.P.A. Steps Up Scrutiny of Pollution in Pennsylvania Rivers*, N.Y. TIMES, Mar. 8, 2011, <http://www.nytimes.com/2011/03/08/science/earth/08water.html?ref=ianurbina&pagewanted>. In Pennsylvania, the sludge that remains after the water treatment process, which may contain radioactive elements, has been sold as fertilizer. Ian Urbina, *Pennsylvania Calls for More Water Tests*, N.Y. TIMES, Apr. 8, 2011, available at <http://www.nytimes.com/2011/04/08/science/earth/08water.html?ref=ianurbina&pagewanted>.

37. NY IMPACT STATEMENT, *supra* note 25, at 13-15.

38. MARCELLUS REPORT, *supra* note 3, at 76. There is, however, a moratorium on new drilling in Pennsylvania's state forests. Laura Olson and Karen Langley, *Corbett Calls Fiscal Plan Lean and Demanding*, PITT. POST-GAZETTE, Feb. 8, 2012, <http://www.post-gazette.com/pg/12039/1208753-454.stm>.

39. NY IMPACT STATEMENT, *supra* note 25, at 16. The federal Clean Air Act's National Ambient Air Quality Standards establish maximum allowable levels of six criteria pollutants in the ambient air. 42 U.S.C. § 7409 (2012).

drilling takes place. One can imagine how the noise and traffic associated with drilling, compressor stations, and processing plants, might be less problematic in remote areas compared to areas that are more populated, or that air pollution and wastewater risks might pose a greater threat in locales frequented by tourists or areas that are already struggling with environmental threats to pristine waterways or threatened species. Not surprisingly, Governor Corbett's Marcellus Shale Advisory Commission received numerous public comments raising concerns about impacts on "roads, bridges, other local infrastructure, social services, emergency response and public safety[,] . . . [and] quality of life."⁴⁰ Michael Krancer, the Secretary of Pennsylvania's Department of Environmental Protection, has similarly remarked that differences between the Commonwealth's local communities militate against uniform statewide regulation of the energy industry.⁴¹

II. THE LAW

As 2011 came to a close, Pennsylvania's General Assembly was moving forward to draft significant amendments to the Oil and Gas Act to address concerns related to shale drilling.⁴² While legislative activity intensified, two prominent environmental organizations, the Pennsylvania Environmental Council (PEC) and the Chesapeake Bay Foundation (CBF), joined forces to persuade legislators to strengthen the permitting process and require energy companies to pay for drilling impacts. Specifically, they lobbied legislators to empower the DEP to restrict drilling in ecologically sensitive areas, regulate operations to protect Pennsylvania's water resources, mandate appropriate setbacks for wells, and impose a reasonable assessment or impact fee.⁴³ PEC and the CBF additionally encouraged the General Assembly to respect local and regional diversity and reject the preemption of local land use controls for the benefit of a single

40. MARCELLUS REPORT, *supra* note 3, at 121.

41. Editorial, *supra* note 8.

42. *See supra* text accompanying notes 9-10.

43. *Environmental Groups Call for Tougher Measures in Marcellus Shale Bills*, PENN. ENVTL. COUNCIL, available at <http://www.pecpa.org/release/environmental-groups-call-tougher-measures-marcellus-shale-bills> (last visited Dec. 12, 2011).

industry.⁴⁴ By year's end, Senate Bill 1100 and House Bill 1950 emerged from the General Assembly with virtually identical language related to local authority.⁴⁵ After the holiday break, House Bill 1950 was reported out of conference committee and approved by the General Assembly.⁴⁶ Governor Corbett signed the bill in less than a week.⁴⁷

Chapter 32 of Act 13 includes detailed provisions governing well permits, restrictions on the location of wells, well site restoration, and water resource protection.⁴⁸ At the outset, the law declares a policy of permitting the "optimal development of . . . gas resources" in Pennsylvania, "consistent with protection of the health, safety, environment and property of Pennsylvania citizens."⁴⁹ The law's location restrictions prohibit natural gas well bores from being located within 500 feet of a building or a water well.⁵⁰ The law additionally mandates various well setbacks from streams, springs, and wetlands,⁵¹ and restricts drilling in floodplains.⁵²

Another of Chapter 32's provisions, Section 3212.1, authorizes municipalities to submit comments to the Pennsylvania Department of Environmental Protection (DEP) when gas wells are proposed within their boundaries.⁵³ Comments may describe "local conditions or circumstances which the municipality has determined should be considered by the department in rendering its determination on the

44. *Id.*

45. S. 1100, H.R. 1950, Gen. Assemb., Session of 2011 (Pa. 2011).

46. *See supra* text accompanying notes 9-11.

48. *See* 58 PA. CON. STAT. §§ 3211, 3215, 3216, 3217, 3218. The law refers to natural gas wells as "unconventional wells." *Id.* § 3203. Chapter 32, Subchapter E, includes enforcement provisions. *See id.* §§ 3251-3162.

48. *See* 58 PA. CON. STAT. §§ 3211, 3215, 3216, 3217, 3218. The law refers to natural gas wells as "unconventional wells." *Id.* § 3203. Chapter 32, Subchapter E, includes enforcement provisions. *See id.* §§ 3251-3162.

49. *Id.* § 3202(1) (emphasis added).

50. *Id.* § 3215(a). The restriction is extended to 1,000 feet if the water well is used by a water purveyor and the purveyor has not consented to a shorter distance. *Id.*

51. *Id.* §§ 3215(b)(1)-(2).

52. *Id.* § 3215(f).

53. *Id.* § 3212.1(a).

unconventional well permit.”⁵⁴ The comment process is limited, however, because DEP’s review is restricted to matters related to well location, the consideration of comments is not mandatory⁵⁵ and municipalities cannot appeal DEP permit decisions.⁵⁶

There is nothing in Chapter 32 that expressly addresses local authority to enact ordinances that affect drilling. Local ordinances are, however, addressed by Chapter 33. Section 3302 provides,

Except with respect to local ordinances adopted pursuant to the . . . [Municipalities Planning Code] and . . . the Flood Plain Management Act, all local ordinances purporting to regulate oil and gas operations regulated by Chapter 32 (relating to development) are hereby superseded. No local ordinance adopted pursuant to the MPC or the Flood Plain Management Act shall contain provisions which impose conditions, requirements or limitations on the same features of oil and gas operations regulated by Chapter 32 or that accomplish the same purposes as set forth in Chapter 32. The Commonwealth, by this section preempts and supersedes the regulation of oil and gas operations as provided in this chapter.⁵⁷

The preemption of local authority to adopt land use ordinances that conflict with Chapter 32’s regulatory provisions is supplemented by section 3303, which preempts local ordinances that attempt to regulate gas operations in ways that are already addressed by any of Pennsylvania’s environmental laws.⁵⁸ Taken together, these two provisions prohibit local governments from enacting ordinances that address the environmental aspects of oil and gas operations.

54. *Id.*

55. *Id.* § 3212.1(b).

56. *Id.* § 3215(d).

57. *Id.* § 3302.

58. *Id.* § 3303. That section provides,

[E]nvironmental acts are of Statewide concern and, to the extent that they regulate oil and gas operations, occupy the entire field of regulation, to the exclusion of all local ordinances. The Commonwealth by this section, preempts and supersedes the local regulation of oil and gas operations regulated by the environmental acts, as provided in this chapter.

