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**FROM RENEWABLE TO ALTERNATIVE: WASTE COAL AND  
THE PENNSYLVANIA ALTERNATIVE ENERGY PORTFOLIO STANDARD**

A Thesis in

Rural Sociology

by

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## ABSTRACT

In recent years, state legislatures have begun to apply green classifications to energy sources in efforts to promote renewable energy. As such, they must conduct environmental boundary work in order to draw lines (or establish borders) between those sources to promote and those sources to exclude. The conceptual opposition between fossil and renewable fuels has typically driven these sorting activities. Pennsylvania's Renewable Portfolio Standard is unusual in this regard. Called the Alternative Energy Portfolio Standard (AEPS), this policy promotes at least three energy sources that are typically thought of as non-renewable: waste coal, coal mine methane, and coal gasification. Since the public readily identifies these energy sources as 'fossil fuels', we can reasonably ask how policy makers overcame this categorical opposition.

This thesis answers this question by examining how Pennsylvania lawmakers inserted waste coal into this renewable energy policy. Analysis first assembles testifiers into discourse coalitions based on their asserted assumptions (or 'first principles') regarding the economy and the environment. Next it demonstrates how stakeholders characterized the concrete situation at hand, namely the production of energy in Pennsylvania, and how they selectively problematized different domains of Pennsylvania's economy and the environment. Third, it shows how stakeholders portrayed waste coal energy production and argued for its inclusion or exclusion in the policy. Finally, the study examines how preexisting linguistic structures offered opportunities to stakeholders as they worked to ascribe meaning and significance to their representations of waste coal.

In doing so, this study shows how waste coal supporters successfully sidestepped the opposition between renewable and fossil fuels by splitting the domain of 'green' energy into two categories, 'clean' and 'renewable'. It also discusses the rhetorical border work that advocates

enacted to justify this splitting. Namely, they drew upon the ambiguous terms ‘alternative’ and ‘clean’ to argue that waste coal plants ‘clean up’ abandoned gob piles and produce ‘cleaner’ energy ‘than’ traditional coal plants.

The results of this thesis are relevant beyond Pennsylvania’s borders. The study discusses how arguments used to justify the promotion of waste coal may be used to justify the promotion of other energy sources, and how the label ‘clean energy’ can be applied to fossil fuels. Further, the study shows how metaphors are effective rhetorical devices to justify the redefinition of categories and the reshaping of boundaries. Also, analysis demonstrates how publicly salient notions like ‘clean’ and ‘renewable’ can place limits on lawmakers as they work to associate themselves with environmental initiatives. Lastly this research demonstrates how the rhetoric of ecological modernization can be adopted to justify the promotion of fossil fuels with the context of green energy policies.

## TABLE OF CONTENTS

ACKNOWLEDGMENTS.....	vii
CHAPTER 1: INTRODUCTION AND BACKGROUND	
1.1 Introduction.....	1
1.2 Research Question.....	2
1.3 Data and Objectives.....	3
1.4 Thesis Outline.....	4
1.5 Renewable Energy and Efforts to Promote It.....	6
1.6 The Renewable Portfolio Standard.....	7
1.7 Pennsylvania’s Alternative Energy Portfolio Standard.....	11
CHAPTER 2: THEORY AND METHOD	
2.1 Boundaries.....	14
2.2 Discourse Coalition Analysis – Theory and Method.....	18
2.3 Classification Analysis – Theory and Method.....	22
2.4 Boundary Change.....	25
2.5 Conclusion.....	34
CHAPTER 3: DISCOURSE COALITION AND CLASSIFICATION ANALYSIS	
3.1 Introduction.....	35
3.2 Economic Rationalism.....	35
3.3 Administrative Rationalism.....	41
3.4 Ecological Modernization.....	47
3.5 Conclusion.....	55

## CHAPTER 4: DEBATING WASTE COAL

4.1 Introduction.....	56
4.2 First Argument.....	57
4.3 Second Argument.....	58
4.4 Third Argument.....	60
4.5 Changing the Policy Name.....	61
4.6 Press Releases Announcing the Final Policy.....	62

## CHAPTER 5: DISCUSSION AND CONCLUSIONS

5.1 Implications for Environmental Discourse and Policy Making.....	64
5.2 Category Incongruity.....	65
5.3 Diversions.....	68
5.4 To the Public – Equivocating Labels.....	69
5.5 To the Committee - Cosmetic Diversions.....	73
5.6 Selective Representations.....	73
5.7 Inherent vs. Relational Definitions.....	74
5.8 Interchangeable Labels – Metaphors.....	76
5.9 Conclusions, Limitations, Future Research.....	80

## APPENDICES

Appendix A: Names of State Renewable Portfolio Standards.....	87
Appendix B: Energy Sources Selected by State RPS Policies.....	88

WORK CITED.....	91
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## CHAPTER 1

### INTRODUCTION AND BACKGROUND

#### 1.1 Introduction

Over the last decade various programs, such as the LEED Green Building Standard or the Energy Star program, have emerged to encourage the use and development of various sustainable products. These programs rely on classifications that draw boundaries around a wide range of practices and processes and, in so doing, establish distinctions between those that are ecologically friendly and those that are ecologically harmful (Hemmelskamp and Brockman 1997; Bartz 1998; Gale 2002; Guthman 2004; Cliath 2007; Salzman 1997). Labels then communicate these distinctions to various groups, including consumers aiming to purchase green products, legislators hoping to take credit for effective environmental policies, and companies striving to profit from environmentalism. Rather than actively engaging with complex ecological issues, decision makers can simply read green labels (that communicate the boundaries established by classifications) and thus choose products or processes that other people have designated as green.

One might argue that the nation's various environmental movements depend, in part, on a wide range of these sorting activities, which organize whole populations of objects and behaviors. The success of these sorting projects will rest on the ability of organizations to create, maintain, and communicate boundaries that are simultaneously rigid, legitimate, and reliable. With this in mind, studying how various groups develop and use environmental boundaries (as well as communicate distinctions with labels) is a good topic for social scientists since these activities may help illuminate how public institutions, the general public, and economic actors negotiate problems of ecological degradation.



## 1.2 Research Question

State legislatures have begun to apply green classifications to energy sources in efforts to promote renewable energy. Resting upon what we might call ‘energy source classifications’, these policies typically involve sorting energy sources along variable scales of renewability and drawing lines between ‘green’ and ‘non-green’ energy sources. Studying Renewable Portfolio Standard (RPS) legislation is a good way to examine how policymakers construct these energy source classifications. The Renewable Portfolio Standard has become a widely implemented state-led policy mechanism to stimulate the development and utilization of renewable energy sources (Rabe 2006, 2004; Berry and Jaccard 2000). While portfolio standards come in a variety of forms, all stipulate minimum requirements for the generation of renewable energy in a state. By September of 2007, twenty-seven states and the District of Columbia had adopted renewable portfolio standards, and most Americans lived in states with RPS policies (EERE 2007).

When creating renewable portfolio standards, policy makers must complete the fundamental task of selecting the energy sources to include in the policy (Berry and Jaccard 2000; Espey 2001), and, thus, they must construct boundaries and categories that establish a separation between acceptable and unacceptable energy practices. The distinction between renewable vs. non-renewable (fossil fuels and nuclear) has generally driven this separation. Pennsylvania’s RPS is unusual in this regard. Called the Alternative Energy Portfolio Standard (AEPS), this policy promotes at least three energy sources that are typically thought of as non-renewable: waste coal, coal mine methane, and coal gasification. The inclusion of these sources is unusual given that typical definitions of renewable energy explicitly exclude fossil fuels (Reiche and Bechberger 2004; Bang et al. 2000; Glavic and Lukman 2007; Jaccard 2005; Cassedy and

Grossman 1998; Demirbas 2008; Rowlands et al. 2002) and given that other states established a precedent of not including fossil fuels in their renewable portfolio standards.

By including waste coal in the PA AEPS, I argue, Pennsylvania lawmakers stretched the boundary of the RPS policy mechanism, overcame the conceptual opposition between fossil and renewable fuels, and thus realigned the border<sup>1</sup> between acceptable and unacceptable energy production practices. This thesis aims to examine how Pennsylvania lawmakers enacted this stretching in discourse.

### **1.3 Data and Objectives**

To study this boundary stretching, I examine committee hearings, floor debates, and press releases that consider this policy. Data analyzed in this thesis includes written and spoken testimony given during floor debates before the Pennsylvania General Assembly and during hearings before the Pennsylvania House and Senate Environmental Resources and Energy Committees. Four hearings and two floor debates were central: the Senate Floor debate on November 17, 2004, the House Floor debate on November 20, 2004, the Senate Environmental Resources and Energy Committee hearings on June 8, 2004 and June 23, 2005, the House Environmental Resources and Energy Committee hearing on September 30, 2003 and April 13, 2004. Additional data include official state press releases that preceded and followed the enactment of the statute.

This study will first consider the various RPS policies proposed by competing stakeholders. Next it will examine how these stakeholders debated the inclusion of waste coal during the hearings. In particular, it will show how policy makers generated a narrative to justify

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<sup>1</sup>Throughout this text I interchange the words border and boundary in order to provide textual variety. However, I recognize that in other studies and in other texts, these terms are not necessarily synonymous.

this boundary stretching and how opponents of waste coal created counter-narratives in an effort to prevent this stretching. I also pay particular attention to the ways in which lawmakers justified the need for an RPS, changed the policy title, redefined energy labels, and redefined the policy blueprint.

Broadly speaking, this research will study, in detail, the creation of one of the many energy classifications being drawn by policy makers and advocacy groups, a particularly timely topic given the increased interest in the economic and environmental costs of energy production. In so doing, the thesis will show one of the ways in which the label ‘clean energy’ has been applied to both coal and waste energy sources and how the rhetoric of ecological modernization can justify the promotion of fossil fuels. Further, I hope to contribute to the study of boundaries by exploring how actors can draw upon opportunities embedded in existing linguistic structures when attempting to redefine categories and stretch boundaries.

#### **1.4 Thesis Outline**

In order to understand how lawmakers justified stretching the boundaries of the renewable portfolio standard to include waste coal, this thesis will follow in two stages and will include four additional chapters. This chapter will continue with an introduction to waste coal, to the renewable portfolio standard policy concept, and to Pennsylvania’s Alternative Energy Portfolio Standard. Chapter Two will provide the theory and method of discourse analysis and classification analysis. It will further introduce the notions of boundary change (including boundary stretching), and describe Fairclough’s (2003) concept of recontextualization (which highlights a movement of appropriation, transformation, and colonization).

Chapter Three will provide the first stage of this analysis by investigating the ‘border war’ that occurred as lawmakers and stakeholders debated how to construct the PA AEPS. This

analysis will first organize testifiers into discourse coalitions based on their concerns and objectives for the proposed legislation (e.g., their description of energy production in PA and the goals of the proposed renewable portfolio standard). By understanding stakeholders' concerns and objectives, we can better understand why they advocated for particular classifications over other alternative choices.

After organizing testimony into discourse coalitions, Chapter Three will next study the energy source classifications provided by each discourse coalition. This will involve examining the blueprint (or the general principles) used by each discourse coalition to select which energy sources policymakers should include in the policy. This will be a type of boundary analysis because each testifier ordered and privileged certain energy sources over others.

Chapter Four will provide the second stage of this analysis. With the discourse typologies and the classification analysis as background, our attention will turn to the specific arguments made for and against the inclusion of waste coal. Here, testifiers specifically describe why 'clean energy' should (or should not) be used to label these coal and waste-based energy sources. This chapter will also show how policy makers went about changing the policy name from *Renewable* Portfolio Standard to *Alternative Energy* Portfolio Standard in order to accommodate the inclusion of a fossil fuel (waste coal) in a renewable energy policy.

Chapter Five will provide a discussion and concluding remarks. Here I argue that waste coal supporters relied upon ambiguous terms to overcome the opposition between renewable and fossil fuels. Discussion will examine the significance of these findings for studies of environmental discourses, diversionary reframing, and boundary stretching.

## 1.5 Renewable Energy and Efforts to Promote It

Before leaping into the data analysis, it will be useful to provide some background information on waste coal, renewable energy, and the renewable portfolio standard. Various rationales have been provided for the use of renewable energy sources. Renewable energy sources typically have much smaller social and environmental footprints than traditional energy sources (Berry and Jaccard 2000). Plus, by using renewable energy, nations can diversify their energy portfolio and thus can enhance energy security and stability. Moreover, the use of renewable energy tends to lead to positive economic growth because the development of renewable energy can reduce foreign fuel imports and generate jobs by creating new opportunities for local technologies and expertise (Berry and Jaccard 2000).

Though the use of renewable energy can provide many benefits, it represents a small percentage of energy production throughout the world, particularly because it typically cannot compete with traditional energy sources on cost (Berry and Jaccard 2000). Therefore governments have pursued a number of incentive programs to stimulate the development of renewable energy sources. Ackermann, Andersson, and Soder (2001) provide an overview of these promotion strategies.<sup>2</sup> Policy makers may, for instance, institute Feed-in Tariffs. With this program, local distribution centers are taxed for every kWh of energy they distribute. Monies collected by this tariff are then used to stimulate renewable power generation. As of 2000, Germany had the highest feed-in tariffs and also had the largest world-wide market for wind turbine generators. A second incentive strategy, Net Metering is popular in the US. In this program, monetary compensation encourages private citizens to generate renewable energy on

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<sup>2</sup>Noting the variety of incentive programs highlights the fact that the Renewable Portfolio Standard is only one of many incentive programs that the Pennsylvania State Assembly could have selected to encourage renewable energy development in Pennsylvania.

their private lands. Here utility companies must compensate energy customers for producing energy onsite by offsetting their electric bill.

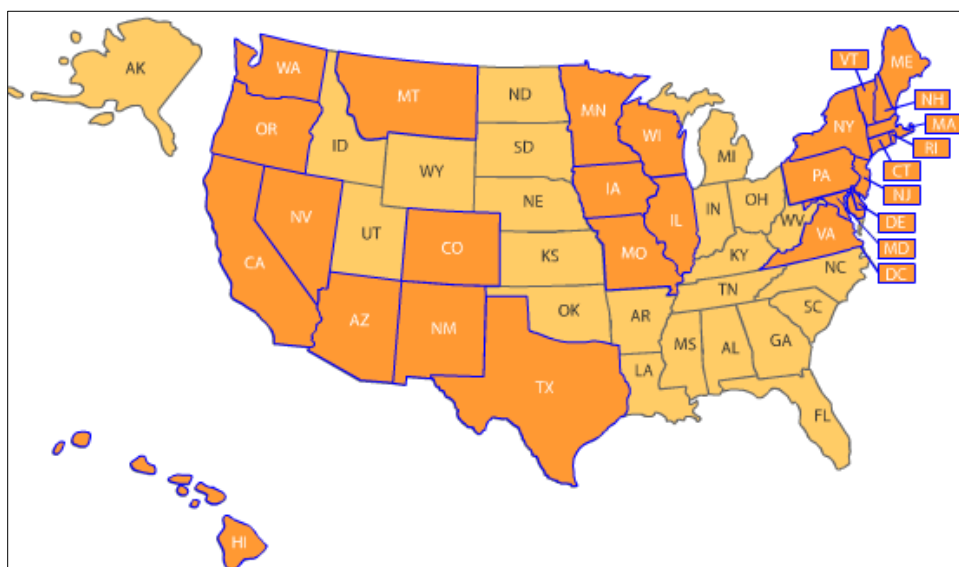
Policy makers may also construct Green Power Exchanges, which provide a market and an indicator for large customers and renewable energy producers who would like to meet and exchange renewable energy. Green Pricing is another choice. Here, energy producers give consumers the option of paying a premium for green energy generation. Programs such as these exist in the US and in Europe. As the next chapter will show, opponents of the proposed PA AEPS argued that the ‘success’ of green pricing in Pennsylvania rendered the PA AEPS unnecessary. Policy makers can also enact Renewable Portfolio Standards, which require energy producers to generate a certain percentage of energy produced from renewable sources.