Although local governments are stripped of their authority to deal with environmental matters, there is still the question of local authority to deal with the land use issues associated with gas operations. That question is answered by Section 3304, which requires land use ordinances to provide for the “reasonable development of oil and gas resources.”⁵⁹ The meaning of “reasonable development” is clarified in a lengthy series of provisions that dictate, with precision, limitations on local land use power. For example, local governments must allow pipeline assessment activities, including seismic operations, within their borders,⁶⁰ and are barred from imposing restrictions on construction activity, noise, lighting, screening, and structure height that are more stringent than limits imposed on other industrial activities.⁶¹

Section 3304 also includes zoning district limitations. Subsection (5) provides that local governments “[s]hall authorize oil and gas operations, other than activities at impoundment areas, compressor stations and processing plants, as a permitted use in all zoning districts.”⁶² Given the broad definition of “drilling operations,” this means that well site preparation, construction, drilling, hydraulic fracturing, site restoration, water and fluid storage, construction and repair of pipelines, and the use of equipment associated with these activities, must be allowed in every zoning district in the state.⁶³ There are a few exceptions from this sweeping requirement. If it is not possible to locate a gas well at least 500 feet from an existing building in a residential zoning district, as required by Section 3215, a local government may prohibit well operations or allow them as a conditional use.⁶⁴ This requirement will generally prohibit gas-drilling operations in densely populated areas.

59. *Id.* § 3304(a). This provision puts an end to local attempts to ban drilling altogether.

60. *Id.* § 3304(b)(1) (providing further that the assessment activities must comply with Federal and state laws).

61. *Id.* §§ 3304(b)(2)-(3).

62. *Id.* § 3304(5).

63. *Id.* § 3304(5.1).

64. *Id.* § 3309(5.1). Additional restrictions in residential districts impose a minimum 300-foot distance between the outer edge of a well pad and an existing building. *Id.* § 3304 (5.1)(i).

Other “reasonable development” requirements include permitting impoundment areas in all zoning districts, provided they are no closer than 300 feet from an existing building;⁶⁵ authorizing natural gas compressor stations in agricultural and industrial zoning districts and allowing them as conditional uses in other zoning districts, subject to setback and noise restrictions;⁶⁶ and authorizing natural gas processing plants in industrial zoning districts and as a conditional use in agricultural districts, subject to setback and noise restrictions.⁶⁷ Local governments are further prohibited from imposing “limits or conditions on subterranean operations or hours of operation of compressor stations and processing plants or hours of operation for the drilling of oil and gas wells or the assembly and disassembly of drilling rigs.”⁶⁸

Pennsylvania’s Public Utility Commission is authorized to issue advisory opinions to municipalities that seek review of their ordinances for compliance with the “reasonable development” provisions.⁶⁹ The Commission is additionally empowered to review ordinances when outside parties allege that an ordinance violates the MPC or Chapters 32 or 33.⁷⁰ A determination that a local ordinance violates the MPC, or the provisions of Chapters 32 or 33, may render the municipality “immediately ineligible” for its share of drilling impact fees.⁷¹

65. *Id.* § 3304(6).

66. *Id.* §§ 3304(7)(i)-(ii).

67. *Id.* §§ 3304(8)(i)-(ii).

68. *Id.* § 3304(10).

69. *Id.* § 3305(a)(1).

70. *Id.* § 3305(b)(1). Orders issued by the Commission under this section are reviewable by the Commonwealth Court. *Id.* § 3305(4). Parties who are aggrieved by “enactment or enforcement of a local ordinance” may also bring an action in Commonwealth Court. *Id.* § 3306(1).

71. *Id.* § 3308. These unusual enforcement provisions are not unique. In 2005, when Pennsylvania’s General Assembly passed legislation to protect local farming activities, a similar enforcement provision, authorizing direct recourse to the Pennsylvania Attorney General, was used. See Scott Detrow, *Preemption Language Gone, But Pennsylvania’s Impact Fee would Still Limit Local Governments*, STATE IMPACT PENNSYLVANIA, Nov. 18, 2011, <http://www.stateimpact.npr.org/pennsylvania/2011/11/18/preemption-language-gone-but-pennsylvanias-impact-fee-would-still-limit-local-governments/>. That law was specifically designed to restrict municipalities from enacting land use

Like the land use provisions, the law's impact fee provisions were the result of a lengthy legislative struggle.⁷² The fee structure for unconventional gas wells, set forth in Chapter 23 of the law,⁷³ aims to make gas producers solely responsible for the impacts caused by drilling operations.⁷⁴ Counties have the authority to impose the fee on gas producers operating wells within their borders,⁷⁵ but until a county passes an ordinance authorizing the fee it is prohibited from receiving distributions under the program.⁷⁶ If a county chooses not to impose an impact fee, the municipalities within the county can compel it to do so.⁷⁷ Impact fees are collected annually over a fifteen year period and are tied to the average annual price of natural gas.⁷⁸

The fees will be distributed to a myriad of entities serving various interests. Counties and municipalities will receive sixty percent of annual revenues after distributions are made to numerous state agencies.⁷⁹ From that sixty per cent, \$2.5 million will be distributed to a Housing Affordability and Rehabilitation Enhancement Fund in the first year of the program, an amount that will double in each following year.⁸⁰ The allocation of the balance of the revenue among the state's counties and municipalities is based, in part, on whether

ordinances that attempt to restrict sludge pools and other industrial farming activities. *Id.* That law, known as the ACRE law, has been in force for over six years, and under its provisions the Attorney General has received 15-20 ordinance inquiries per year, half of which involve unauthorized provisions. *Id.*

72. *See* Laura Olson, *Shale Bill Heads to Governor*, *supra* note 10 (noting that lawmakers agreed after "years of debate" over how much drilling companies would be charged).

73. *See* 58 PA. CON. STAT. §§ 2301-2318.

74. *Id.* § 3501(2).

75. *Id.* § 2302(a).

76. *Id.* §§ 2302(a.3)(1)-(2).

77. *See generally id.* § 2302(a.4).

78. *Id.* §§ 2302(b)(1)-(5), 2303.

79. Off-the top fee distributions are made, in varying amounts, to conservation districts, the Pennsylvania Fish and Boat Commission, the Public Utility Commission, the Department of Environmental Protection, the Pennsylvania Emergency Management Agency, the Office of State Fire Commissioner, the Department of Transportation, and the Natural Gas Energy Development Program. *Id.* § 2314 (a)-(c.2). The county distribution provision is found in *id.* § 2314(d).

80. *Id.* § 2314(f). The funds will be used to increase the supply of safe, affordable housing. *Id.*

wells are operating within their borders or in counties contiguous to their borders.⁸¹ Local government distributions may only be used for specific purposes, which include roadway repair, storm water and sewer system construction, repair and maintenance, emergency preparedness, environmental programs, affordable housing projects, and the delivery of social services.⁸²

Pennsylvania's 2012 oil and gas amendments seek to optimize shale gas development by authorizing drilling throughout the Commonwealth while making drilling companies pay for the impacts they cause. The "reasonable development" mandate of Chapter 33 furthers those policies by preventing ordinances that amount to "effective moratoriums" on drilling, thereby providing state-wide access and consistency for the gas industry.⁸³ Chapter 23's impact fee provisions are designed to fund state and local government efforts to address the environmental and social impacts caused by gas development. Although some observers have praised the law for striking a reasonable balance between development and environmental interests,⁸⁴ others charge that the fee provisions are too meager and that taking away local land use authority is a mistake.⁸⁵ The question this Article poses is how well the Oil and Gas amendments reflect the principles of sustainable development, as informed by feminist scholarship.

III. SUSTAINABLE DEVELOPMENT AND FEMINISM

Some background is required to place Pennsylvania's recent legislation in the context of sustainability, particularly the provisions dealing with local authority to regulate natural gas development.

81. *Id.* § 2314(d) (including allocation to counties where there are no gas wells). Fracking wells that are in operation are referred to as "unconventional gas wells." *See id.* § 2301.

82. *See generally id.* § 2314(g)(1)-(13). A portion of the impact fees will be deposited into the Marcellus Legacy Fund, which will be used for state initiatives that deal with environmental problems, highway and bridge repair, and planning for new and existing green ways and trails. *Id.* § 2315(a.1).

83. *See* Detrow, *supra* note 71.

84. *See* Olson, *supra* note 10.

85. *Id.* (additionally estimating that at least 100 municipalities currently have illegal ordinances under the new provisions).

Many observers agree that “sustainable development” was first recognized globally at the 1987 World Commission on Environment conference.⁸⁶ As commonly defined, it refers to “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”⁸⁷ This in turn requires development decisions to be based on an integrative decision-making process that takes into account social, environmental, and economic issues.⁸⁸ Some observers have coined the phrase “the three Es” to refer to the environmental, economic and social equity components of sustainability,⁸⁹ and this Article will follow suit.

Sustainability refers to process as well as outcomes. A legitimate process will be fair and participatory, making it possible for those with economic, environmental, and social concerns to meaningfully participate.⁹⁰ This type of process will help assure that development decisions maximize, to the extent possible, benefits to the 3E’s now and into the future. Acknowledging the means-ends reality of sustainable development is important, because it clarifies that outcomes will be suspect if they are not the result of the “procedural integration” demanded of sustainability.⁹¹ Thus, gauging the effectiveness of Pennsylvania’s amendments to the Oil and Gas Act in furthering sustainable development will require two inquiries: one that asks whether the amendments assure the integrative process demanded of sustainable decision-making, and another pertaining to

86. Kristina M. Tridico, Note, *Sustainable America in the Twenty-First Century: A Critique of President Clinton’s Council on Sustainable Development*, 14 NAT. RES. & ENVTL. L. 205, 208 (1998-1999).

87. John C. Dernbach & Scott Bernstein, *Pursuing Sustainable Communities: Looking Back, Looking Forward*, 35 URB. LAW. 495, 496 (citing WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, OUR COMMON FUTURE 43 (1987)).

88. *Id.* at 498-99.

89. See J.B. Ruhl, *Sustainable Development: A Five-Dimensional Algorithm for Environmental Law*, 18 STAN. ENVTL. L.J. 31, 40 (1999); Nancy P. Spyke, *Heeding the Call: Making Sustainability a Matter of Pennsylvania Law*, 109 PENN STATE L. REV. 729, 732 (2005).

90. Dernbach & Bernstein, *supra* note 87, at 498-99.

91. See John C. Dernbach, *Targets, Timetables and Effective Implementing Mechanisms: Necessary Building Blocks for Sustainable Development*, 27 WM. & MARY ENVTL. L. & POL’Y REV. 79, 102-03 (2002).

the amendments' capacity to assure that Marcellus drilling will result in a reasonable balance of the 3Es.

Pennsylvania's Experience

Pennsylvania is no stranger to sustainability, although efforts to institutionalize sustainability planning at the governmental level have recently slackened. In 1997, Governor Tom Ridge issued an Executive Order that established the 21st Century Environment Commission. The Commission was charged with making recommendations to improve Pennsylvania's environmental quality while at the same time "allowing for enhanced economic and social progress."⁹² The Order expressly envisioned policies "that effectively support the simultaneous goals of environmental quality, personal and community well being, and economic prosperity."⁹³ The Commission's work, embodied in the *21st Century Commission Report*, focuses on fifteen principles of sustainability, which include "the importance of determining the proper level of governance for specific tasks."⁹⁴ The Report also includes over 240 recommendations designed to fulfill the Governor's charge.⁹⁵ Among the recommendations are those calling for "responsible land use, conserving natural resources in a sustainable manner, striving for a healthy environment for healthy people, [and] developing a culture of teamwork" ⁹⁶ The Report's comprehensive commitment to sustainability likely helped the state achieve a strong ranking in a 2001 survey of state capacity to achieve sustainability.⁹⁷

92. 27 Pa. Bull. 3784 (July 1, 1997).

93. *Id.*

94. *See* Spyke, *supra* note 89, at 740-42. The Report is no longer available online.

95. *See generally*, Spyke, *supra* note 89.

96. *Id.* at 741.

97. *Id.* at 730, *citing* ERIC SIY ET AL., *The State of the States: Assessing the Capacity of States to Achieve Sustainable Development through Green Planning*, RESOURCE RENEWAL INST., app. A, tables 5-7 (2001) (ranking Pennsylvania fourteenth in the nation). Pennsylvania is also home to numerous non-governmental organizations that are devoted to sustainability. They include PennFuture, *see* <http://www.pennfuture.org> (last visited May 11, 2012); Sustainable Pittsburgh, *see* <http://www.sustainablepittsburgh.org> (last visited May

More recently, the Commonwealth's sustainability initiatives have stalled. In 2004, Governor Ed Rendell issued Executive Order 2004-9, creating a cabinet-level entity known as the Economic Development Committee.⁹⁸ The Committee coordinates programs dealing with economic development in the state while furthering environmental stewardship and social policies.⁹⁹ Although the Executive Order expressly addresses the 3Es, the primary objective of the EDC is to further economic development, which arguably diminishes the importance of environmental and social improvements. Nowhere does the Order use the phrase "sustainable development"; neither does it encourage the simultaneous and equal consideration of the economy, environment, and social welfare. After one year in office there is no sign that Governor Corbett will reinvigorate the sustainability principles of the *21st Century Report* or strive to implement the Report's recommendations. Instead, the administration appears to have chosen to place disproportionate weight on economic development at the expense of environmental and social policies.¹⁰⁰

Feminist Leanings

The involvement of women in the international sustainable development movement has been constant and powerful. Since the 1970's, the imprint of pro-environment women in the evolution of sustainable development has been unmistakable, and there is much to be learned from their thinking. In fact, forty years after sustainable

11, 2012); and the Pennsylvania Environmental Council, *see* <http://www.pecpa.org> (last visited May 11, 2012).

98. 40 Pa. Bull. 8 (June 15, 2004).