### **1.6 The Renewable Portfolio Standard**

Of these various incentive programs, the renewable portfolio standard (RPS) has become particularly popular with American lawmakers (Rabe 2004, 2006; Berry and Jaccard 2000). Berry and Jaccard (2000) assert that there are a number of reasons for this interest. First, RPS policies encourage renewable producers to increase efficiency and pass savings on to customers. Second, the RPS provides lawmakers with a target to strive for. By meeting a policy goal, governments can demonstrate their abilities to meet targets and work to improve environmental conditions. Third, the standard requires little government involvement, because the market dictates how development occurs. Thus governments need to contribute little to the specific configuration of green energy development.

As previously mentioned, most Americans now live in states with RPS policies (EERE 2007). Figure 1 highlights those states with RPS policies in dark gray. All but two of these policies included the term *renewable* in the policy title. So for instance, Colorado policymakers

labeled their RPS policy the *Renewable Energy Standard*, while Maine lawmakers used the label the *Renewable Resource Portfolio Requirement*. Two states, however, used the term ‘alternative’ instead of ‘renewable’ to label their policies. As noted, Pennsylvania’s policy is entitled the *Alternative Energy Portfolio Standard*. Iowa lawmakers produced a non-binding policy entitled the *Alternative Energy Law*. (For a complete list of state enacted renewable portfolio standards see Appendix A).



**Figure 1:** States with RPS policies as of 2007 (in Dark Gray)

Source: [http://www.eere.energy.gov/states/maps/renewable\\_portfolio\\_states.cfm](http://www.eere.energy.gov/states/maps/renewable_portfolio_states.cfm)

Creators of renewable portfolio standards must make a number of decisions. A few key considerations include: applicability, flexibility mechanisms, and administrative responsibilities. Further, RPS creators must determine which energy sources are eligible (Berry and Jaccard 2000; Espey 2001) and thus must draw a conceptual border between included and excluded energy sources. American lawmakers have promoted a variety of energy sources with RPS policies (For a full listing of state-by-state energy source choices see Appendix B). Most popular sources include photovoltaic, wind, biomass, hydroelectric, landfill gas, and solar thermal electric. Many

states also included the following sources: geothermal electric, anaerobic digestion, fuel cells, tidal energy and wave energy. Table 1 highlights these sources.

Most Popular RPS Energy Sources	
Energy Source	# of States
Photovoltaics	28
Wind	28
Biomass	28
Hydroelectric	27
Landfill Gas	27
Solar Thermal Electric	24
Geothermal Electric	21
Anaerobic Digestion	19
Fuel Cells	18
Tidal Energy	17
Wave Energy	16
Ocean Thermal	13

**Table 1:** Most Popular Energy Sources promoted in Renewable Portfolio Standards.

Other energy sources were selected less uniformly. Table 2 details these sources. This data shows that energy sources selected by state lawmakers vary somewhat from state to state, and so boundaries drawn by state RPS policies are not completely rigid. However the boundary drawn by Pennsylvania lawmakers stands out for its inclusion of coal-related energy sources including coal mine methane, coal gasification, and waste coal.



Other Energy Sources Promoted by Renewable Portfolio Standards		
	Energy Source	# of States
Solar Sources	Solar Water Heat	9
	Solar Space Heat	5
	Solar Thermal Process Heat	4
	Solar Pool Heating	3
	Solar Space Cooling	2
	Daylighting	1
	Solar HVAC	1
Waste Sources	Trash Incineration	11
	Animal Waste Digesters	1
	Waste Tires	1
Coal Sources	Coal Mine Methane	1
	Coal Gasification	1
	Waste Coal	1
Various Others	Biodiesel	8
	CHP/Cogeneration	5
	Geothermal Heat Pumps	4
	Ethanol	3
	Methanol	2
	Seawater AC	1

**Table 2:** Other Energy Sources promoted in Renewable Portfolio Standards.

## 1.7 Pennsylvania's Alternative Energy Portfolio Standard

Various groups proposed renewable portfolio standards for Pennsylvania roughly a year before the State Assembly passed the final policy. Two Pennsylvania environmental groups (ActionPA<sup>3</sup> and Citizen Power<sup>4</sup>) wrote the first RPS proposal. State Senator Jim Ferlo introduced this proposal as the *Clean Energy Portfolio Standard* (PA Senate Bill 962) on November 12, 2003 (Ewall 2006). The bill aimed to promote 'Clean Energy' sources, and it explicitly excluded fossil fuels and fossil fuel waste products. This bill was referred to the Consumer Protection Committee and was never discussed. However, it is worth noting that the first proposed RPS used 'clean energy' to label a policy that excluded energy sources like waste coal.

Subsequently, lawmakers proposed three other RPS bills. House Bill 2250, Senate Bill 1030, and Governor Rendell's proposal all included waste coal as a source to be promoted by the renewable portfolio standard. The Governor ultimately signed Act 213 into law on 30 November 2004 as the Pennsylvania *Alternative Energy Portfolio Standard*. He stated that the policy will "address today's energy challenges and meet tomorrow's energy demands—all while taking tremendous strides to make our environment healthier and cleaner" (Philips 2004). The enacted policy requires that 18% of Pennsylvania's energy will come from alternative sources by 2020. Policy makers divided this 18% into two tiers. Pennsylvania energy companies must generate 8% of their energy from Tier I energy sources, which includes coal-mine gases, wind, landfill gases, solar (policymakers gave photovoltaic its own subcategory within Tier I, requiring 0.5% of solar by 2021), and multiple bio-fuel sources (crop ethanol production, as well as animal

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<sup>3</sup> ActionPA is a Pennsylvania-based research, organizing, and networking organization for the grassroots environmental justice movement ([www.actionpa.com](http://www.actionpa.com))

<sup>4</sup> Citizen Power is a non-profit, public policy research education and advocacy organization based in Pittsburgh, PA ([www.citizenpower.com](http://www.citizenpower.com))

waste digesters and incinerators). Energy companies must generate ten percent of their energy from Tier II sources, which includes municipal solid waste, waste from paper production, waste coal, coal gasification, energy efficiency measures, and citizen generation through net metering.<sup>5</sup>

In crafting the details of this energy list, the Pennsylvania State Assembly had to decide which energy sources to promote from a wide range of possible energy sources. The RPS itself carries an implied distinction between renewable energy sources and non-renewable energy sources. During discussions of the PA AEPS, policymakers often followed this conceptual border when sorting energy sources. For instance, policy makers identified nuclear and traditional coal as non-renewable and consequently excluded them from the legislation without contention. Conversely, policy makers categorized wind power and solar power as renewable and included them in the policy. However a consensus did not form over the categorization of all energy sources as easily. When it came to categorizing waste coal, some stakeholders continued to follow the distinction of renewable vs. non-renewable and argued for its exclusion. Other competing testifiers argued that waste coal may not be renewable, but it is clean, and thus lawmakers should include it in the final policy.

Collected in large piles throughout coal mining areas, waste coal is a low-energy-value discard of the coal extraction process (Morag-Levine 2003:95; Muller and Tarr 2003:19). A common sight in many Pennsylvania communities, waste coal piles often resemble barren and dark mountains. Waste coal piles (colloquially named gob or boney piles) can contribute to acid mine drainage, which can transform nearby streams into sulfur-smelling and orange-colored dead

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<sup>5</sup> These details were summarized on the Pennsylvania Public Utilities Commission web site ([www.puc.state.pa.us](http://www.puc.state.pa.us), downloaded 7/26/07), a press release from Gov. Rendell (Philips 2004), and Action PA's web site ([www.actionpa.org](http://www.actionpa.org), downloaded 7/26/07). They were also summarized by government representatives and Penn State University professors at the Sixth Goddard Forum on the Pennsylvania Renewable Portfolio Standard conference held in State College, PA, January 30-31, 2006.

zones (Brake et al. 2000; Li et al. 2005). Most committee hearing participants also agreed that these piles cause visual and land pollution (Ewall 2006; McGinty, House 30 September 2003).

While energy companies historically discarded waste coal, power plants using new technologies can produce energy from this former waste product. However, judging the environmental impact of these technologies has proved to be difficult and controversial. On one side, waste coal generation companies argue that their plants count as a “clean coal” technology (Reliant Energy 2001). Additionally, former Governor Tom Ridge honored one Pennsylvania waste-coal plant with the *Governors Award for Environmental Excellence* (Business Wire 1998). Waste coal advocates also argue that burning waste coal removes abandoned gob piles that cause visual, land, and water pollution. On the other side, opponents argue that the waste coal power plants are much dirtier than traditional coal power plants. These opponents argue that waste coal facilities release more toxins into the air than traditional coal burning plants, and that this technology merely moves pollution from the land and the water to the air (Ewall 2006; Wilcox 2004). As such, the uncertain ecological status of waste coal electric power generation caused a small controversy for lawmakers as they worked to construct and enact the PA AEPS. Some stakeholders wanted to include waste coal in the final policy while others wanted to exclude it.

Previous research on the Pennsylvania Alternative Energy Portfolio Standard has examined the potential economic benefits (Pletka 2004; Urbanchuk 2006) and the technical merits of this policy (Wise et al. 2005). Others have briefly examined the political context that influenced the policy outcome (Rabe 2006). This thesis aims to contribute to this literature by examining the processes by which lawmakers went about selecting energy sources with a specific emphasis on the selection of waste coal. In particular, it focuses on the narratives constructed by stakeholders as they worked to justify the exclusion of waste coal.

## CHAPTER 2

### THEORY AND METHOD

#### 2.1 Boundaries

Boundary making is a fundamental activity of social life that we can observe in a broad range of domains and activities (Lamont and Molnar 2004; Lakoff 1987:5). Gender, racial, and ethnic boundaries are just a few of the most readily identifiable distinctions that social groups draw between themselves and others (Schiebinger 2004, Harding 1986, Haraway 1991). Scholars have also studied the boundary making activities of artist communities (DiMaggio 1987), food industries (Rao et al. 2005), biomedical institutions (Bowker and Star 1999; Shuval and Mizrachi 2004), and scientific disciplines (Gieryn 1983, 1999; Kleinman and Kinchy 2003)<sup>6</sup>. Equally diverse are the range of aims pursued by social actors as they create boundaries, categories, and classifications. Scientists, for instance, draw lines between scientific activities and policy making activities in efforts to decide what institutions are responsible for resolving regulatory disputes (Jasanoff 1987). Industries use classifications in order to control product identities (Zhao 2005). Social actors also create classifications in efforts to distinguish certain practices or products as acceptable or privileged (Fuller 2003).

Of course, many and varied consequences emerge when social groups conduct this boundary making activity. At a very basic level, categorization activities impact social perceptions. As Bowker and Star note, the “process of constructing and shaping differences through classification systems is crucial in anyone’s conceptualization of reality” (1999:230). Indeed, categorization activities often influence how people perceive a variety of objects, peoples, products, and economies. For instance, when two objects are categorized together, a person is

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<sup>6</sup> For a thorough examination of this literature see Pachucki et al. (2007).

led to emphasize the similarities that exist between these objects and to deemphasize the differences that might exist between them. In other words, “as we lump those things together in our minds, we allow their perceived similarity to outweigh any differences among them” (Zerubavel 1996, 1991:21). Furthermore, when sorting objects into categories, creators of classifications suggest that members of a given category are interchangeable and can be substituted for one another with no substantial consequences (Zerubavel 1996; Bowker and Star 1999:230; Fairclough 2003:88). This type of interchangeability can lead to stereotypes, where, for example, “racists claim that all blacks are lazy or that all Orientals look alike” (Zerubavel 1991:17), and to groupings, where lawmakers promote solar power and wind power equally as renewable energy.

If boundary making influences perceptions, then it also impacts a range of material and social realities. In particular, boundary making often results in the creation and reification of social identities, at the expense of other seemingly applicable identities (Zhao 2005). By drawing boundaries between entities of the same class, category creators answer the ontological question of “what is it” or “what are they”, and thus define an entity’s meaning, value, and function (Edelman 1985:131). Social actors subsequently use these identities to determine what to do (or how to approach) a variety of objects, persons, and situations. For instance, lawmakers will use a person’s designation as a scientist or non-scientist to determine that person’s ability to participate in various policy making situations (Gieryn 1983). The nation of South Africa used racial categories to determine the educational, economic, and social potential of its citizens (Bowker and Star 1999: 27). Consumers use the label ‘organic’ to determine whether to pay more for certain food products.

In this sense, classifications are an important mechanism of social control and material creation. As Zhao (2005:187) notes, “Classifications not only create social boundaries but also often result in differentiation in social standing among actors (or objects).” Indeed, a person’s categorization will often determine the activities that this person can pursue (Zhao 2005, Gieryn 1999:16). Likewise, a product’s classification will affect how consumers use the product in question. Therefore we can reasonably argue that social worlds and classification schemes are co-constructed; social actors create categories but the resultant classifications also affect the potential, influence, and meaning of various social and material worlds (Bowker and Star 1999:83; Hess 1995:23).

Since boundaries can alter market dynamics and impact people’s lives, category creation often involve contentious political debates (Zhao 2005; Bowker and Star 1999:46; Lounsbury and Rao 2004; Guthman 2007; Gieryn 1999:15). As Fuller (2003:4) notes, “Because particular boundaries suit some purposes more than others, their meaning, placement, and structure may be highly contested, and boundaries are often a key site for struggles over social relations generally.” Therefore, boundary making often involves what we might call ‘border wars’ in which various groups compete to define boundaries in ways that benefit themselves or the people that they represent (Haraway 1991:150).

Scholars have studied the ‘border wars’ that occur when policymakers construct environmental standards (Guthman 2004; Salzman 1997). These competitions typically involve what we might call ‘environmental boundary work’. Gieryn defines boundary work as “the discursive attribution of selected qualities to scientists, scientific methods, and scientific claims for the purpose of drawing a rhetorical boundary between science and less authoritative residual non-science” (1999:4-5). Contextualizing this notion within environmental studies, we can

define environmental boundary work as: the discursive attribution of selected qualities to *products* and *behaviors* for the purpose of drawing a rhetorical boundary between acceptable environmental practices and those deemed unacceptable or ecologically harmful.

The creation of renewable portfolio standards involves ‘border wars’ of a sort. In crafting an RPS policy, lawmakers must complete the essential step of choosing which energy sources to include in the final legislation. As such they must conduct environmental boundary work in order to draw lines (or establish borders) between those sources the policy should promote and those sources the policy should exclude. Since enacted policies will have impacts on economies, environments, and consumers, the final location of this boundary will benefit (or satisfy) certain constituent groups and will harm (or disappoint) other groups. Thus the creation of RPS policies can involve ‘border wars’ in which various stakeholders compete to define policy boundaries in ways that best suit their purposes.

The Pennsylvania State Assembly ultimately decided where to locate the policy boundary of the PA AEPS. However, prior to the legislation’s passing, various constituents attempted to influence lawmakers’ decisions by proposing alternative policy options. By analyzing committee hearings, we can access the ‘border war’ that took place in the construction of the PA AEPS. Examining this competition will provide a context for understanding lawmakers’ decision to place a fossil fuel within a renewable energy policy. Consequently, the first stage of this analysis will examine stakeholders’ efforts to construct the policy’s boundary in different ways. To this end, Chapter Three will first group testifiers into discourse coalitions based on the assumptions, metaphors, and narratives invoked by stakeholders. Next a classification analysis will examine the energy taxonomy that each stakeholder presented to Pennsylvania lawmakers.



Theory and method for this discourse and classification analysis are provided in the next two sections.

As mentioned, Pennsylvania drew a notably different policy boundary when they decided to include various coal-related energy sources in a renewable energy policy. While other states followed the conceptual border between renewable energy and fossil fuels, Pennsylvania lawmakers chose to include fossil fuels. In doing so, I argue that Pennsylvania lawmakers stretched the boundary of the RPS policy and redefined the relationship between acceptable and unacceptable energy practices. Chapter Four will complete the second stage of this analysis by examining the rhetorical boundary work that lawmakers engaged as they constructed a narrative to justify this boundary stretching and how other testifiers provided counter-narratives to prevent this stretching. Theory and method for this analysis are provided in the final section of this chapter.

## **2.2 Discourse Coalition Analysis - Theory and Method**

To understand environmental initiatives, products, and debates, researchers must untangle an intricate web of highly complex ecological, technical, and social systems (Dryzek 2005). Numerous sociologists have shown the role of discourse, storytelling, and narration in these complex interrelationships (Gismondi and Richardson 1994; Hajer 1997; Glenna 1999; Boynton 2004; Szarka 2004; Dryzek 2005; Hannigan 2006). For instance, researchers have shown how policy makers invoke discourses and narratives when debating and defining what is a problem and what is not a problem (Hajer 1997, Glenna 1999), when attempting to prioritize some problems over others (Hilgartner and Bosk 1988), when trying to clarify and dramatize issues in order to maintain the public's attention (Hilgartner and Bosk 1988), and when attempting to

render environmental phenomena intelligible across heterogeneous intellectual disciplines (Hajer 2005).

In this articulation, discourses are conceptualized as “shared ways of apprehending the world” that people use to build constituencies around commonly held judgments and assumptions (Dryzek 2005:9). Discourses will influence decisions regarding a wide range of situations. For instance, discourses can influence how policymakers decide what counts as legitimate knowledge and how policy makers articulate the most relevant relationships between society and nature. However, stating that discourse and narration play large roles in environmental debates does not mean that material realities are fanciful fabrications; rather it means that social construction mediates relations between humans and material realities (Berger and Luckman 1966; Hannigan 2006; Hajer 1997). To illustrate this point Hajer (1993) provides the example of dead trees. In this illustration, a material reality indeed exists; however social construction mediates how people make sense of the dead forest. Some persons may argue that drought or fire killed the forest in question, while other people may claim that pollution killed the forest. Thus, the notion of discourse here does not indicate an extra-human force that drives a discussant to speak or act in certain ways; rather, discourse describes how discussants speak, act, or interpret various situations and behaviors.

In efforts to organize how certain groups coalesce around specific approaches and interpretations of various social and environmental problems, scholars have introduced the notion of discourse coalition. Discourse coalition names any group of actors who “share the usage of a particular set of story lines over a particular period of time” (Hajer 2005:302). While people can articulate similar storylines, they may be members of very different organizations.

Consequently, discourse coalitions can be composed of individuals or groups who are not associated with each other in any way (Szarka 2004).

Discourse coalitions are a useful concept for studying discussions and debates such as those that occur during various governmental committee hearings. This thesis will employ this concept primarily to organize the various testifiers who attempted to influence the creation of the PA AEPS. A number of scholars have developed environmental discourse typologies in efforts to organize the various stakeholders and discussants involved in contemporary environmental debates (Rydin 2003; Brulle 1996; Hannigan 2006; Herndl and Brown 1996). Dryzek (2005) provides a useful typology for this thesis. His scheme outlines nine distinct environmental problem management discourses that have become prominent in national and international policy and treaty discussions, as well as in academic and popular publications. Each of them rests upon assumptions and claims regarding the relationship between the economy and the environment.

This thesis will first arrange the various stakeholders involved in discussing the PA AEPS roughly according to Dryzek's typology<sup>7</sup>. The definition of each discourse coalition will be provided in the analytical section. In using Dryzek's typology, this analysis will code for testifier's comments on the existence, importance, influence, and relationships between the following items: the market, the environment, consumers, energy producers, and the state.

In addition to these items, the analysis will code for a number of other items in order to localize Dryzek's typology. Like any typology based on ideal forms, Dryzek's works well as a heuristic device that provides broad conceptual distinctions, indicates 'first principles, and articulates abstract assumptions. However, his typology does not provide concrete distinctions

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<sup>7</sup> The use of Dryzek is somewhat arbitrary, however this choice adequately serves the purpose of this thesis, since discourse typologies are not central to the argument; rather the typologies are a heuristic tool to help organize testifiers.

that we can readily apply to specific cases. For instance, his typology does not articulate how these distinctions might manifest themselves in energy policy making situations. To apply the typology to this analysis, I will examine how each testifier defined the problems that lawmakers should address with the proposed legislation. To do so, analysis codes for the following items:

- The Situation: Analysis will examine how each testifier characterized energy production in Pennsylvania. For instance, some testifiers argued that Pennsylvania has plenty of renewable energy and thus has no need for an RPS policy.
- The Threatened: The thesis will also illuminate how testifiers defined or described the threatened entity or entities that lawmaker must protect. For example, some testifiers argued that lawmakers must enact an RPS policy to protect the state's public health, while others argued that a policy was necessary to protect the state's economy.
- The Threat: The paper should also illuminate the threatening agent (e.g. pollutants). For instance, some testifiers asserted that pollution threatened the state's public health.

With these three items we can illustrate how each testifier defined the problem (or problems) that lawmakers should address with the policy. This is central given that “in controversial areas, competing groups often struggle to impose definitions of a problem, and, hence, to influence policy” (Hilgartner and Bosk 1988). Following from this problem, testifiers defined the purpose of the proposed policy. So in establishing discourse coalitions, the paper will also highlight how each discourse coalition defined the purpose or central aim of the proposed RPS policy. This purpose will then illustrate the logic that testifiers provided for decisions to include some energy sources and to exclude others.

### 2.3 Classification Analysis – Theory and Method

The discourse coalition, as described above, will group testifiers according to their asserted associations with broad political discourses. To understand how these broad discourses work their way into concrete arguments for the inclusion or exclusion of waste coal, I will next examine the energy classification provided by each coalition. Classification creation typically starts with a specific *population* of objects to be sorted and organized. Next, two sorting movements occur. The first sorting movement involves *focalization* (Fairclough 2003:85). Here classification creators decide what characteristics or properties will guide the categorization process. Most objects have multiple characteristics (e.g., we can characterize something as simple as a fruit by its shape, smell, taste and color), but a classification scheme will, in a sense, sort these various characteristics into those that are relevant and those that are irrelevant to the classification. As Bowker and Star note, “Designers of classification schemes constantly have to decide what really makes a difference; along the way they...ensure that all and only relevant features of the object (a disease, a body, a nursing intervention) being classified are remembered” (1999:281). We can look at Carl Linnaeus’s early modern taxonomy to see an example of focalization. In creating the category ‘mammal’, Linnaeus foregrounded the female reproductive system (Schiebinger 2004).

Once classification creators chose the salient features to concentrate on, they must next define the relationships between these salient features. Relationships may be topological as when physical geographies are organized into political states. Classification authors can also create binary opposites as when ‘white skin’ is ‘white’ since ‘white’ is not ‘black’. Relationships can also be metric or a matter of degree (Zerubavel 1991:24). The combination of these salient features and the relationships between them will define a *blueprint*. (Rao et al. 2005; Carroll and

Hannan (2000:68) use the word code instead of blueprint). Hence, blueprints will set the requirements for entrance into categories. So for instance, a racial classification may focus on skin color, differentiate a population along a varying range of white or black skin tone, and then allocate public and social resources to those groups deemed privileged or worthy (Bowker and Star 1999:27).

Once authors establish a blueprint, a classification can be used to sort populations following what Zerubavel (1991, 1996) calls lumping and splitting. Lumping occurs when some members of a population are deemed equivalent and are, consequently, ‘split’ from the rest of the population and ‘lumped’ into a category. This lumping of course creates what we can call a *membership*, which is simply defined as all those entities included in a group. Splitting is just the reverse of lumping. Here, members of a population are separated from one another because members of opposing categories are deemed distinct in some essential manner.

Once created, a category will carry an *identity* and will confer this identity to all items included in the category (Zhao 2005). Here identity is conceptualized as a socially determined ontology that indicates the meaning and significance of the category in question. Identities often constrain what organizations and subjects can do and what is expected and not expected of them (Carroll and Hannon 2000:68). We can mostly clearly recognize identities in sentences using the verb ‘to be’. For instance, ‘wind power is renewable energy’ is a statement of categorical identity. In this conceptualization identities do not reflect inherent qualities or meanings (Hall 1996) and therefore do not necessarily emerge from (or rest upon) memberships or blueprints (Carroll and Hannon 2000:68). Instead identities are packets of meaning and significance that float above and are unattached to the categories and the objects that they organize. Indeed some cultural categories do seem to persist and to suggest inherent qualities (e.g., nature vs. culture);

however people can relocate or reassign most identities. For instance, product manufacturers often attempt to increase sales by associating their products with an established identity (Guthman 2004:146). To do so they insert their product into a category while leaving its identity intact. When this occurs, a category's membership changes, but the category's identity remains the same.

Category identities are communicated by various signifiers, markers or landmarks. Landmarks act as signals that designate the social ontology of an object and indicate what an object is and what an object is not. As such, markers are an important mechanism by "which boundaries are maintained, perpetuated and reshaped" (Mizrachi et al. 2005:24). As Gieryn notes, "boundaries define insiders and outsiders, while labeled landmarks give distinctive illustrations of each side" (1999:10). Landmarks come in various audible, material, conceptual, or metaphorical forms. For instance, skin color is a landmark used to designate racial categories, while clothing can be used to indicate social class. Certifications can also indicate an official distinction between experts and non-experts (Kinchy and Kleinman 2003). Labels are also particularly common landmarks. In this case, textual or visual indicators are used to designate categorical contents and distinctions. For instance, milk labels 'talk' to consumers about differences between organic and non-organic milk (DuPuis 2000).

Given that we often rely upon language to indicate identities, the same term can sometimes function as both a label and an identity. However, it's important to conceptually separate these items given that a change in label does not necessitate a change in identity. This distinction will become clearer when I show how the PA AEPS continued to be identified as a renewable portfolio standard despite the fact that lawmakers labeled the policy with the term 'alternative'.

To summarize, we can conceptualize classifications as ‘cultural maps’ constructed of interrelated categories (Gieryn 1999). Categories are metaphorical containers into which various objects and people are sorted (Lakoff and Johnson 1980: 30). Blueprints define what objects are included in categories, and identities determine the meaning of category contents. Landmarks then communicate category identities and the distinction between category members and non-members. This conceptualization of classification provides helpful tools for the study of energy classifications in general and for the ‘border war’ which occurred during the construction of the PA AEPS. In particular, this analysis will examine how testifiers focused on certain characteristics when creating their classifications, and how they conferred identities upon various energy sources to justify their inclusion or exclusion. Next, the study will discuss how testifiers constructed blueprints, labels and memberships around these focalizations and identities.

#### **2.4 Boundary Change**

After examining the various energy classifications proposed by different stakeholders, this thesis will next concentrate on the debate surrounding the inclusion of waste coal. As mentioned before, I argue that lawmakers stretched a boundary when they chose to include waste coal. To understand this movement, the following sections introduce the notion of boundary change.

Since social actors can influence a range of behaviors, products, and situations by drawing social boundaries, they can likewise stimulate a variety of consequences when redrawing these borders. As such, the boundary literature has been occupied with the issue of boundary change. At one level, scholars have provided metaphors like cyborgs and hybrids in efforts to destabilize culturally trenchant distinctions like nature vs. culture or animal vs. man (Haraway 1991:81; Latour 1993; 2005). Far more prosaic are studies of changing product



categories (Lounsbury and Rao 2004), sport identities (Fuller 2003), and organizational forms (Shuval and Mizrachi 2004; Carroll and Hannon 2000).

To understand the type of boundary change that occurred in the case of the PA AEPS, it will be helpful to describe a few of types of change that other authors have identified. This discussion will rely upon the concepts of membership, identity, and blueprint as described in the previous section. Scholars, for instance, have discussed *category branching* which occurs when members of a preexisting category branch off to form a new category (Lounsbury and Rao (2004) call this boundary branching). Here a new category emerges with its own membership, identity, and blueprint. The identity of the original category remains the same, while the membership and the blueprint will change. *Category splitting* occurs when one preexisting category splits into two new categories (Lounsbury and Rao (2004) call this boundary splitting). In this case, two categories (with separate blueprints, identities, and membership populations) emerge from an original category which disappears. Fuller (2003) for instance, examined how the categories ‘trad’ and ‘sport’ climbing emerged from the more general category ‘climbing’.

Most important to this study of the PA AEPS are *category collapse* and *category stretching*. *Category stretching* occurs when classification authors move an object, person, or practice typically associated with one category into the domain of an opposing category. In this case, authors maintain the identity of an existing category but change it’s definition so that the given category can reasonably accept the absorption of new members (Lounsbury and Rao (2004) also call this *merging* or *absorption*.). Thus the significance and identity of the category remains the same, but the category contents change. For instance, Gieryn shows how creators of the National Science Foundation debated whether to expand the boundaries of science and, “the

credibility of natural science... to embrace an altogether different ontological domain- society and culture” in order to justify funding social scientific research (1999: 31).

*Cooptation* is one particular form of boundary stretching worthy of special mention (Shuval and Mizrachi 2004). Like any boundary stretching, this movement occurs when a social group intentionally stretches the blueprint of a category so that certain products or processes can be identified with other members of the category in question. However, in this case, a social group pursues a form of ‘identity theft’, since they attempt to ‘piggy-back’ upon an established identity and thus procure the legitimacy, value, and significance associated with that identity. ‘Greenwashing’ is a form of co-optation particularly relevant to environmental studies. In this situation, a product manufacturer produces ‘cosmetic makeovers’ that rhetorically and symbolically associate their products with other products identified as green without necessarily changing what their products are made of or how their products are manufactured (Athanasiou 1996; Sperber 2003; Switzer 1997; Bridge and McManus 2000).