99. *Id.*

100. *See* Section IV *infra*. This assessment is also based on the Governor's priority of relying on Marcellus shale development to create jobs. His webpage states,

[T]he Governor has also taken decisive action to ensure the natural gas industry will continue and grow and be a source of quality jobs for Pennsylvanians. This proposal provides a common sense framework for creating jobs and sustaining this flourishing industry

http://www.portal.state.pa.us/portal/server.pt/community/rebuilding_pa/20355/job_creation/990217 (last visited Feb. 17, 2012).

development blossomed in the global community, its feminist foundations remain relevant to development controversies everywhere.¹⁰¹ Recent feminist scholarship on legal theory and practical research methodology provide additional insights, and together with the feminist themes of sustainability, will form a feminist platform for sustainable development against which Pennsylvania's recent legislation will be measured. Each of these three sources of knowledge – feminism in sustainable development, feminist legal theory, and feminist research methodology – are rich in content, but the focus here will be their critique of science, emphasis on intersectionality and locality, and employment of coalition-building.

Because the most familiar work of feminists addresses issues that directly touch on women's lives, the connection between women and development may seem attenuated to some readers. Admittedly, feminist theory is not a cure for all of society's ills, but it is not limited to issues that are of particular interest to women.¹⁰² Women who are actively engaged in global development have pointedly observed, "[E]verything in feminist theory and practice makes it capable of elaborating general theoretical frameworks."¹⁰³ With that sentiment in mind, this article synthesizes feminist leanings to nudge our understanding of sustainable development in new directions.

Women and Development: History and Alternative Development

The impetus for women's action in the face of increasingly destructive global development came from two sectors: the eco-feminist and anti-war movements led by women of the North, or developed countries, and an anti-development movement led by

101. See, e.g., Christopher C. Joyner & George E. Little, *It's Not Nice to Fool Mother Nature! The Mystique of Feminist Approaches to International Environmental Law*, 14 B.U. INT'L L.J. 223, 230-39 (1996).

102. See ANN SCALES, *LEGAL FEMINISM: ACTIVISM, LAWYERING, AND LEGAL THEORY* (NYU Press 2006).

103. ROSI BRAIDOTTI ET AL., *WOMEN, THE ENVIRONMENT AND SUSTAINABLE DEVELOPMENT* 56 (1994) (explaining that women in developing countries were concerned about the impact of development on their special relationship with nature) [hereinafter BRAIDOTTI ET AL.].

women of the South.¹⁰⁴ By the 1970s, Women in Development (WID) was a specific area of study.¹⁰⁵ Fairly quickly, WID evolved into Gender and Development (GAD), which sought to integrate women into development decision-making at all levels to make them active participants rather than passive onlookers.¹⁰⁶ In 1984, the issue of women and development appeared on the U.N. agenda, just a few years before the concept of sustainable development was introduced globally.¹⁰⁷ From that point forward, the efforts of Women, Environment, and Sustainable Development (WED)¹⁰⁸ gained momentum, encouraging broad-based participation to help people determine how to use resources to shape their lives in positive ways.¹⁰⁹ At the heart of WED's capacity-building enterprise was a strong critique of the development model of the West.¹¹⁰

Growing concerns about the failings of Western development led to the "Alternative Development" movement, an initiative strongly supported by women in developing countries that took root during the formative stages of sustainable development.¹¹¹ Alternative development looks to local efforts that shape community decisions about development, embracing place- and people-specific planning.¹¹² In sharp contrast with the competitive development process of the West, alternative development promotes decentralized decision-making and self-autonomy within a larger framework of interdependence and cooperation.¹¹³ Recognizing that boycotts and other forms of resistance to development are typically disregarded,

104. *Id.* at 77-78.

105. *Id.* at 80.

106. *Id.* at 82-83. GAD additionally seeks to "look for the potential in development initiatives to transform unequal social/gender relations and to empower women." *Id.* at 82.

107. *Id.* at 86-87. *See also supra* text accompanying note 86.

108. *Id.* at 87.

109. BRAIDOTTI ET AL., *supra* note 103, at 90 (quoting UNCED 1991: 15, Geneva (May 1991)).

110. *Id.* at 95.

111. *See id.* at 108. *See also id.* at 116-17. The Development with Women for a New Era (DAWN), founded in 1984, was a major force in the alternative development movement. *Id.* at 116.

112. *Id.*

113. *Id.*

alternative development proponents sought to empower local people so they could meaningfully participate in development decisions.¹¹⁴ The goal was a development decision-making model that rejected traditional binaries associated with “private and public domains: household from economy, personal and political reality, feeling/intuition and rationality.”¹¹⁵

Alternative development’s holistic approach to development decision-making was a major force into the 1990’s, when women’s groups from the South and North joined forces to develop a framework for its implementation.¹¹⁶ More so than ecofeminism, the feminist-inspired alternative development framework has been highly relevant to the sustainable development debate.¹¹⁷

Critique of Science

Feminism’s long-standing attack on the masculinity of Western thought is partially based on its conception of science.¹¹⁸ Charges from women involved in global development have been strong, if not scathing, describing western science as a system of knowledge that colonizes nature,¹¹⁹ and represents “violence in theory, acted out in practice.”¹²⁰ Attacks such as these, leveled at the masculinist production of knowledge that aligns women with nature, are at the center of feminist thought.¹²¹ When thinking about sustainability, this critique is particularly relevant, because it raises legitimate questions about frameworks of sustainable development devised by mainstream politicians and developers who believe that the

114. *Id.* at 113-14.

115. *Id.* at 117.

116. *Id.* at 121.

117. *Id.* at 170, 174 (noting that, although there was a value to ecofeminism, it seemed to have “reached an impasse”).

118. *Id.* at 30-31. A central piece of the feminist critique of science is “the intersection of the practice of domination of the environment for the purpose of economic gain . . .” *Id.* at 31.

119. BRAIDOTTI ET AL., *supra* note 103, at 33 (explaining that the destruction nature is justified because it is made up of “brute matter . . . without logic or intelligence of its own.”).

120. *Id.* at 111.

121. *See id.* at 30.

intricacies of sustainability can only be explained by scientists and experts.¹²²

Feminist researchers whose work aims to achieve health equity are similarly vocal in criticizing science. To them, expert-centered research models fail to account for “a localized and complex understanding of people’s lives”¹²³ Their overarching concern takes aim at the biomedical establishment’s positivist approach that currently controls the health research landscape.¹²⁴ These feminists believe that this research paradigm is “over-medicalized,” “highly technical,” and works best for the well-off.¹²⁵ By emphasizing quantification, health scientists reduce people to “units” and extract race, class, and gender from analysis, resulting in troubling biases.¹²⁶ Despite these significant shortcomings, the mainstream research model remains “ubiquitous and powerful,” and to some, invincible.¹²⁷

In her 2006 book, *Legal Feminism*, Ann Scales echoes some of these points without confronting mainstream science head-on.¹²⁸ The feminist legal methodology she proposes asks us to question what is purportedly “known” rather than to attack purported expertise.¹²⁹ Knowledge, she argues, is not as clear cut as it is made out to be and is always susceptible to change. Lawyers need to diligently consider that contingency when analyzing policies, especially those that subordinate the underclass.¹³⁰ Because those who “serve . . . patriarchal corporate masters” are often the ones presenting facts,¹³¹ developing a healthy habit of skepticism is critical. Simplistic and seemingly absolute statements generated by hegemonic regimes are

122. *Id.* at 130-31.

123. Lynn Weber & Jennifer Castellow, *Feminist Research and Activism to Promote Health Equity*, in *THE HANDBOOK OF FEMINIST RESEARCH, THEORY AND PRACTICE*, 434 (Sharlene Nagy Hesse-Biber, ed., 2d ed. 2011) [hereinafter Weber & Castellow].