Fairclough’s notion of *recontextualization* encapsulates a similar movement as boundary stretching. Developed in the sociology of education, recontextualization involves “the appropriation of elements of one social practice within another, placing the former with the context of the latter, and transforming it in the process” (Fairclough 2003:32-33). The process often follows three movements: appropriation, transformation, and colonization. The last movement, colonization, is important because it indicates that recontextualization involves more than just the development of new texts or concepts. Rather it involves a process in which the identity of a category is maintained even while the meaning of that category is significantly changed.<sup>8</sup> Re-cast in the language of boundary change, recontextualization occurs when social

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<sup>8</sup> To better explain these concepts, Fairclough provides an example involving a qualitative researcher who studies the practices of successful businesspersons. This researcher interviews business persons and writes a book that

actors successfully maintain the saliency and legitimacy of an identity, but substantially change the objects or persons named by this identity.

*Category collapse* is a related form of boundary change that can result when boundary stretching is too extensive. In this case, two or more opposing categories (that once provided distinctions useful enough to drive decisions) are no longer trusted given that members of the opposing categories are exchanged frequently or carelessly. In this situation the categories are no longer used and thus simply disappear. So for instance, distinctive food traditions can collapse when high status chefs mix techniques and ingredients from competing traditions (Rao et. al 2005). Boundaries between politically-neutral science and value-laden advocacy can collapse when scientists align themselves too closely with political movements (Kinchy and Kleinman 2003). Category collapse can also result when extensive greenwashing leads consumers to mistrust the distinctions implied by designations such as ‘green’ or ‘sustainable’ (Gallastegui 2002; Cliath 2007).

Thus, category collapse and stretching are related given that cooptation can only succeed if organizations can stretch a category enough to include its product without undermining the legitimacy of the distinction implied by the category in question. In the language of environmental studies, greenwashing can only succeed if the organization can identify its products as, for instance, ‘green’ without undermining the distinctions drawn between ‘green’ and ‘non-green’ products.

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graduate students read in various business school seminars. The recontextualization in this situation involves first, the appropriation of what the businesspeople said (i.e., interview transcriptions). Here data is, in a sense, appropriated from the persons interviewed. Second, the researcher transforms the data by converting the particular experiences of those interviewed into the universal language and principles of the ‘global’ business world. The business world is finally colonized when the researcher’s universal business language and principles are taught to business students, who presumably go out into the market place and apply these principles. Fairclough argues that this movement of appropriation, transformation, and colonization “brings into focus the social relations of power in governance of which these recontextualizations are a part” (2003:32-33).

This tension between boundary stretching and category collapse leads one to ask how social actors might stretch categories without provoking category collapse and thus without undermining the legitimate distinctions that these same categories purport to indicate. The literature provides a few examples of how social actors carefully accomplish this. I will discuss two of these mechanisms below: cosmetic diversions and category splitting.

### *Cosmetic Diversions*

If we understand cooptation as attempts to move some objects or persons from one category to another, than cooptation can succeed only if one can deliver the impression that the given categorical boundary remains the same and that the category identity continues to provide the useful meanings and distinctions that it previously indicated. In the language of boundaries, cooptation can succeed if one can redefine a categorical boundary while rhetorically maintaining that the conceptual border has remained the same. In this sense, one must enact change while obscuring the fact that boundary change has occurred.

Cooptation then becomes a matter of performance. One must assert that the newly moved objects are sufficiently similar to justify their inclusion in an opposing category and, in doing so, must suggest that the logic of these two opposing categories remains intact. How might one obscure boundary change when cooptation occurs? Social actors can, for instance, engage various 'expressive' mechanisms that emphasize the similarity of merging members and that deemphasize the differences that originally sorted them into separate categories.

To take one example, Shuval and Mizrachi (2004) studied the micro processes of demarcation used when mainstream Israeli biomedical organizations stretched their institutional boundaries in order to include alternative medical practices. Distinct epistemological traditions and assumptions most clearly mark the domains of mainstream and alternative medicines. When

combining these opposed traditions, medical practitioners had to establish that these two separate domains were sufficiently equivalent to warrant their inclusion within the same organization. As the authors note, “The relative newness of the changed organizational boundary contour raises the need to gain legitimacy for the presence of alternative practitioners within the structure of biomedical organizations” (Shuval and Mizrachi 2004:683). In order to procure this legitimacy, alternative practitioners enacted a number of isomorphisms, or what we might call ‘cosmetic diversions.’ Here alternative physicians mimicked the practices and behaviors of biomedical practitioners in order to deliver an impression of similarity. For instance, the authors describe how alternative medical practitioners began wearing the same sort of dress typically associated with biomedical physicians and furthermore outfitted their offices with decorations and furniture that mirrored the offices of mainstream medical professionals.

In this case, clothing and furniture act as categorical landmarks which suggest that the two opposing biomedical traditions are sufficiently similar to warrant their inclusion within the same organizational boundary. But white coats only make traditional and alternative medicine *look* the same. As the authors note, “Isomorphic behavior by alternative practitioners tends to provide symbolic and behavioral evidence of ‘belonging’ to the biomedical family”, but these behaviors do not result in actual changes in the epistemological boundaries that separate these two medical domains (Shuval and Mizrachi 2004:685). Instead, the use of medical uniforms merely suggests that alternative and mainstream professionals are sufficiently similar for alternative practitioners to benefit from the identity and legitimacy of mainstream physicians. In doing so, the organizations use landmarks in an attempt to shift their audience’s attention from differences (epistemological traditions) to similarities (clothing, furniture).

Thus, aiming to re-label an object with a legitimate identity, social actors can invoke what we could call ‘isomorphic landmarks’ or ‘cosmetic diversions’ that obscure the salient characteristics that originally determined the object’s identity. As previously mentioned, categorical landmarks come in multiple forms. We can define cosmetic diversions as those landmarks that people use to deliver the impression of similarity. Military marches (and their associated uniforms) are a good example of such isomorphic landmarks. By marching in unison, a military creates a visual display that suggests uniformity and homogeneity.

Of course a military can create the impression of uniformity only if it can draw an audience’s attention to the march (and corresponding uniforms) and away from the individual lives’ of each soldier. Freudenburg and Alario (2007) provide the concept of diversionary reframing to describe efforts by some politicians to distract the public’s attention away from pertinent problems at hand by diverting the public’s attention to some other question or situation. As the authors note, magicians are particularly skilled at this form of distraction and erasure. Cosmetic diversions, like military uniforms, are akin to diversionary reframing. Here an audience’s attention is drawn to ‘uniforms’ or ‘landmarks’ and diverted away from the mundane details inhering to the entities which might suggest fundamental differences. Thus one way to enact boundary stretching is to invoke isomorphic landmarks (or sleights of hand) that draw objects together but which obscure the act of boundary change.

Of course, metaphors and labels are one particularly effective way to divert an audience’s attention. Metaphors are used to understand, experience, or represent one kind of thing in terms of another kind of thing (Fairclough 1989:119; Lakoff & Johnson 1980:5). As a form of representation, metaphors naturally concentrate on some aspect or characteristic of the thing in question and thus deemphasize other seemingly relevant aspects or characteristics. Therefore

metaphors ‘call to mind’ certain properties and characteristics at the expense of others. As Lakoff and Johnson state, “In allowing us to focus on one aspect of a concept, a metaphorical concept can keep us from focusing on other aspects of the concept that are inconsistent with that metaphor” (1980:10). Thus metaphors are a particularly effective form of cosmetic diversion because they can both distract one’s attention away from relevant differences and can actively contradict those relevant differences. Since energy is typically discussed with metaphors, this thesis will attend to the various ways that lawmakers used metaphors as isomorphic landmarks to establish a similarity between waste coal and other renewable energy sources.

### *Category Splitting*

Isomorphic landmarks (or cosmetic makeovers) can succeed when categorical boundaries are sufficiently ambiguous or when a given audience is sufficiently inattentive to the fact that cooptation is occurring. Invoking the military metaphor discussed above, uniforms or marches can successfully deliver the impression of homogeneity only if the audience is located some distance from the march. However, invoking similarity or uniformity does not always work because sometimes a given audience is sufficiently watchful or because the logic of a given category is sufficiently tight to prevent boundary stretching.

How can the identity be conferred in this case? One strategy is to split the category of acceptability, such that the original distinction remains intact but an alternative relationship is established between acceptable and unacceptable practices. For instance, Fuller (2003) studies how the American climbing communities struggled to define lines between acceptable and unacceptable climbing practices as technological advancement allowed climbers to pursue new strategies that threatened the social hierarchy of the sport community. She shows how advocates of more traditional climbing attempted to limit the use of new climbing methods by rendering

these new techniques as unacceptable and heretical. Proponents of new climbing techniques used various strategies to blur exclusionary boundaries drawn by their opponents. Traditional climbers responded to this attempt by creating even more exclusionary distinctions between acceptable and unacceptable techniques. In reaction to this requirement tightening, advocates of the new techniques simply rejected the requirements of the more traditional climbers and created an alternative category called 'sport climbing' with its own distinct techniques and requirements. As 'sport climbing' became a normalized category of practice, older climbing techniques remained, but they were re-labeled as 'trad' climbing. As a result, the domain of acceptability was stretched to include two categories 'trad' and 'sport' climbing. Thus, in a back and forth movement of erosion and ossification, sport climbers displaced the traditional climbers' strict requirements by establishing an alternative relationship between acceptable and unacceptable climbing techniques.

This type of category splitting or distinction displacement can be observed in a number of environmental situations. Product manufacturers have been observed attempting to replace independent certifications and labeling schemes by inventing their own alternative programs (Cliath 2007). For instance, the forest industry established the Forest Stewardship Initiative to offer an alternative to the distinctions established by the Forest Stewardship Council (Gale 2002). The Green Globes Building Assessment Tool was invented in an attempt to displace the influence of the LEED Green Building Standard. In these cases, industries offer competing standards and labels in an attempt to normalize alternative relationships between the domains of 'green' and 'non-green'. In doing so, they aim to make their practices more palatable to environmentally conscientious consumers and thus procure the financial benefits associated with green practices.



## 2.5 Conclusion

With this thesis I aim to describe efforts by testifiers to rhetorically influence the inclusion or exclusion of waste coal in the Pennsylvania Alternative Energy Portfolio Standard. The first step in understanding this situation will be to examine the ‘border war’ that occurred as various stakeholders voiced their opinions and concerns regarding the proposed renewable portfolio standard. To this end, Chapter Three will group testifiers into discourse coalitions, and a boundary analysis will study the classification offered by each of these groups. This analysis will examine how testifiers focused on particular characteristics when creating their classifications and how they constructed blueprints, labels, and memberships around these focalizations. With Chapter Four, attention will shift to the specific arguments made for the inclusion of waste coal. In doing so, analysis will attend to the ways in which testifiers used cosmetic diversions and category splitting to justify this inclusion.

## CHAPTER 3

### DISCOURSE COALITION AND CLASSIFICATION ANALYSIS

#### 3.1 Introduction

This chapter provides the first stage in this analysis of the PA AEPS and waste coal. Here committee testifiers are grouped into discourse coalitions based on their asserted assumptions regarding the environment, the economy, and the production of energy. Testifiers were assembled into three groups, Economic Rationalism, Administrative Rationalism, and Ecological Modernization (with Ecological Modernization split into two subcategories) following Dryzek's (2005) environmental typology. Next, the chapter will show how each coalition attempted to influence the final policy by providing their own energy classifications. Particular attention is paid to the location of waste coal within their classifications.

#### 3.2 Economic Rationalism

Economic rationalism refers to a "commitment to the intelligent deployment of market mechanisms to achieve public ends" (Dryzek 2005: 121). According to this narrative, the market is a self-regulating entity that can efficiently convert private interests into public benefits when left to function on its own (Glenna 2002). Stakeholders invoking economic rationalism tend to argue that legislative bodies should address social problems by limiting government regulation and by privatizing natural resources and public services.

During the Pennsylvania AEPS hearings, three energy company representatives most clearly articulated the rhetoric of economical rationalism: James Seif, PPL Corporation<sup>9</sup> (who was the DEP Secretary under former Republican Governor Tom Ridge), Doug Biden, Electric

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<sup>9</sup> PPL Corporation is Fortune 500, publically-traded, energy production and delivery company with 11,000 megawatts of generating capacity in the northeastern and western United States. Originally called Pennsylvania Power and Light, PPL serves customers in both regulated and unregulated utility markets (<http://www.pplweb.com/about/>).

Power Generation Association<sup>10</sup>, and J. Michael Love, Energy Association of Pennsylvania<sup>11</sup>.

These testifiers should be placed in the economic rationalism group because they argued that the market is the best mechanism to develop renewable energy in Pennsylvania. They note that, in Pennsylvania, the market has already successfully stimulated renewable energy in the Pennsylvania, and so government mandates (such as the proposed RPS) are unnecessary. Not only is the RPS unnecessary, but it might interfere with the efficient workings of the marketplace. Thus these testifiers argued that the proposed RPS will disrupt the economy or the market, suggesting that concerns for the economy are more important than concerns for the environment. To summarize, in coding for the situation, the threatened, and the threat, this group described Pennsylvania energy production as healthy and productive, and characterize the proposed policy as the threat and the economy as the threatened. Their arguments are discussed in greater detail in the following discourse analysis.

### 3.2.1 Discourse Analysis

*Argument 1: The reliance on non-renewable fuels creates environmental problems, and the state should promote renewable energy, but unregulated markets are the best way to achieve this desired outcome.*

James Seif, for example, acknowledged that burning fossil fuels creates pollution and that the state should promote the development of renewable energy; however he argued that market forces have successfully stimulated renewable energy sources in Pennsylvania, and that energy companies have “an admirable track record in terms of the use and development of renewable energy” (Senate, 8 June 2004, 25:7-9). He stated that wind power has emerged within

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<sup>10</sup> EPGA is a regional trade association of major electric generating companies that supply wholesale power in Pennsylvania and surrounding states. Associated companies own and operate more than 139,000 megawatts of generating capacity, approximately half of which is located in the mid-Atlantic region (<http://www.epga.org/>).

<sup>11</sup> Energy Association of Pennsylvania represents the interests of the Pennsylvania Commonwealth’s PUC-regulated electric and natural gas energy distribution companies, five Associate members and over-95 Affiliate members. The Energy Association formed in October 2000 through the merger of the Pennsylvania Electric and Pennsylvania Gas Associations (<http://www.energypa.org/index.html>).

Pennsylvania without interference from the Pennsylvania State Assembly (Senate, 8 June 2004, 26:20-21). Doug Biden and Michael Love made similar arguments when stating that 20% of energy customers have chosen to pay premiums to buy green power (Biden, Senate, June 23, 2004, 4:10-11), and that PPL energy consumers have responded enthusiastically to a program that allows them to pay an additional \$2.50 on their monthly bill to support wind energy (Love, Senate, June 23, 2004, 117:16-20).