124. *Id.* at 436.

125. *Id.* at 437.

126. *Id.* at 438.

127. *Id.*

128. *See generally*, SCALES, *supra* note 102.

129. *Id.* at 87.

130. *Id.* at 87, 92-93, 108.

131. *Id.* at 60 (explaining that the people who present one-sided statements may do so unconsciously).

particularly dangerous because they limit discourse and, at their worst, can create a sense of crisis that leads to swift community acceptance.¹³²

Feminist development activists, health researchers, and lawyers send a clear message: Sources of knowledge and pronouncements made in absolute terms should be questioned. An alternative structure of knowledge, where women and subordinated groups are respected as “knowers,” must take root.¹³³ Uniformly, feminists argue that women’s knowledge is grounded in “experience,” a term that describes the merger of living and thinking.¹³⁴ The contours of experience are not defined solely by the lives and thoughts of the privileged, but additionally incorporate the lives of those at the bottom of hierarchical orders.¹³⁵ Experience-based knowledge arises from the situatedness of people and accounts for differences of race, class, and gender.¹³⁶ By constructing knowledge in this fashion, the methods by which powerful institutions subordinate others can be revealed and meaningfully questioned.¹³⁷ Importantly, feminist attention to localized and differentiated experiences does not attempt to separate and compartmentalize the various attributes of experience, but instead attempts to understand “the variousness in point of view as constitutive of social life.”¹³⁸ In doing so, it rejects mainstream decision-makers’ tendency to reduce everyone’s identity to an essence.¹³⁹ Scholars agree that feminism’s situated and

132. *Id.* at 126-27.

133. *See* BRAIDOTTI ET AL., *supra* note 103, at 32.

134. *See id.* at 36. Feminist standpoint theory, which is aligned with these principles, posits that “knowledge is always mediated by the individual’s position and identity according to race, class, and gender in a particular socio-political formation and a certain point in time.” *Id.* at 44; *see also* Weber & Castellow, *supra* note 123, at 434 (noting the importance of “a localized and complex understanding of people’s lives”).

135. SCALES, *supra* note 102, at 109.

136. BRAIDOTTI ET AL., *supra* note 103, at 37, 45.

137. Weber & Castellow, *supra* note 123, at 439 (explaining that, in the biomedical field, this approach has shifted the emphasis of some biomedical researchers from “the health of individual bodies to the health of communities”).

138. SCALES, *supra* note 102, at 91.

139. *Id.* at 8; *see also* Bonnie Thornton Dill & Marla H. Kohlman, *A Transformative Paradigm in Feminist Theory and Social Justice*, in THE HANDBOOK OF FEMINIST RESEARCH, THEORY AND PRAXIS 154 (Sharlene Nagy

contextual way of knowing complicates analysis,¹⁴⁰ but they recognize its importance in challenging the “exclusionary forms of thought” that mainstream science engenders.¹⁴¹

Intersectionality and Locality

Feminism rejects the homogenization of women and acknowledges that differences among women matter.¹⁴² The leap from feminism’s first wave, which fought for equality in a man’s world while treating all women more or less the same,¹⁴³ to a feminism that embraced differences among women, has been well documented.¹⁴⁴ Post-modern feminism goes a step further, and examines identity through multiple lenses in ways that make it impossible to separate the various components of one’s life. Intersectionality, the term used to describe this rich and complex understanding of experience, “emphasizes the interlocking effects of race, class, gender, and sexuality, highlighting the ways in which categories of identity and structures of inequality are mutually constituted and defy separation into discrete categories of analysis.”¹⁴⁵

Scholars who write about intersectionality consider how the simultaneous impacts of multiple power structures shape both identity and interpersonal relations.¹⁴⁶ Their research thus requires an analysis of the convergence of traditional markers of identity as well as the social policies that affect women’s lives.¹⁴⁷ ‘Feminist

Hesse-Biber ed., 2d ed. 2011) (eschewing methods of describing identity that separate people into “discrete categories of analysis”); BRAIDOTTI ET AL., *supra* note 103, at 49 (explaining feminism’s emphasis on “the situated, specific, embodied nature of the feminist subject” in contrast to generalized essentialism).

140. Weber & Castellow, *supra* note 123, at 439-40.

141. See BRAIDOTTI ET AL., *supra* note 103, at 56.

142. See *id.* at 71-72 (discussing developments in eco-feminism).

143. Feminism’s first wave explored the differences between men’s and women’s experiences. Dill & Kohlman, *supra* note 139, at 157.

144. See *e.g.*, SCALES, *supra* note 102, at 1.

145. Dill & Kohlman, *supra* note 139, at 154.

146. *Id.* at 157 (noting that intersectionality is transforming feminist scholarship).

147. Weber & Castellow, *supra* note 123, at 438. These researchers expand their analysis to include relevant macro- and micro-level forces to gain a fuller and more accurate understanding of people’s experience. *Id.* at 434.

researchers involved in health equity issues, for example, rely on qualitative as well as quantitative techniques as they search for the social causes of illness,¹⁴⁹ a methodology that differs considerably from positivist biomedical approaches that extract race, class, and gender from analysis.¹⁵⁰

Paying attention to the concurrent operation of multiple power structures on individuals of varying combinations of race, class, and gender reveals how social inequalities operate within power relationships.¹⁵¹ As is true of the critique of science, this can lead to legitimate questions about solutions supported by those in power, especially solutions that are imposed on subordinate populations.¹⁵² Thorough questioning of hierarchical decision-making also opens the door to opportunities to develop more equitable alternatives.¹⁵³

Feminist legal methodology embraces intersectionality as well, although the terminology may differ. When describing her “antisubordination theory,” Ann Scales writes that it refers to:

[A] set of movements that focus on how law constructs and maintains hierarchical power relations on the bases of race, sex, ethnicity, class, sexual orientation, gender status, disability or ... any synergistic combinations of discriminations, whether experienced at present or arising in the future.¹⁵⁴

By pointing to the multiple power structures and synergies that cause subordination, Professor Scales alludes to the simultaneity and holistic scope of intersectionality. Her hope is for feminism to inform the legal system about the complexity of equality by offering

149. *Id.* at 442, 446.

150. *Id.* at 438 (further noting that this approach “reduc[es] systemic inequalities to individual-level problems of bias . . .”).