Given these facts, this coalition argued that the market has successfully stimulated renewable energy in the state, and thus the proposed RPS legislation was unnecessary. As Seif asserted, “The market approach is the best way...to enhance the variety and amount of renewable energy in the state” (Senate, 8 June 2004, 27:4-6). At most the State Assembly should stimulate the market development of renewable energy by subsidizing ‘market boosters’ (Seif, Senate, 8 June 2004, 37:11; also Biden, Senate, 23 June 2004, 5:23-25). Pursuing this path, “would produce a different mix of energy, and it might go slower, but it would have the most economic efficiency...” (Seif, Senate, 8 June 2004, 37:23-25).

*Argument 2: Government regulation is not only unnecessary; it would disrupt the optimal workings of the market.*

Employing what Hirschman (1991) would call the “perversity thesis,” the economic rationalists argued that a renewable portfolio standard would unnecessarily harm the efficient workings of the market. For example, Biden claimed that:

“Obviously, mandating a market share for a certain class of generators is fundamentally at odds with the normal functioning of this wholesale market. Thus, EPGA would prefer to spur the development of renewable energy resources through programs that rely on market pull rather than government mandated market percentages.” (Senate, June 23, 2004, 5: 20-25)

Thus to them, the RPS threatened to produce a less efficient and less productive market.

*Argument 3: Energy companies cannot practically implement the policy.*

Love argued that energy companies will be able to reach a set percentage of alternative energy only if sufficient quantities of alternative energy are available. However, many factors beyond the utility's direct control determine this availability (Love, Senate, June 23, 2004, 116:1-5). For instance, in written testimony Love noted that, "There have been recent actions where communities in other states have turned down construction permits for wind, coal, and gas-fired units" (Love 2004). He further argued that the changing availability of federal tax credits for wind power, largely impacts the available wind power that can be purchased by the energy companies that his association represents.

Given these outside factors, Love argued that the state should not require energy companies to achieve a certain percentage of alternative energy. Instead, the PA State Assembly should give the Pennsylvania Utility Commission the task of judging whether energy companies have made a good faith effort in achieving alternative energy percentages (Love, Senate, June 23, 2004, 117:1-3; 119:4-11). Further, given these outside factors, fines and penalties for non-compliance are inappropriate (Love, Senate, June 23, 2004, 118:16-18).

### 3.2.2 Classification Analysis

These testifiers argued that the RPS is unnecessary and potentially harmful. Thus we might not expect them to provide an energy classification at all. However, the energy producers seemed to recognize that some portfolio policy would go forward. Indeed, Committee Chairwoman White told Love, "Unfortunately, I don't think [a] good faith effort is much of a standard" (Senate, 23 June 2004, 122:22-24), and she also told Biden, "I doubt we'll go with a complete market pull, but you never know until we're finished" (Senate, 23 June 2004, 13:22-23).

Having recognized that lawmakers would implement an RPS, this coalition proposed a classification that met their goal of having no RPS at all; namely they offered a classification based on one category that included all possible energy sources and thus excluded no sources. They did this by arguing that the PA Assembly should use the proposed RPS to diversify the sources used by the state to generate energy (including coal). With the aim of energy diversity in mind, they argued that the RPS should thus include the broadest possible definition of renewable energy (Biden, Senate, 23 June 2004 8:23-24; Love, Senate, 23 June 2004, 114:23-24). Seif asserted that, “The broadest possible definition would enable the wholesale energy market to handle the problem as best it can through the market and implement renewable standards at the least cost.” (Senate, 8 June 2004, 31:18-21).

In addition to emphasizing the broadest range of energy sources, this discourse coalition argued that, “all qualifying resources should compete on an equal footing and be valued equally” (Biden, House, 13 April 2004, 20:15-17). Some policy proposals privileged solar and wind over other sources by establishing a tier system. Biden argued against the proposed tiers when stating, “To facilitate a market-based approach to renewable and environmentally beneficial resource development to the extent possible, EPGA recommends that no tier classification of eligible resources should be adopted” (House, 13 April 2004, 20:10-14).

In order to justify including the broadest range of energy sources, these testifiers needed to dislodge the conceptual boundaries that other testifiers attempted to draw in efforts to distinguish energy sources. Namely, they had to disrupt the distinction between renewable and fossil fuels. These testifiers utilized a number of strategies to problematize this border. For instance, the coalition described renewable as a contingent, indeterminate, and socially created category (Latour 1987:23). Seif asked, “What is renewable energy? A certification issue comes

up. Who says how much of it is renewable and how much not” (Senate, 8 June 2004, 30:22-24)? Similarly Love argued that, “I don’t think we should be spending our time trying to figure out how renewable is renewable” (Senate, 23 June 2004, 121:8-9). When discussing the term renewable, Seif also deployed a variation on the rhetorical move common to anti-environmentalists. He said, “There’s always a possibility to touch off a wonderful debate about what is it” (Senate, 8 June 2004, 31:3-4). Here, he emphasized the controversial character of environmental meanings. Finally, they invoked a derisive stereotype to undermine the authority of participating environmental groups, who proposed a strict division between renewable and fossil fuels. Seif warned against the “pure definitions” of renewable put forth by “enviros” (Senate, 8 June 2004, 31:4-5).

During the PA AEPS hearings, other testifiers employed the term ‘renewable’ as a concrete matter of fact, and consequently employed the term to justify differentiated energy classifications. In this case, Seif and Love drew attention to social production of the category ‘renewable’ and suggested that the definition of renewable is too inconsistent and controversial to provide a basis for creation of a renewable portfolio standard. By highlighting the social construction of this term, he questioned the matter of fact character of the category ‘renewable’ and therefore aimed to destabilize any taxonomic boundaries that other testifiers may have based on this category.<sup>12</sup>

To summarize, by proposing that the AEPS should have no tier system and that the AEPS should maintain the broadest possible array of sources, the coalition sought to undermine the primary function of the policy: to draw distinctions and thus promote some fuels and exclude

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<sup>12</sup> This narrative amounts to a form of representation that Latour (1987:23) calls negative modality and Fairclough (2003:42) calls dialogical. Latour describes negative modalities as sentences, “that lead a statement.... towards its condition of production and that explain in detail why it is solid or weak instead of using it to render some other consequence more necessary” (1987:23).

others. Thus they created a blueprint which allowed the inclusion of every available energy source. How does one create such a category blueprint? In this case, testifiers deemphasized any characteristics inherent to the energy sources. Rather than focusing on salient characteristics of energy sources, they emphasized the objectives of the policy. Next, they challenged efforts by others to sort energy sources according to the notion ‘renewable’ by problematizing both this concept and the boundaries that it would create between energy sources.

### **3.3 Administrative Rationalism**

Administrative rationalism describes the application of scientific management principles through bureaucratic structures to manage market failures. It is often associated with federal and state natural resource and environmental protection agencies (Dryzek 2005). Administrative rationalism may also describe private-public partnerships that are designed to maximize the efficient use of public resources. Selznick’s (1984) description of the Tennessee Valley Authority and Hays’s (1987) description of the United States Soil Conservation Service are examples of this version of administrative rationalism.

Unlike the rhetoric of economic rationalism, those invoking administrative rationalism believe that governments must intervene in order to manage market failures. Although most administrative rationalists would argue that governments should allow the markets to operate with little intervention, they would also tend to argue that governments must protect workers, consumers, and the environment from the negative impacts of the market. Regulations may result in economic costs, but those costs are acceptable given that unregulated markets will produce unacceptable social and environment costs.



During the Pennsylvania AEPS hearings, four speakers invoked the rhetoric of Administrative Rationalism: Sonny Popowsky, the Pennsylvania Utility Consumer Advocate<sup>13</sup>, David McAnally, the private wind company US Wind Force<sup>14</sup>, Peter Rigney, the general manager of the Scrubgrass waste coal generating plant<sup>15</sup> and Roger Clark, of the Sustainable Development Fund<sup>16</sup>.

These testifiers were grouped together largely because they characterized Pennsylvania's energy supply as expensive and unreliable. Thus, expensive and unstable energy supply threatened to weaken the economy. They asserted that the free market has failed (and will continue to fail) to provide reliable and cheap energy. Thus, Pennsylvania lawmakers have no choice but to implement a policy to fix market failures. Furthermore, while the RPS may provide environmental benefits, their primary concern was the economy. To summarize, in coding for the situation, the threat, and the threatened, this group described Pennsylvania energy production as problematic and characterized the threat as the unregulated markets, and the threatened as the economy. Their arguments are discussed in greater details in the following discourse analysis.

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<sup>13</sup> The Office of Consumer Advocate is a state agency that represents the interests of Pennsylvania utility customers before the Pennsylvania Public Utility Commission, federal regulatory agencies, and state and federal courts. The Office of Consumer Advocate was created by the Pennsylvania General Assembly in 1976 and is an independent office within the Office of Attorney General (<http://www.oca.state.pa.us/>).

<sup>14</sup> US Wind Force, LLC is an independent, privately held developer of renewable energy projects.

<sup>15</sup> Scrubgrass Generating Company, L.P. is a \$200 million, 83-megaWatt waste coal facility supplying electricity to Pennsylvania Electric Co (Penelec).

<sup>16</sup> The Sustainable Development Fund was created by the Pennsylvania Public Utility Commission in its final order in the PECO Energy electric utility restructuring proceeding. Managed by The Reinvestment Fund (TRF), a community investment and policy analysis organization, the Sustainable Development Fund provides low-interest financing to encourage the development of the use of renewable and clean energy sources (<http://www.trfund.com/sdf/>).

### 3.3.1 Discourse Analysis

*Argument 1: The free market cannot supply cheap and reliable energy to Pennsylvania's energy consumers.*

David McAnally, representing US Wind Force, asserted that the free markets are ill-equipped to deal with the demands of energy consumers (Senate, 8 June 2004, 61:1-2) and claimed that, "because of the lack of guidance from the public arena, we believe that the free markets have gotten ourselves into [a] jam and consumers now have to pay more" for energy (Senate, 8 June 2004, 63:13-18). Sonny Popowsky, the Consumer Advocate stated that his purpose was, "to try to ensure that Pennsylvania consumers enjoy safe and reliable electric service at a reasonable price" (Senate, 23 June 2004, 89:7-9). If the free market could provide cheap energy, the committee would not need to assemble to discuss an RPS policy. Peter Rigney, general manager of the Scrubgrass waste coal generating plant, asserted that within a free market system certain alternative energy sources struggle to compete with cheaper traditional energy sources. Roger Clark<sup>17</sup> of the Sustainable Development Fund went a step further. He directly challenged the economic rationalists when he argued that, "the idea of a free market for energy is a myth" (House, 13 April 2004, 25:25). He stated that Pennsylvania should move beyond the idea of a free market, accept the PA Assembly's tradition of modifying and influencing the production of energy, and accept the new policy (House, 13 April 2004, 26:1-25).

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<sup>17</sup> Roger Clark also appealed to the rhetoric of ecological modernization when he stated that the adoption of a renewable portfolio standard is "critical to Pennsylvania's economic and environmental future" (House, 13 April 2004, 22:23-25). He mentioned that a diversified portfolio of energy sources will increase energy supply and security (House, 13 April 2004, 24:10-14) and argued that "the downward price of natural gas...is worth the price of RPS by itself" (House, 13 April 2004, 23:21-23). In terms of the environment, he claimed that the policy would offer "Serious benefits...as we reduce what right now is a very dirty industry, by adding cleaner renewable energy sources" (House, 13 April 2004, 25:16-18).

*Argument 2: Consumer energy prices will rise if governments do not intervene.*

Both David McAnally and Sonny Popowsky, the PA Utility Consumer Advocate, highlighted the rising costs of traditional energy. Popowsky claimed that, in the past, he probably would have argued that the pursuit of renewable energy would be too costly for the consumer (Senate, 23 June 2004, 89:23-25). However, he stated that the “dramatic and persistent increases in the price of natural gas, coal, and oil have combined to make renewable resources more attractive on economic grounds...” (Senate, 23 June 2004, 90:11-14). He introduced a study of the proposed Colorado RPS, which concluded that a renewable energy policy would help to reduce consumer energy prices if natural gas prices remain high (Senate, 23 June 2004, 91: 17-23).

Given these conditions, proponents of administrative rationalism argued, the State Assembly must act to stabilize consumer prices. According to Popowsky, “the types of [energy] generation included in these portfolios can serve as an extremely valuable hedge against the frightening level of price increases and volatility that we have seen in the price of fossil fuels that are used to produce much of the power in our current generation resources” (Senate, 23 June 2004, 89:15-21). In regards to rising natural gas prices, McAnally concurred by stating that, “We believe that this legislation can help provide that stability to the natural gas prices, because I think it's very important to note that every unit of electricity that is produced by a wind farm is one unit of electricity for which the country does not have to burn its precious natural gas resources” (Senate, 8 June 2004, 64:5-10).

*Argument 3: A policy is needed to address rising energy demand.*

McAnnally commented that the economy is expected to grow 40 to 50 percent in the next ten years, and energy demand is expected to grow concurrently (Senate, 8 June 2004, 61:19-21).

He listed some options for meeting this increased demand. The state might promote new natural gas generation, but he noted that this option “is becoming prohibitively expensive” (Senate, 8 June 2004, 66:18-19). The state might also pursue nuclear power, but he acknowledged, “What investor is going to put money into a project that is going to be met by endless protests, endless lawsuits and every way along the way being contested” (Senate, 8 June 2004, 66:8-12). He supported the use of coal, but had the following reservations: “I hope a lot of it comes from new coal facilities, but I’m doubtful that there’s going to be coal facilities built in somebody’s back yard without going through years and years and years of battles and in terms of permitting” (Senate, 8 June 2004, 67:22-25).

Given these conditions, McAnnally argued, our best option is to promote renewable energy sources, like wind power, however governments must enact strong policies to make them viable. He bemoaned that “we currently have no national energy policy at this point in time in a country that is in desperate need of such policy” (Senate, 8 June 2004, 61:3-5). Therefore, McAnnally argued that states must take the lead in adjusting the energy market (Senate, 8 June 2004, 67:3-5). Like Popowsky, McAnnally noted that wind fuel costs nothing (Senate, 8 June 2004, 64:25), and he argued that the State Assembly can help stabilize energy supply and energy prices by mandating the use of renewable energy sources, like wind power (Senate, 8 June 2004, 63:13-18).

*Argument 4: Alternative energy cannot compete without governmental intervention.*

Peter Rigney, general manager at the Scrubgrass waste coal generating plant claimed that such plants power provides broad economic and environmental benefits. However, those benefits are not cost effective in a competitive marketplace, because energy generated from waste coal costs more than energy generated from other forms of power. This led Rigney to

claim that, “Given the expense of running these facilities, survival in a competitive marketplace is a huge challenge” (Senate, 23 June 2004, 107:1-3). Furthermore Rigney argued that the market does not accurately reflect the economic and environmental benefits of waste coal energy generation; thus the Pennsylvania Assembly should design the proposed RPS to “create a specific need for electricity generated waste coal” (Senate, 23 June 2004, 106:19-20).