151. *See id.* at 442. Thorough questioning of hierarchical decision-making also creates opportunities to develop more equitable alternatives. *Id.* Feminists working on the health care front offer a variety of solutions for health care inequities, including a living wage, higher-quality child care, and better access to transportation. *Id.*

152. *Id.*

153. *Id.* Feminists working in the health care front offer a variety of solutions for health care inequities, including a living wage, higher-quality child care, and better access to transportation. *Id.*

154. SCALES, *supra* note 102, at 9.

a “concrete analysis of systematic oppressions.”¹⁵⁵ She asks law to classify things with the sophisticated understanding of difference that feminists endorse.¹⁵⁶ Here, she clearly speaks of intersectionality, stating that the feminist perception of difference “takes the variousness in point of view as constitutive of social life It regards differences as emergent, as always changing.”¹⁵⁷

Professor Scale’s feminist legal method, with its strong intuition of intersectionality, is comprised of multiple steps and themes meant to guide legal analysis.¹⁵⁸ As previously mentioned, some of these steps respond directly to feminism’s critique of science.¹⁵⁹ Others speak more directly to confronting the multiple factors that intersect to construct experience and, at times, oppression. Her legal method refuses to accept existing social inequities as a given, and instead promotes investigating privileged forms of knowledge.¹⁶⁰ She argues that, when two good-faith competing views of an issue conflict, one should look “to the bottom,” to those who traditionally are epistemologically unprivileged.¹⁶¹ By examining the multiple sources of power that contribute to one’s experience, her legal theory adopts a core principle of intersectionality. She takes an additional step by reasoning that, at some point, the law needs to redistribute the power and privilege of knowledge to address subordination,¹⁶² and to take action so people can have “livable, and even dignified lives.”¹⁶³ Her feminism is both intersectional and pragmatic, “proceeding from the facts of social life”¹⁶⁴

Intersectionality strives to take into account, in a comprehensive way, the facts and forces that combine to impact one’s life. The impacts that shape experience occur where one is situated, at the

155. *Id.* at 79, 83.

156. *Id.* at 90 (noting that this is something feminism does well).

157. *Id.* at 91.

158. *Id.* at 100; *see generally id.* at 100-15, 145-47.

159. *See supra* text accompanying notes 127-31.

160. *Id.* at 104, 109.

161. *Id.* at 109.

162. *Id.*

163. *Id.* at 146-47 (referring to the seventh theme of Professor Scales feminist legal theory).

164. *Id.* at 46 (also describing her theory as “contextual, proceeding . . . in resistance to the hierarchical organization of the world.”).

place where one exists. The importance of one's locality is significant in feminist thought,¹⁶⁵ and it is often paired with a desire to control one's life. Women want control over their experience, where they live, and they expect to have some control of the resources that matter to them.¹⁶⁶

Feminist researchers in the health field reflect this sensitivity to locality and autonomy in their efforts to promote community health services in place of top-down initiatives.¹⁶⁷ Feminist legal theory, as already noted, similarly suggests that when confronted with two competing views of reality one should "look to the bottom," or to the most localized, subordinate situation.¹⁶⁸ Additionally, feminists at work in the sustainability field point to the effects of development on local people when they question the viability of top-down approaches where the state is the arbiter of what is sustainable.¹⁶⁹ They argue forcefully for the preservation of local communities, small-scale development, and a bottom-up approach aimed at creating sustainable livelihoods.¹⁷⁰

Intersectionality's multi-focused gaze is directed at localized experience and reinforces the feminist critique of impersonal and narrowly-constructed scientific methods discussed above. It additionally raises questions about how to make the implications of these concepts known to decision makers and to assure they are incorporated into the decision-making process.

Coalition-Building and Solidarity

Feminists on all fronts agree that the means by which the complex dimensions of intersectionality can be injected into analysis and problem solving is by building coalitions and practicing solidarity. Feminism itself is no stranger to collaborative undertakings; its history is rich with important moments of reaching out to diverse

165. See e.g., BRAIDOTTI ET AL., *supra* note 103, at 37 (stating that "[a]ttention to gender results in renewed emphasis being placed on the situated, that is to say local structure of knowledge . . ."); see also *id.* at 41.

166. *Id.* at 136.

167. See Weber & Castellow, *supra* note 123, at 439.

168. See SCALES, *supra* note 102, at 109.

169. See BRAIDOTTI ET AL., *supra* note 103, at 134.

170. *Id.* at 134, 137, 151.

constituencies to strengthen its agendas.¹⁷¹ The eye-opening appeals made by women in developing countries during the formative years of sustainable development, which ultimately led to collaborative efforts between women of the North and South, is a major example.¹⁷² Lessons learned from these moments can help guide coalition-building efforts to ensure that skepticism of expertise and intersectionality are injected into hierarchical decision-making frameworks.

The overarching objective of feminist coalitions is to expose linkages between hierarchical structures and affronts to individual experience when forces impose solutions on “subordinate groups.”¹⁷³ This work can be taxing, especially when those in power feel less inclined to consider who will be harmed by development policies than those who will benefit.¹⁷⁴ Further, fledgling feminist groups concerned about inequities may need help building the capacity to collaborate and becoming convinced that their experience can become a factor in a larger framework of interdependence and cooperation.¹⁷⁵ Feminists must also be willing to reach out to other justice-minded groups to forge interdisciplinary alliances.¹⁷⁶ It is important to persuade feminists that this type of “border work” will not dilute their group identity and instead can create “multivocal” alliances built on “self awareness, self-respect, and a genuine appreciation of others.”¹⁷⁷ Still, because these broadly-constituted coalitions bring together groups with generalized social and political affinities, it is crucial that participants remain true to their own identity and situatedness.¹⁷⁸

Feminist legal scholars strongly endorse forming coalitions to inform decisions about the instrumental objectives of the law¹⁷⁹ and

171. *See, e.g.*, BRAIDOTTI ET AL., *supra* note 103, at 32 (explaining the importance of alliances among diverse groups of women).

172. *See supra* text accompanying note 115.

173. Weber & Castello, *supra* note 123, at 439, 442.

174. *Id.* at 439 (applying this argument to feminist field work in the biomedical arena).

175. BRAIDOTTI ET AL., *supra* note 103, at 108.

176. Weber & Castello, *supra* note 123, at 444.

177. *Id.* at 446.

178. *See* BRAIDOTTI ET AL., *supra* note 103, at 169.

179. *See* SCALES, *supra* note 102, at 4.

to prompt decision makers to consistently ask themselves what they want the law to accomplish.¹⁸⁰ To fully consider all options, the voices of those who normally are excluded from deliberation need to be heard. Accomplishing that end will require feminists to work and participate in multiple communities,¹⁸¹ and to try to understand the concerns and insecurities of their opponents.¹⁸² By developing this type of open mindedness, feminists can expand their scope of alliances.

The importance of solidarity to the coalition-building process cannot be understated. As like-minded groups work together, participants must take steps to actively nurture and construct solidarity.¹⁸³ Again, this does not mean that feminists must yield to other positions; instead, members of coalitions must carefully consider differences among their members.¹⁸⁴ Practicing solidarity requires thinking about how legal decisions will affect others; it forces one to think about the connections between one's life and beliefs and those of others who may be less well off.¹⁸⁵ At times it may require more privileged collaborators to step back and listen to others with different perspectives to determine whether they present better options.¹⁸⁶ Coalitions built upon solidarity do more than work toward a common goal; they are comprised of participants who strive to be constantly aware of how their views and experience connect to others.¹⁸⁷

A Feminist Nudge for Sustainable Development

A feminist vision of sustainable development does not disturb the three pillars of sustainability: environmental quality, economic prosperity, and social well-being. Instead, the feminist leanings drawn from WED's alternative development, the critique of science,

180. *Id.* at 31.

181. *Id.* at 31, 79.

182. *Id.* at 102.

183. BRAIDOTTI ET AL., *supra* note 103, at 72.

184. *See id.* (noting that without solidarity, feminist agendas will not be realized).

185. SCALES, *supra* note 102, at 112-13.

186. *Id.* at 114.