### 3.3.2 Classification Analysis

The testimony of those participants grouped into this discourse coalition articulated specific goals that did not necessarily involve arguing for or against a complete energy source classification. For instance, Popowsky mainly argued that a RPS will help reduce energy prices and reliability, thus when speaking of energy sources he focused on those characteristics related to these two issues. For instance, he noted that some renewable sources are small and distributed throughout the grid, and so, the state can increase energy stability and reliability by developing renewables. Thus his discussion concentrated on supporting energy sources that will potentially increase stability and decrease energy prices, and so he did not directly engage the debate over what sources are renewable which others are not. That said, he did indicate his support for waste coal when arguing that the RPS should have two tiers, one tier for renewable energy sources and a second tier including energy sources, “like waste coal, which may not fit into the classic definition of renewable resources, but from a Pennsylvania perspective may have other environmental benefits.” (Senate, 23 June 2004, 101:12-20).

In representing US Wind Force, McAnnally’s testimony mostly addressed wind power, and he commented little on what other energy sources should be included in the final policy. While appearing to promote just one single energy source, he did note that he hoped the state will construct new coal plants since they can provide a substantial portion of the expected growth

in energy demand (Senate, 8 June 2004, 66:13-21). In representing the Scrubgrass waste coal plant, Rigney's testimony primarily considered waste coal. He also did not provide a complete energy classification. His extended remarks regarding waste coal are studied in the next chapter which examines arguments for and against the inclusion of this fossil fuel.

### **3.4 Ecological Modernization**

Ecological modernization “refers to the restructuring of the capitalist political economy along environmentally sound lines” (Dryzek 2005:167). As a discourse developed to counter the claims that environmental protection necessarily leads to negative economic effects and that economic growth necessarily leads to environmental degradation, Ecological Modernization has emerged as a kind of unified theory of environmental and economic management. This discourse shares with survivalists and radical environmentalists many assumptions of ecological and natural resource limits. However, it also incorporates economic rationalist assumptions that societies can utilize free markets to solve problems (as long as governments properly calibrate those markets). It also incorporates administrative rationalist assumptions regarding the capacity of the government to manage problems.

Policymakers can invoke the rhetoric of Ecological Modernization in order to justify a wide variety of actions and policies. Some groups may employ this rhetoric to advocate for strict environmental policies, while other groups may employ this rhetoric as a public relations gimmick. To account for variations in the use of ecological modernization rhetoric, scholars have distinguished between “weak” and “strong” ecological modernization (Dryzek 2005:173; Christoff 1996). A strong version involves an open democratic style of policy making that seriously considers making broad ranging changes to society's institutional structure and economic system. A weak form emphasizes technological solutions and a technocratic style to

policy making. According to Christoff (1996:497) weaker forms of ecological modernization “may serve to legitimize the continuing instrumental domination and destruction of the environment....”

The following analysis did not find that stakeholders emphasized a specific style of policy making. However, analysis did identify two different rhetorical forms of ecological modernization. The first form argued that the proper management of Pennsylvania’s energy production practices will simultaneously benefit the state’s economy, environmental, and public health. In the second form, environmental problems are conceptualized as providing economic opportunities. In this case, policies may bring about environmental benefits but the main concern is improving the economy. Distinguishing between these forms is helpful as each led to a different conclusions regarding waste coal. Arguments for these differing conceptualizations are discussed in greater detail in the next two sections.

### 3.4.1 Discourse Analysis: Form 1

Those testifiers invoking the first form of ecological modernization argued that Pennsylvania’s energy production practices threaten the economy, the environment and public health. By switching to renewable energy production, the public’s health, the environment, and the economy will benefit. Two representatives from environmental organizations, Nathan Wilcox, of PennEnvironment<sup>18</sup>, and John Hanger, of Citizens for Pennsylvania’s Future<sup>19</sup>, invoked this form of ecological modernization. Another environmentalist, Mike Ewall, Founder and Director of Energy Justice Network<sup>20</sup>, did not offer enough commentary on the society-environment relationship to allow us to categorize him as an ecological modernization proponent

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<sup>18</sup> PennEnvironment is a statewide, citizen-based environmental advocacy organization working to promote clean air, clean water and open spaces in Pennsylvania (<http://www.pennenvironment.org/>).

<sup>19</sup> Citizens for Pennsylvania’s Future (PennFuture) is a Pennsylvania based environmental advocacy organization that advocates for the transformation of public policy, public opinion and the marketplace to restore and protect the environment and safeguard public health ([www.pennfuture.org](http://www.pennfuture.org)).

<sup>20</sup>Energy Justice Network is a grassroots energy justice advocacy organization, supporting communities threatened by polluting energy and waste technologies (<http://www.energyjustice.net/>).

or to define him according to any other discourse. However, his testimony is discussed here given that it indicates some synergy with other two environmentalists on the issue of waste coal.

In written testimony, Wilcox asserted that Pennsylvania relies too heavily on dirty and dangerous energy production practices, and noted that these energy practices contribute to global warming, threaten public health, and harms the environmental (Wilcox 2004). In spoken testimony, he noted that the proposed legislation could benefit the economy by reducing health care costs and lost workdays due to asthma (Senate, 23 June 2004, 75:12-13). John Hanger made a similar argument when he stated that,

“An RPS presents Pennsylvania with opportunities to enhance energy security and reliability...hold down electricity prices and stimulate tremendous economic investments, while promoting public health and conserving our environment. It is a policy whose benefits are too good to pass up” (Senate, 23 June 2004, 15:1-6).

He agreed that the RPS should focus on developing renewables as well as any existing investments that meet a tight renewable qualifying definition (Senate, 23 June 2004, 11:23-25).

To summarize, these testifiers argued that Pennsylvania’s energy production practices threaten the economy, the environment and public health. Thus they argued that policymakers should construct an RPS policy that stimulates new and genuinely *clean* technologies (Ewall Senate, 8 June 2004 44:10-11; Wilcox 23 June 2004 75:23-25). By switching to renewable energy production, the public’s health, the environment, and the economy will benefit (Wilcox Senate, 23 June 2004 75:4-12).

#### 3.4.2 Classification Analysis: Form 1

This coalition based their energy classification on two categories. The first category includes all sources to be promoted by the policy. They intermittently used the terms ‘renewable’ and ‘clean’ to label these sources. The second category includes all energy sources excluded from the policy, and they frequently labeled these sources ‘dirty’. Thus these testifiers



established no clear distinction between the indicators of clean and renewable; they both appear at the same level on the energy source hierarchy. A binary opposition divides energy sources along a strict adherence to pollution, with sources indicated as ‘dirty’ and some indicated as ‘clean’ or as ‘renewable’.

We can see this conceptual distinction when Ewall notes that he is, “the founder of the Energy Justice Network, representing environmental and community organizations and individuals committed to promoting *clean* alternatives to *dirty* energy technologies” (Senate, 8 June 2004, 44:19-22 [author’s emphasis] ). In a discussion of waste coal he also notes that, “Waste coal is *dirty*er than normal coal.” (Senate, 8 June 2004, 51:6 [author’s emphasis]).

Wilcox articulated the distinction between these two categories when emphasizing that the switch from dirty energy to clean energy would benefit public health, the environment, and the economy:

“...increasing renewable energy production would have enormous environmental and public health benefits due to the resulting decreased reliance on *dirty* or coal-fired power plants and nuclear power” (Senate, 23 June 2004, 75:4-12 [authors emphasis]).

In the following quote, he further indicates this distinction when arguing that polluting sources should not be promoted alongside renewable and clean energy sources:

“An RPS should include only clean and renewable energy sources. *Polluting energy sources*, such as the combustion of waste coal, should not be eligible for the same policy support as *clean, renewable energy sources*, lest they crowd out new, genuinely clean and renewable options” (Senate, 23 June 2004, 75:23-25 [authors emphasis] ).

In another example, Hanger urged policy makers to adopt the energy classification provided by the Green-e standard (a third-party certification program which incidentally does not include fossil fuels). He also noted that, “Pennsylvania's energy portfolio must be diversified. Using

clean, nonpolluting, and indigenous or domestic renewable electricity make sense both economically and from the standpoint of energy security” (House, 13 April 2004 9:7-12).<sup>21</sup>

Following this strict binary between renewable and non-renewable, these testifiers argued that lawmakers should exclude waste coal from the policy (Ewall Senate, 8 June 2004 51:4-5; Wilcox Senate, 23 June 2004 76:1-2).

### 3.4.3 Discourse Analysis: Form 2

Department of Environmental Protection Secretary, Kathryn McGinty invoked the second form of ecological modernization. In this case, environmental problems are conceptualized as economic growth opportunities. Here the economy is threatened, and if properly managed, environment problems provide a potential solution to the state’s ailing economy. For instance, she asserted that geology and geopolitics make the continued practices of PA energy production unsustainable (Senate, 8 June 2004 5:6-8). She employed a peak oil discourse when claiming that Saudi Arabia is “increasingly...having to pour ... salt water into its wells to try to maintain production” (Senate, 8 June 2004 5:16-18). She also mentioned terrorism and the economic rise of China (Senate, 8 June 2004 6:18-25).

She further claimed that renewable “assets can be, and are, huge engines of economic growth for the state” (House, 13 April 2004, 58:23-24). She noted that historically Pennsylvania has led the development of fuels and of energy technologies, and that the state’s investment in new and diversified energy technologies “can be a signature piece of the revitalization that all of us are working together to achieve in the economy of Pennsylvania” (House, 13 April 2004,

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<sup>21</sup> While these testifiers relied upon two categories (renewable and non-renewable) they proposed separating the renewable category to adjust for the energy source’s market valuation. They argued that solar energy costs more than most renewable sources, and so policymakers should place it into its own category (Wilcox 81:4-5). In contrast, energy efficiency measures cost relatively little, and so lawmakers should place these into a second tier (Wilcox 83:17-25).

58:4-8). She also mentioned that a new wind turbine manufacturing plant may come to Pennsylvania, and “So it's not just the deployment of wind energy, but our becoming a manufacturing center for those technologies that I think is very much at hand” (House, 13 April 2004, 59:4-12). She further argued that the development of wind power and methane bio-digesters would provide economic opportunities for farmers and that the development of waste coal offers an economic opportunity for areas of the state particularly affected by the downturn of the state's coal industry (House, 13 April 2004, 59:4-12; Senate, 8 June 2004, 9:14-7). Regarding environmental benefits, McGinty noted that, while Pennsylvania has made much progress, the state's power plants still generate significant emissions, and so, “if we diversify our energy resources, we certainly can move towards cleaner air, cleaner water, and overall a healthier Pennsylvania” (Senate, 8 June 2004, 11:12-15).

Two years after the Pennsylvania Assembly passed the AEPS, Secretary McGinty stated during her re-confirmation hearings:

“Madame Chair and members of the Committee, four years ago almost to the day when you gave me the honor to appear before you in the Governor's first term, I had said that Pennsylvania's prosperity, economic vitality is my top priority knowing that it is indeed your top priority. And I said I would work to make our environmental challenges a further opportunity for economic growth” (Senate, 27 March 2007, 3:1-8).

Although, McGinty did not articulate this statement during the Pennsylvania AEPS hearings, it is included, because it strongly illustrates her portrayal of environmental challenges as economic growth opportunities. It also reflects the perspective of the Rendell Administration, which initiated and pushed the AEPS legislation.

To summarize, she argued that job losses, geopolitics, and geology threaten the state economy. Lawmakers should use the RPS policy to diversify the energy sources employed in the production of PA energy and to promote energy self-sufficiency by promoting indigenous

energy sources (McGinty 4:8-14). Given this need to diversify energy sources, policymakers should include waste coal in the RPS policy.

#### 3.4.4 Classification Analysis: Form 2

If the economic rationalist coalition attempted to dislodge all boundaries between energy sources by providing a blueprint that included all possible energy sources, McGinty created a ranked hierarchy of energy sources based on three categories. She used the term ‘renewable’ to label the first category and the terms ‘clean’, ‘advanced’, and ‘environmentally friendly’ for the second. The third category includes all other energy sources excluded from the policy. These three categories are first articulated in Governor Rendell’s draft policy proposal, which separates energy sources into two groups: Tier I (which includes traditional renewable sources such as wind) and Tier II (which includes those sources deemed ‘clean’ or ‘environmentally beneficial’, such as waste coal and coal gasification). McGinty also articulated these three categories in committee discussions of waste coal and municipal solid waste.

First, McGinty clearly indicated that waste coal is not a renewable energy source in a discussion with Senator Raphael Musto. During a hearing he asked, “Do you see waste coal as being pretty much the same as other traditional renewable resources?” She replied,

“It is the Governor's position and we do feel strongly that it is a valuable resource for us. We would like to see it included in a portfolio standard, [but] we would not consider waste coal renewable in that sense” (Senate, 8 June 2004, 14:21).

Second, McGinty articulated a conceptual separation between the first category (labeled ‘renewable’) and the second category (labeled ‘advanced’, ‘clean’, or ‘environmentally beneficial’). At the same hearing, Senator Musto inquired about municipal solid waste. He asked, “Would you consider waste-to-energy plants as renewable?” She replied, “Not as renewable, but as advanced and clean energy resource, yes” (Senate, 8 June 2004, 17:2-5).

During a third hearing, Representative Miller asked whether lawmakers should consider waste coal as renewable. McGinty replied by stating,

“We don’t include waste coal as a renewable energy. We do not. We consider it an advanced energy source, but would not consider it renewable” (House, 13 April 2004, 75:10-12).

In a press release she also indicated this conceptual separation:

“The administration also is moving on a portfolio standard to ensure that in 10 years, 10 percent of all of the energy generated in the Commonwealth comes from *clean, efficient sources, including waste coal*, which while not considered a “traditional” renewable still provides a net environmental benefit to the Commonwealth” (PA DEP Press release 8 August 2004; PA DEP Daily Update 10 August 2004 [author’s emphasis])

Third, McGinty reinforced the notion that waste coal is clean and advanced. For example in written testimony to the PA House Environmental Resources and Energy Committee, Secretary McGinty labeled waste coal as clean energy:

“Waste coal also poses air and water quality challenges, and gob piles are eyesores that discourage economic redevelopment. But, *waste coal too, can be a clean and valuable energy source*” (2003 [author’s emphasis]).

In written testimony to the Senate she also asserted the following:

“During his January budget address Governor Rendell announced that the Commonwealth would purchase ten percent of its electricity from *clean, advanced energy sources, including waste coal*. I am pleased to note that we recently completed this purchase, which includes 10,000 megawatt hours of waste coal -- out of a total of 100,000 megawatt hours of clean, advanced electricity” (Senate, 8 September 2004 [author’s emphasis]).

In following press release she mentioned that waste coal is clean and advanced.

“Governor Rendell recently initiated two actions to help support and promote Pennsylvania’s waste coal industry, including directing the state to purchase 10 percent of its electricity from clean, advanced energy sources, including waste coal. The Commonwealth recently completed this purchase, *which includes 10,000 megawatt hours of waste coal out of a total of 100,000 megawatt hours of clean, advanced electricity*” (PA DEP Press release 9 August 2004; PA DEP Daily Update 10 August 2004[author’s emphasis]).

Thus, McGinty clearly labeled waste coal as ‘clean energy’. In doing so, she proposes an energy classification that includes three categories. The first category includes all renewable sources, while the second includes all sources deemed clean, advanced, or environmentally beneficial. In this case, renewable energy sources are higher than clean sources on the energy source hierarchy. Some sources are renewable and clean, while some are just clean. In either case, this group argued that policymakers should include both in the PA AEPS.

### **3.5 Conclusion**

To summarize, testifiers can be grouped into discourse coalitions based on their assumptions regarding the environment, the economy, and the production of energy. A group of energy companies, invoking Economic Rationalism, aimed to disrupt the policy first by arguing, in part, that the policy will harm the economy and, second, by proposing a policy that would promote all energy sources including traditional coal and waste coal. A second group, invoking Administrative Rationalism, argued that the state should intervene to increase energy stability and decrease energy prices. A third group invoked a form of Ecological Modernization by arguing that a properly constructed RPS can benefit the state’s economy, environment, and public health. In doing so they proposed an energy classification that separates fossil fuels from clean and renewable energy sources. A fourth group invoked a variant of Ecological Modernization by arguing that environmental opportunities provide economic opportunities, and inserted waste coal by conceptually separating renewable and clean energy.

By itself, the separate of renewable energy and clean energy does not necessarily seem problematic. However we might ask: how can lawmakers include waste coal in a clean energy category? The next chapter will discuss the arguments made for the inclusion of waste coal in the clean energy category, as well as, arguments made for the exclusion of waste coal.

## CHAPTER 4

### DEBATING WASTE COAL

#### 4.1 Introduction

Both opponents and advocates of waste coal used the label ‘clean’ to justify the inclusion or exclusion of this fossil fuel; however this label indicated two very different identities. For waste coal opponents the terms renewable and clean labeled the same category, while for advocates these terms labeled two separate categories. For supporters this separation is significant both rhetorically and practically. In practical terms, this distinction establishes a new and separate category into which various other energy sources can be included. In a sense they split the domain of green energy sources. While a pure RPS includes only renewable sources like solar and wind, the Pennsylvania RPS can now promote both renewable and clean sources. This distinction, of course, opens the door for the inclusion of waste coal, because waste coal may not be renewable, but according to McGinty and other testifiers, it is clean.

This separation is also significant rhetorically. McGinty could have simply labeled waste coal as renewable energy, and then included it in the Pennsylvania AEPS. However, based on his 2006 re-election campaign, Ed Rendell clearly wanted to portray himself as an environmentally responsible governor. The separation of renewable and clean enabled his administration to support renewable energy without alienating the supporters of waste coal and without inhibiting the economic benefits of waste coal plants. Thus, the administration avoided undermining the notion of renewable, which might have undermined the legitimacy of his political goals.

Committee hearings provided waste coal opponents the opportunity to challenge the arguments of those who aimed to categorize waste coal as clean energy. Challenging this

categorization was easy since waste coal is a fossil fuel, and since the burning of waste coal pollutes the environment with mercury, CO<sub>2</sub>, SO<sub>x</sub> and NO<sub>x</sub>. Therefore, Secretary McGinty and other supporters of waste coal needed to provide substantive arguments to make their characterization seem legitimate. This chapter explores how they did this by arguing that waste coal plants are ‘cleaner than’ current coal burning plants and that the use of waste coal also ‘cleans up’ pollutants left by historic mining activities.

#### **4.2 First Argument:** *Cleaner than traditional coal plants*

*Cleaner Coal Plants:* Waste coal proponents acknowledged that burning waste coal pollutes the air. However, some argued, because waste coal plants are new, they pollute less than traditional coal-fired plants and pollute roughly the same as scrubbed coal-fired plants. As Senate Committee Chairwoman White stated, “No doubt it's cleaner because they're newer...than a traditional coal-burning plant” (Senate, 8 June 2003, 57:10-12). Secretary McGinty also stated, “Whether it's SO<sub>x</sub>, NO<sub>x</sub>, or toxic emission, waste coal not only competes but usually exceeds the performance of traditional energy” (House, 13 April 2004, 61:10-15). She also stated, “In terms of NO<sub>x</sub>, [waste coal is] very competitive and much cleaner, actually, than traditional coal-fired generation” (Senate, 8 June 2004, 15:3-4). Roger Clark of the Sustainable Development Fund concurred by stating, “A new, clean burning waste coal incinerator does much less pollution than an old, antique, coal-fired power plant. So I think it's worth having” (House, 13 April 2004, 33:11-16). Peter Rigney, the general manager at Scrubgrass Generating Plant (a subsidiary of a conventional electricity utility, National Energy and Gas Transmission) also argued that waste coal energy generation results in very low emissions of nitrous oxide and sulfur dioxide (House, 13 April 2004, 110:8-11).



Nathan Wilcox of PennEnvironment and Mike Ewall of the Energy Justice Network disagreed with those who characterized waste coal as ‘cleaner than traditional coal’. Wilcox conceded that waste coal does contribute to land and water pollution (Senate, 23 June 2004, 78:7-10), and Ewall acknowledged that waste coal plants produce roughly the same air pollution as scrubbed coal-fired plants (Senate, 8 June 2004, 51:9-11). However, Ewall argued that the toxins created by burning waste coal are collected in fly ash and then buried in the ground, causing land and water pollution. Ewall asserted that “those who have been arguing that [waste coal is] cleaner have been arguing from the standpoint of just looking at the air pollution” (51:7-9). He also argued that, “You can’t destroy metals, and so they have to go somewhere” (Senate, 8 June 2004, 58:4-7). Furthermore, because waste coal has a much lower BTU value, generating plants must burn more waste coal than traditional coal to get the same energy amount (Ewall, Senate, 8 June 2004, 51:12-18). Thus, waste coal is not only dirty; it is “dirtier than normal coal” (Ewall, Senate, 8 June 2004, 51:6).

#### **4.3 Second Argument: *Cleaning Up Pollutants***

*Cleaning Up Waste Coal Piles:* Waste coal advocates also argued that burning waste coal would ‘clean up’ gob piles and thus reduce the resultant land, water, and visual pollution associated with these abandoned piles. For instance, McGinty claimed, “the ability that we would have under the rubric of a broad and diverse portfolio standard to clean up and use waste coal resources...could be hugely valuable to us” (Senate, 8 June 2003, 9: 24-25). In written testimony, McGinty asserted that one waste coal “plant uses advanced technology to convert waste coal to energy, cleaning up 60 million tons of coal in some 40 refuse piles throughout the Conemaugh Valley” (McGinty 2004). Additionally, Peter Rigney stated that, “Together, the waste coal generating industry removes eight million tons of waste coal from Pennsylvania's

landscape each year and has reclaimed more than 3,400 acres of abandoned mine lands since 1990” (Senate, 23 June 2004, 109:2-6). Further, he alluded to acid mine drainage when stating that, “We all know what that red looks like when it goes into our streams” (109:21-22) and then argued that removal of waste coal eliminates one major source of acid mine drainage.

*Cleaning Up Abandoned Mine Sites:* Waste coal advocates also argued that fly ash, generated from waste coal energy production, can be used to clean up another environmental problem associated with historic mining activities, namely acid main drainage. Senator Musto brought up this topic when remarking to Rigney, “It seems that ash is always a controversial part of your process. Could you advise the committee as to what process is used before ash is deposited?” (Senate, 23 June 2004, 113:3-6). Rigney responded that fly ash is a by-product of a process designed to reduce air pollution from smoke stacks. Limestone is mixed with the coal in a flow of hot air. The resultant alkaline ash is like concrete, and so when spread across mine sites, it helps to neutralize acid mine drainage (Senate, 23 June 2004, 113:7-18). According to Rigney, state regulatory agencies approve the testing of this ash (Senate, 23 June 2004, 113:19-24). Here Rigney seems to suggest that the practice of the spreading of fly ash should be characterized as an environmentally friendly practice simply because state agencies regulate the practice.

Wilcox and Ewall challenged the notion that using fly ash in this manner benefits the environment. For instance Wilcox argued that the practice is problematic because of instances of improper disposal. He stated, “there have been instances of the ash not being disposed of properly and creating entirely new pollution problems due to leaching into groundwater” (Senate, 23 June 2004, 87:19-22). However, Senator Musto dismissed Wilcox’s claim by saying, “Well, I personally feel you have a very weak argument, unless you could produce some substantial

evidence” (Senate, 23 June 2004, 87:21). Senator Musto’s request for evidence is not unreasonable; however, he did not demand the same evidence from other testifiers who advocated for burning waste coal.

Ewall also questioned the argument that the process permanently seals the toxins within the lime and cement-like mixture. He stated that researchers at The Pennsylvania State University have argued that, “the benefits of having lime in there to prevent the leaching [of toxins] are only temporary. The alkalinity...will recede over time and the toxins that are in that ash will, indeed, leach out” (Senate, 23 June 2004, 58:14-18). Thus the benefits to acid mine drainage are only temporary and eventually the toxins captured in the ash will leach into the ground. However, Senators did not address these concerns.

**4.4 Third Argument:** *The alternative approaches to managing waste coal are unacceptable or unrealistic.*

Senate Committee Chairwoman White shifted attention away these arguments regarding fly-ash by highlighting the problems caused by gob piles. She asked Wilcox, “I guess on the coal piles...what do you suggest we do with it” (Senate, 23 June 2004, 85:18-20). Here, she challenged Wilcox and other opponents to provide an alternative solution to the land and water pollution created by waste piles. As she put it, “I don’t know of any other thing to do with it [waste coal piles]” (Senate, 23 June 2004, 86:13-14). Here she implied that lawmakers had no choice but to promote the burning of waste coal in order to reduce the associated water and land pollution caused by gob piles.

Wilcox and Ewall offered alternative approaches to the problems, but the committee did not seriously entertain these alternatives. For instance, Wilcox agreed that the Pennsylvania Assembly should, indeed, address the problems caused by gob piles; however they should not

address waste coal in legislation intended to promote renewable energy. Rather, the Assembly should address gob piles in subsequent legislation (Wilcox, Senate, 23 June 2004, 78:14-15). This argument was displaced when Senator Musto changed the subject of discussion without responding to this proposal. In another instance, Wilcox argued that legislators should force polluters to pay for the waste coal pollution (Senate, 23 June 2004, 79:1-4). Chairwoman White responded by claiming that polluters no longer exist (Senate, 23 June 2004, 86:1-2). In another attempt, Wilcox suggested putting waste coal into lined pits, but Chairwoman White interrupted Wilcox by saying, “Oh my, let’s not go there” (Senate, 23 June 2004, 86:15-18).

Ewall offered another alternative to burning waste coal piles. He stated that federal government researchers have demonstrated that a certain kind of beach grass will grow on gob piles. This research suggests that, when established, the grass helps to reduce the water and land pollution. Senator Mary Jo White responded to this by saying,

“The seagrass or whatever, idea, is interesting but it [waste coal] is a resource, and it doesn't make sense to me to let it sit there and plant grass over it when we could be getting the double benefit of ...cleaning it up, you know, getting [it] out of the ground, out of the way, and using it while it's there” (Senate, 8 June 2004, 56:21-25).

The comment suggests an underlying commitment to what Hays (1987) called the “gospel of efficiency.” According to this “gospel”, resources must be exploited whenever the technology allows. Therefore, by deciding to plant grass on gob piles, the state would inefficiently utilize a resource that can be converted into energy.

#### **4.5 Changing the Policy Name.**

Despite protests from some environmentalists, policy makers decided to include waste coal in the final policy (and other non-renewable energy sources like coal gasification and coal mine methane). However, even if some lawmakers were able to classify waste coal as clean, waste coal still did not fit easily into a renewable portfolio standard, namely because the same

lawmakers admitted that waste coal is not a renewable energy source. Just as lawmakers refined their statute to make waste coal a clean, but non-renewable resource, they also changed the policy name to accommodate waste coal's inclusion. Secretary McGinty indicated her openness to this strategy when stating that:

“We...chose the name of our portfolio standard very carefully, because [waste coal] is not the same as a pure play renewable resource. We have not called the Governor's idea a renewable portfolio standard, but an advanced energy portfolio standard” (Senate, 8 June 2004, 14: 16-22).

Senator Mary Jo White said that she would also consider changing the policy name so as to:

“perhaps make the tent a little bigger as to what qualifies” (Senate, 8 June 2004, 17:10-12).

We can trace the policymaker's efforts to find the most appropriate policy title. The final bill emerged from the following three RPS proposals.

- *Renewable Portfolio Standard*  
(Proposed as House Bill 2250 December 8, 2003)
- *Advanced Energy Portfolio Standard*  
(Proposed by the Governor Rendell February 3, 2004)
- *Renewable and Environmentally Beneficial Portfolio Standard*  
(Proposed as Senate Bill 1030 March 14, 2004)

After being discussed during committee hearing as the *Renewable and Advanced Energy Portfolio Standard*, policy makers named the final policy the: *Alternative Energy Portfolio Standard* (passed November 17, 2004).

#### **4.6 Press Releases Announcing the Final Policy**

After passing the policy, lawmakers generally described their RPS policy as a green and environmentally beneficial initiative. The following quotes show the administration using the label of clean energy to describe the passed policy. This first quote indicates that the State

Assembly has enacted a policy that includes clean and efficient energy sources. Since this portfolio of energy sources includes waste coal, the implication is that waste coal is a clean and efficient energy source:

“Governor Edward G. Rendell has signed into law legislation (S.B. 1030) that creates a two-tiered portfolio standard, ensuring that in 15 years, 18 percent of all of the energy generated in the Commonwealth comes from *clean, efficient sources*...With a clean energy portfolio standard, Pennsylvania has a unique opportunity to attract new investment in energy technology that will stimulate our economy, improve electric system reliability, cut energy costs, enhance national security and help to restore the state’s environment by ensuring more electricity generation comes from environmentally beneficial resources” (PA DEP Daily Update 3 December 2004 [author’s emphasis])

This next quote implies the same. Since the clean-energy portfolio standard includes waste coal, waste coal is a clean energy source.

“Governor Edward G. Rendell today signed into law a *clean-energy* portfolio standard that will cut energy costs, promote economic development and encourage technologies to protect and restore the environment by ensuring more electricity generation comes from environmentally beneficial resources” (PA DEP Daily Update 17 December 2004 [author’s emphasis]).

The Pennsylvania Department of Environmental Protection has a website entitled: *Pennsylvania's Environmental Heritage Timeline*, which outlines Pennsylvania’s environmental history from 1600 to 2005. This website describes the PA AEPS as follows:

“*Clean Energy Portfolio Standard*: The standard ensures that in 15 years, 18 percent of all of the energy generated in Pennsylvania comes from *clean, efficient sources*. The portfolio standard uses two tiers to ensure the state’s energy needs are met by advanced and renewable resources. Tier I requires 8 percent of electricity sold at retail in the state to come from traditional renewable sources. Tier II requires 10 percent of the electricity to be generated from sources such as waste coal, coal gasification and efficiency measures. The *clean energy portfolio standard* as proposed would annually avoid 9,044,615 tons of carbon dioxide, 78,462 tons of sulfur dioxide, and 21,398 tons of nitrogen oxides. The economic benefits are significant: \$10 billion in increased output for the state, \$3 billion in additional earnings and more than 3,500 new jobs for our residents over the next 20 years” (PA DEP Website 2007[author’s emphasis]).