187. *Id.* at 118.

intersectionality, and coalition-building enrich the procedural and substantive integration of the 3 E's in ways that reinforce the fundamental objectives of sustainable development. Supplementing sustainability in this way presents an opportunity for feminist thought going forward.

To begin, procedures directed at sustainable outcomes must be less hierarchical and open to more voices. To accomplish this objective, decision-making frameworks should be structured to encourage cooperation and interdependence between all those involved.¹⁸⁸ Participants must acknowledge both the macro- and micro-contexts of their decisions as well as the multiple power structures at work.¹⁸⁹ The process must be open to all relevant points of view and avoid making generalizations about the people who will be affected by the proposed development.¹⁹⁰ To succeed, steps must be taken to help local and subordinated individuals to develop the capacity to make their concerns known in meaningful ways.¹⁹¹

To ensure that the decision-making process is made open to all those whose voices matter, feminists must form alliances with similarly engaged groups from other disciplines. Further, they must encourage a spirit of solidarity among their collaborators to emphasize their shared views while respecting and accounting for the special situatedness and experiences of all.¹⁹²

Throughout the decision-making process, expert pronouncements and other "facts" offered by those at the highest decision-making levels must be open to fair questioning,¹⁹³ and discussion must focus on the instrumental and pragmatic goals of the proposed development and any accompanying legislation.¹⁹⁴ As statements are challenged and objectives are put on the table, those who will be most affected, especially subordinated groups, must be free to meaningfully present concerns based on their experience.¹⁹⁵ It is crucial that deliberative

188. *See supra* text accompanying note 90.

189. *See supra* text accompanying notes 145-47.

190. *See supra* text accompanying notes 137-39.

191. *See supra* text accompanying notes 178-81.

192. *See supra* text accompanying note 177.

193. *See supra* text accompanying notes 131-32.

194. *See supra* text accompanying note 163.

195. *See supra* text accompanying notes 158-62.

procedures show respect for all sources of knowledge by giving all “knowers” a voice.

Participants in the decision-making process should strive to craft outcomes in ways that further the feminist understanding of sustainability. Sustainable solutions will reflect the holistic objective of integrating environmental, economic, and socially equitable goals.¹⁹⁶ To fully integrate equitable concerns, decision makers will make development decisions with an understanding of local situations and the multiple variables that intersect in people’s lives,¹⁹⁷ with special attention given to the underprivileged and those who are most likely to be affected by the project.¹⁹⁸

The institutions that will implement and oversee development also deserve attention. In particular, decision makers should not automatically adopt hierarchical regimes; rather, they should consider redistributions of resources and power if needed for people to have livable lives.¹⁹⁹ As a general rule, the preferred option should involve power sharing with those who will live closest to development.²⁰⁰

This feminism-infused model of sustainable development represents a starting point for enhancing the role of feminist thought in development decisions. To see how it might work in practice, it will be used as a measuring stick for Act 13, Pennsylvania’s new law regulating Marcellus shale development.

IV. THE UNSUSTAINABILITY OF PENNSYLVANIA’S OIL AND GAS ACT AMENDMENTS

An assessment of how well Pennsylvania’s legislation measures up to the feminist model of sustainable development requires the identification of what, precisely, is being analyzed. Process and outcomes must be examined separately, but because those two components work in tandem to achieve sustainability, the analysis of one is likely to impact the other.

196. *See supra* text accompanying notes 88-89.

197. *See supra* text accompanying notes 150, 161.

198. *See supra* text accompanying note 160.

199. *See supra* text accompanying notes 152, 162.

200. *See supra* text accompanying note 161.

The amendments create a limited and unusual process by which municipalities may regulate natural shale gas development. The law preempts local attempts to regulate the environmental aspects of gas drilling operations, foreclosing local processes and outcomes aimed at addressing environmental concerns. Municipalities are, however, authorized to enact land use ordinances pursuant to their authority under Pennsylvania's Municipalities Planning Code, as long as their ordinances provide for the reasonable development of natural gas resources. As far as outcomes, the new law's provisions guarantee that state law will regulate all matters related to gas well operations, and that municipal land use ordinances across the state will authorize drilling operations in all zoning districts and otherwise provide for the reasonable development of shale gas. Further, the law assures that local governments will receive a share of impact fees to be used for specifically enumerated purposes.

These processes and outcomes are sadly deficient in terms of their attention to sustainable development. The provisions in the new law that reflect a feminist vision of sustainability are few and far between. The law is striking in that it never mentions "sustainable development." Instead, the law provides that the overall objective is the "optimal development" of gas resources in a manner that is consistent with the protection of health and safety.²⁰¹ Assuring optimal development, in turn, requires all local governments to authorize the reasonable development of Marcellus gas. These objectives give considerable weight to development, while health, safety, and community well-being play subordinate roles. The law's omission of any reference to sustainability and its primary emphasis on gas development sends a message that the law aims to allow gas drilling in ways that are as painless and beneficial for the energy industry as possible. This message is under-scored on the Governor's website, where the only reference to sustainability is to "sustaining [the] flourishing [natural gas] industry."²⁰²

The pro-development message is further borne out in the processes and outcomes the amendments create. The law's preemption of local

201. H.B. 1950 § 3202, Gen. Assemb., Sess. of 2012 (Pa. 2011).

202. OFFICE OF THE GOVERNOR, *Rebuilding Pennsylvania*, <http://www.portal.state.pa.us/portal/server.pt?open=514&objID=1071687&parentname=ObjMgr&parentid=7&mode=2> (last visited Apr. 27, 2012).

environmental ordinances is arguably reasonable. Allowing municipalities to enact their own environmental restrictions on drilling operations would make it unduly burdensome and expensive for energy companies to conduct business in multiple jurisdictions in the state. To avoid the risk of losing valuable economic benefits, the amendments prohibit municipalities from creating an amalgam of varying regulatory requirements. Limiting the land use authority of municipalities to control gas development is quite another thing.

The law creates a process for local land use regulation of gas drilling that is seemingly benign. Municipalities are free to enact land use ordinances that provide for the reasonable development of Marcellus gas resources. Without more, this language would permit a sustainable process for the adoption of allowable land use ordinances. Procedures could be designed in an open and cooperative manner that moves away from a hierarchical structure while favoring, or at least accommodating, those at the local level who will bear the brunt of gas operations. Such a process would additionally allow participants to question the absolute pronouncements of state and energy industry officials, bring attention to the variety of interlocking forces that contribute to their experience, build alliances of all sorts, and arrive at a consensus regarding the instrumental objectives of local land use law.

Hope for a feminist process for sustainability wanes, however, when one considers the strictures of the “reasonable development” provisions. Section 3304 tells municipalities what type of gas operations must be authorized in various zoning districts, and forbids them from imposing numerous other conditions on gas operations.²⁰³ By dictating with remarkable precision the contours of allowable land use ordinances, the amendments remove any rationale for constructing an inclusive process to achieve sustainable land use controls. It would be illogical for individuals to invest time and effort in a local legislative process when nearly the entire outcome has already been pre-determined.

Just as the law reduces attempts to forge a sustainable process for local land use regulation to a meaningless exercise, the “reasonable development” provisions stray far from the type of outcomes sought

203. *See supra* text accompanying notes 62–68.

by feminist sustainability. The substantive integration of the 3Es, which is the hallmark of the traditional model of sustainability, is seemingly achieved by the legislative package, taken as a whole. The requirement that local governments permit drilling operations in all zoning districts is very beneficial to economic interests, as is the impact fee structure which, among other things, establishes a grant program for the conversion and purchase of vehicles that run on natural gas.²⁰⁴ Further, the regulatory provisions of Chapter 32 address a host of generic environmental concerns, and social issues such as affordable housing, emergency response, parks and recreation, career training, and delivery of social services may be funded under the impact fee distribution provisions.²⁰⁵ As such, each of the three pillars of sustainability is represented in the legislation.

The deficiency in the new law lies in the reality that the balancing of the 3E's for the purposes of local land use decision-making has been pre-determined by the state for every local government in Pennsylvania, resulting in a virtually uniform land use outcome. This sort of intentional suppression of local input is at odds with Pennsylvania's own sustainability policies.²⁰⁶ There is no opportunity for local residents to question the data and research that led state leaders to allow drilling operations in every zoning district in the state. Neither is there an opportunity for local residents to bring to bear the interests of future generations and the intersection of race, class, gender, age, education, and place of their experience. With so little choice left for local land use officials, there is no incentive to form alliances to work in partnership with officials to achieve properly balanced land use plans for shale development. As such, the law strips away all opportunity for a feminist vision of sustainability to play a role in land use outcomes regarding shale development. Instead, the law announces by near fiat that the land in

204. *See generally*, H.B. 1950 § 2703. The program, administered by the DEP, will receive \$20,000 over the next three years. *See* H.B. 1950 § 2314(c.2). Admittedly, these provisions will benefit the environment, but they also will create a ready market for natural gas producers.

205. H.B. 1950 § 2314(g).

206. *See* Spyke, *supra* note 89, at 742 (noting that the 21st Century Commission Report endorsed “decentralizing decisions when possible”).

Pennsylvania's vastly diverse communities will be used to develop natural gas in much the same way.

The extent of the law's departure from the norms of land use practice in Pennsylvania is remarkable. The vast majority of local governments in the Commonwealth receive their land use powers from the Municipalities Planning Code,²⁰⁷ while the state's largest cities, Philadelphia and Pittsburgh, receive their authority from their own enabling acts.²⁰⁸ Most pertinent to this discussion are the provisions in these laws that direct local governments to preserve their distinct identities. For example, the city of Pittsburgh is instructed to use its land use powers to address unique "topography" and "character," as well as the land's "peculiar suitability for particular uses"²⁰⁹ The MPC similarly encourages municipalities to consider their "character" and "special nature," and to use special zoning classifications for "places having a special character or use affecting and affected by their surroundings."²¹⁰ The MPC further recognizes that the protection of social and cultural amenities is within the ambit of land use authority.²¹¹ It is beyond question that Pennsylvania's delegation of land use authority reflects a policy to allow local officials to determine how to use the land on which they and their constituents live, work, and play.

Although the Oil and Gas Act amendments preserve the ability of municipalities to enact land use ordinances to address shale drilling, the reasonable development provisions put municipalities in a virtual straight jacket. Ordinances that run afoul of the new provisions are subject to review by the Public Utilities Commission and, if found to

207. See 53 PA. CONS. STAT. ANN. §10601 (2003).

208. See 53 PA. CONS. STAT. ANN. §§ 14751, 25051. See generally Nancy D. Perkins, *Principled Preemption in an Age of Interest Convergence: Preserving the Distinction between Pennsylvania's Environmental Regulation and Local Land Use Regulation*, 47 DUQ. L. REV. 27, 31-35 (2009).

209. THE HILLSIDE STEERING COMMITTEE, CITY OF PITTSBURGH – DEPARTMENT OF CITY PLANNING, OPPORTUNITIES FOR HILLSIDE PROTECTION 8 (2005); 53 PA. CONS. STAT. ANN. § 25052 (setting forth second class city land use powers).

210. 53 PA. CONS. STAT. ANN. § 10605(1)-(2).

211. 53 PA. CONS. STAT. ANN. § 10105. The author has written elsewhere that the MPC "unquestionably reflects and understanding that zoning exists, in large part, to enable municipalities to deal with unique local features and environmental conditions." Perkins, *supra* note 208, at 34.

be invalid, may result in local governments being barred from receiving their share of impact fees. The law makes no exception for unusual local conditions; neither does it provide municipalities with a variance procedure. The protection of unique attributes of identity and place, which Pennsylvania's land use laws prominently make the business of local governments and which is crucial to a feminist understanding of sustainability, is ignored. This omission, when combined with the amendments' clearly-stated policy to promote the optimal development of shale gas throughout the Commonwealth, reflects, at best, an out-of-balance attempt at sustainability or, at worst, a law that was never intended to provide for sustainable outcomes in the first instance.

The gas amendments additionally conflict with the anti-hierarchical objectives of a feminist model of sustainability. In order to avoid the subordination of those who are most likely to bear the brunt of development decisions, feminists have argued that decision-makers should replace top-down hierarchies with a partnership model that is open to the redistribution of resources and power.²¹² Rather than adopt these objectives, the Oil and Gas Act amendments replace the generous delegation of land use authority embodied in the MPC with a largely hierarchical structure of state-selected and state-monitored land use requirements. This unusual approach, adopted only once before in Pennsylvania,²¹³ turns the feminist goal of redistributing state power to municipalities on its head.

The fact that the impact fee provisions will steer resources to Pennsylvania's municipalities to help them fund social services, infrastructure improvements, and environmental projects does not cure the amendments' shortcomings. Although the revenue distribution provisions may ultimately address environmental and social equity issues, the state has subordinated those interests to economic development. There is no process that gives municipalities an opportunity to balance economic development against their unique environmental and social conditions in ways that might prevent or mitigate environmental and social impacts before they occur. Instead, Act 13 requires Marcellus gas development wherever

212. *See supra* text accompanying notes 161, 199.

213. *See supra* note 71.

possible, severely truncates local land use authority, and justifies this new power structure with impact fee provisions. The law eschews a true policy of sustainability by giving economic development the nod while paying localities to deal with the environmental and social impacts they are bound to experience.

The newness of the Oil and Gas Act amendments makes it impossible to say what it will mean for Pennsylvanians. Some describe the law as an “acceptable first step,” while others call it a “squandered” opportunity.”²¹⁴ One thing is certain: the law is a letdown for those who have hoped that Pennsylvania’s commitment to sustainability would be carried forward

CONCLUSION

The feminist goal of preventing the subordination of those who are closest to development decisions is especially significant when new technologies open the door to massive development initiatives. It is at those moments that feminists should advocate for sustainable procedures and outcomes informed by the principles this article articulates. As Pennsylvania’s Marcellus story illustrates, when major development decisions fail to integrate a rich understanding of sustainability in a rush to capitalize on new forms of resource development, everyone’s backyard is at risk.

214. Olson, *supra* note 10. Shortly before this Article went to press, seven Pennsylvania municipalities filed suit challenging the local ordinance provisions of Act 13. Laura Olson, *7 Municipalities File Suit over State Shale Regulations Law*, PITT. POST-GAZETTE, Mar. 29, 2012, <http://www.post-gazette.com/stories/local/marcellusshale/7-municipalities-file-suit-over-state-shale-regulations-628784/>.