Thus press releases and hearing statements demonstrate that the Rendell administration attached the label ‘clean energy’ to waste coal and presented the PA AEPS as a clean and environmentally beneficial portfolio standard.

## CHAPTER 5

### DISCUSSION AND CONCLUSIONS

#### 5.1 Implications for Environmental Discourse and Policy Making

In some sense, we can see the PA AEPS as a success for the Rendell Administration and for Pennsylvania in general. At the time of enactment, the PA AEPS joined a short list of five other states that decided to include a solar photovoltaic guarantee. Thus, if properly implemented, the policy will require energy companies to develop solar energy resources, despite the relatively high cost of this energy source (PennFuture 2004). Pennsylvania also became one of the first states to recognize energy efficiency measures and to define hydro-electric in terms of ‘low-impact’ (Ewall 2005). Furthermore, some environmentalists argued that, while the policy includes some controversial energy sources, at least eight percent of these sources are indeed renewable. Therefore, the finalized PA AEPS constitutes an eight percent renewable portfolio standard.

Political considerations in Pennsylvania also suggest that the State Assembly would not promote renewable energy at all. Pennsylvania produces more electricity from coal than any other state (except Texas), and only three other states extract more coal and generate more carbon dioxide than Pennsylvania (Levy 2007). Given this we might expect that energy coalitions would attempt to limit the passing of any policies promoting renewable energy. As Rabe (2006) notes, “coal mining and its use in electricity have been Pennsylvania staples for generations, posing formidable challenges for any policies that might encroach on that resource”. Indeed, as Chapter Three demonstrates, energy companies did attempt to block or manipulate the PA AEPS in multiple ways. Consequently, any form of renewable policy in Pennsylvania might be properly characterized as a success.

Analysis from this thesis suggests that the passing of the PA AEPS was influenced, in part, by Secretary McGinty's ability to invoke the rhetoric of ecological modernization by framing environmental problems as economic opportunities. Typical environmental debates have shifted between the opposing arguments of economic rationalism (which asserts that states' should rely upon the market to resolve environmental problems) and administrative rationalism (which asserts that lawmakers must implement regulations to resolve environmental problems). As this analysis shows, competing stakeholders invoked both these rhetorical arguments during the creation of the PA AEPS. By asserting that environmental regulations will bring economic growth, McGinty constructed a hybrid space between this two opposing views. The successful reception of this argument may bode well for future environmental policies. Indeed, the policymaking context could be more favorable for proponents of environmental protection if lawmakers become more responsive to the rhetoric of ecological modernization than to the rhetoric of economic rationalism.

## **5.2 Category Incongruity**

Despite this success, McGinty's rhetoric also rationalized the inclusion of waste coal in the final policy. If lawmakers adopted the logic of 'environmental problems offer economic opportunities', they should promote waste coal plants since they both create needed energy and remove an environmental problem. Furthermore, one former official of the Pennsylvania Department of Environmental Protection suggested that the Rendell Administration supported waste coal in an attempt to split a legislative coalition that has historically influenced energy policy in Pennsylvania. This official argued that the inclusion of waste coal forced some state lawmakers to choose between supporting waste coal interests and supporting traditional energy interests (Donald Brown, personal communication).



While the promotion of waste coal may have been politically expedient, the burning of waste coal is still ecologically controversial. As such the inclusion of waste coal constitutes a unique form of environmental boundary work. I have previously defined this notion as the discursive attribution of selected qualities to products and behaviors for the purpose of drawing a rhetorical boundary between acceptable environmental practices and those deemed unacceptable or ecologically harmful. Each domain of practice engaged by environmental considerations is driven by a specific logic (or categorical blueprint) which defines the relationship between environmental practices and their opposite. Policymakers have typically organized RPS policies and green energy considerations around the opposition of 'renewable' to its others, namely fossil fuels and nuclear energy (Jaccard 2005). This categorical opposition caused problems for testifiers who hoped to place waste coal in a renewable policy. The preceding analysis shows how waste coal advocates pursued two strategies to overcome this categorical limitation.

First, energy producers pursued a type of diversionary reframing in an attempt to dissolve the opposition between renewable and fossil fuels altogether. They first attempted to render PA energy production as non-problematic, asserting that the free market has sufficiently stimulated renewable energy in the state. Seeming to contradict themselves, they next tried to dislodge the notion of renewable. They suggested that the category adheres to no clear meaning, conveys indeterminate distinctions, and originates from environmentalists with questionable legitimacy. Hence, they questioned whether lawmakers could reasonably use this category to drive the selection of green and non-green energy sources. This strategy reflects attempts by other anti-environmentalists to 'preach the controversy'. Namely, the consequences and causes of global warming (and other forms of ecological degradation) are too indeterminate and controversial to justify substantial policy action (Athansiou 1996; McCright and Dunlap 2003).

Policymakers may effectively overcome the distinction between renewable and fossil fuels by problematizing the notion of renewable, but this approach limits policymakers' ability to render themselves as environmentally responsible. Aiming to appear 'green', a second group pursued a different strategy to overcome this categorical incongruity. Seemingly recognizing 'renewable' as a publicly salient distinction, they sidestepped the categorical incongruity altogether by creating a hybrid category between renewable and fossil fuels. In doing so, they left the logic of renewable vs. fossil fuels intact, but they displaced this categorical blueprint by establishing a newly acceptable relationship between green and non-green energy practices. Therefore, they chose not to follow the conceptual border established by the notion of 'renewable' and the precedent set by other state RPS policies of excluding fossil fuels. Instead they established an alternative logic that policymakers could follow while sorting acceptable and unacceptable energy practices. In this sense, lawmakers stretched the boundary of green energy practices and of the RPS policy mechanism, and thus softened the conceptual distinction between renewable and fossil fuels.

As mentioned, consumers and constituents have become more aware of the many ways that corporations and politicians manipulate categories and labels in order to garner the benefits associated with sustainable products and processes. Indeed, the association of renewable energy and waste coal could potentially undermine the state's ability to render itself as environmentally responsible and could potentially undermine the conceptual border drawn by the RPS policy between green and non-green policies. Despite this hybridization, the PA AEPS continued to be identified as a renewable portfolio standard. Scholarly articles and governmental websites list the PA AEPS alongside other state-enacted RPS policies (EERE 2007; Wiser et. al 2005; Sovacool and Barkenbus 2007; Rabe 2004; Huang et. al 2007). Plus, as the last chapter has

shown, state officials used press releases to characterize the policy as a clean and environmentally beneficial policy. Consequently, while they may have changed the policy structure and name, the policy itself continues to maintain the identity implied by other RPS policies. In a sense, it would seem that Pennsylvania lawmakers successfully redefined the RPS but continued to garner the benefits associated with other Renewable Portfolio Standards and with green policies in general.

### **5.3 Diversions**

To help prevent category collapse and a loss of legitimacy, policy makers provided both the public and the committee a plausible justification for the inclusion of a clean category within the RPS and for the insertion of waste coal within this category. In creating this justification, they first conceptually separated the notions of ‘renewable’ and ‘clean’ and then named their separate category ‘clean’ or ‘environmentally beneficial’. In doing so, they suggested that ‘clean energy’ and ‘renewable energy’ are distinct but sufficiently similar to be promoted by an RPS policy. Second, they justified categorizing waste coal as clean energy by employing the metaphor ‘clean’ to characterize waste coal as sufficiently similar to other ‘green’ energy sources. Namely lawmakers showed how waste coal plants produce less SO<sub>x</sub> and NO<sub>x</sub> than traditional coal production and thus represented waste coal with the metaphor ‘cleaner than’. They also described how burning waste coal removes abandoned gob piles, an activity which they rendered in terms of ‘cleaning up’. Linking these two metaphors with the hybrid category named clean, they created a plausible justification for promoting waste coal as clean energy. Third, they changed the policy name to ‘alternative’ and presented the policy in press releases as a ‘clean energy’ portfolio standard.

This selective use of metaphors amounts to two different types of rhetorical diversions. Freudenburg and Alario (2007) describe forms of diversionary framing in which political actors redirect an audience's attention away from pertinent issues at hand. This technique attempts to situate an audience's attention on a completely different topic, problem, or question. They comment that,

“studies of technological controversy have begun to note the use of ‘diversionary reframing,’ which essentially involves the processes of diverting attention away from such uncomfortable questions altogether, by reframing the debate as being ‘about’ something else – preferably about the legitimacy of one’s critics” (2007:161)

We observed this form of diversion in our case when, for instance, the energy company representatives attempted to focus attention on the questionable authority of environmentalists. Here, testifiers tried to move discussion away from the issue of energy source selection and towards the credibility of other committee participants.

Advocates' use of the labels ‘clean’ and ‘alternative’ constitutes different forms of diversion. To be sure, it seems that waste coal advocates used ‘clean energy’ in an attempt to divert attention away from the fact that they sidestepped the categorical opposition between renewable and fossil fuels. However this diversion is slightly different from an outright redirection of attention. In our case, supporters' use of ‘clean’ and ‘alternative’ serve two different functions. When presenting the final policy to the public, they serve as equivocating markers or signifiers. In presentations to the committee, these labels provide a type of cosmetic diversion based on abstract representations. I describe these functions in the next two sections.

#### **5.4 To the Public – Equivocating Labels**

Lawmakers seemed to divert attention away from the practical reality of waste coal energy production by invoking the notions clean and alternative. But, at the same time, these labels can also reasonably symbolize policy maker's decisions. Indeed, the label ‘clean’ does

communicate policymakers' rationale and actions. On the other hand, it is important to note that these labels can also connote many other meanings that the public might apply to the symbol 'clean energy.' Hence, a careful observer could look beyond this metaphor, and see clearly what policy makers did. But other observers can easily assign multiple interpretations to the labels clean and alternative.

To make this point we should discuss how lawmakers presented this final policy to the public. As mentioned the final policy was described as both an alternative and a clean energy policy promoting clean, advanced, and environmentally beneficial energy sources. All of these labels are metaphorical descriptors that play a mediating role between the general public, lawmakers, and energy production itself. As Eledman notes, "Politics is for most of us a passing parade of abstract symbols" (1985:30). Indeed, press releases occupy a separate realm, a relational space between energy production and the public's eye. Here, symbols, concepts, and representations act as substitutes for actual experience and understanding. They are ecological indicators that the public relies upon, since they rarely have the time, interest, or ability to disentangle complex environmental policy decisions (Turnhout et al. 2007). In this sense, the public must rely upon lawmakers to provide clear and opaque communications.

In discussions of concepts, scholars note that many metaphors, symbols, and concepts carry a range of meanings. For instance, Hayles describes how some concepts can generate "a surplus of signification", and so we can use them to indicate disparate and multiple distinctions (1990:33). Given this variety and surplus of meaning, symbols themselves cannot be used in isolation when attempting to provide transparent communication. In other words, metaphors rarely sufficiently communicate meaning when standing independent of other labels, contexts, or

metaphors.<sup>22</sup> Rather, they must be placed within a discursive context that narrows the range of signification and thus ascribes a specific meaning to the metaphors in question (Lakoff and Johnson 1980:167; Edelman 1985:130; Chandler 2002:177). To make this point think of the phrase: “Harry fired his gun at John.” This phrase will likely invoke a specific image and meaning, but it is divorced from any context. If we add a discursive context, the phrase’s meaning can change drastically. So for instance, we might change the phrase to “Harry *the clown* fired his *water* gun at John.” Here, a context narrows the range of possible significations, and so, the indicated meanings can be quite different from the meaning invoked by the original phrase (Example borrowed from Lakoff and Johnson 1980:167).

The public announcements of ‘alternative energy’ and ‘clean energy’ portfolio standard provide little discursive context. While they do serve to invoke certain meanings and distinctions, it is unlikely that these symbols will properly communicate policy makers’ decisions and rationales to the public. Why? First, it’s possible for these labels to resonate with cultural meanings which are quite distinct from policy maker’s actions. As Lakoff notes, progressives typically associate the words clean, safe, and healthy with policies that genuinely address global warming and other environmental impacts (2004: 22). Second, ‘Alternative Energy’ carries with it an inherent ambiguity. We typically use ‘alternative’ to indicate relationships, in the sense of ‘alternative to some other’. Here, ‘alternative’ describes the relation between two or more distinct objects with separate identities. However, in the title of the PA AEPS, this relation is not provided. In other words, the statement does not clarify what the policy is alternative to. Instead, the ‘alternative to some other’ is transformed into a noun

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<sup>22</sup> This assumption parallels the basic assertion of Saussurean semiotics that a sign’s meaning emerges from its systematic relations to other signs and thus do not carry inherent meaning as a discrete object (Chandler 2002:22).

‘Alternative Energy’, suggesting that ‘alternative’ designates an identity within itself. By losing the sense of its relationship to some other, we are provided little information regarding what energy sources are labeled by this phrase.

Furthermore, it’s worth noting, that it may be a great thing that the state is pursuing both renewable and advanced energy sources simultaneously; however this is clearly a conceptual break from the precedents set by previous RPS policies. Lawmakers more clearly articulated this conceptual break with earlier proposal names. Titles like *Renewable and Advanced Portfolio Standard* or *Renewable and Environmentally Beneficial Portfolio Standard* indicated that Pennsylvania pursued a strategy different from previous RPS policies. However by using the title ‘Alternative Energy’ this distinction is lost. Indeed, the word alternative is ambiguous enough that the label does not explicitly signal that the PA policy differs from other renewable policies. As such, this ambiguity seemed to allow the policy to be associated with other RPS policies, but, in practice, it is something different.

To summarize, by using these labels, lawmakers do not necessary construct a clear and informative message. Instead they (wittingly or unwittingly) used labels with multiple significations that both convey their decisions and plenty of other alternative messages. Policy makers do indeed have a plausible answer to provide to a careful audience who might ask why they called waste coal clean. Advocates showed that naming waste coal as clean has a certain logic in the sense of cleaning up gob piles and being cleaner than traditional coal. One might disagree with this logic; however we can’t accuse supporters of distortion or misrepresentation. But this rationale is not communicated to the public via press releases, and it is reasonable to think that people can assign other interpretations and associations to these labels. Without a complete context, people can interpret the terms clean and alternative energy in many ways.

### **5.5 To the Committee - Cosmetic Diversions**

While communications with the public did not provide a proper discursive context, waste coal advocates did provide a justification for their decisions to other lawmakers and committee participants. In doing so, they constructed a description of waste coal with cosmetic diversions or isomorphic landmarks. As mentioned, cosmetic diversions are symbolic diversions that draw an audience's attention away from relevant differences and towards labels or landmarks that suggest similarity. For example, lab coats are a type of diversion intended to distract medial patient's attention away from the epistemological differences that separate alternative and biomedical practices (Shuval and Mizrachi 2004). In this case, waste coal advocates constructed a justification for the inclusion of this fossil fuel by drawing attention away from the pertinent differences between waste coal and other renewable sources and towards their common association with the notion clean. We might reasonably characterize waste coal as clean but the question is whether this identity (and its' associated distinctions) are the most important characteristics to attend to when constructing policy and when sorting energy sources into 'green' and 'non-green'.

That said, it is worth noting how advocates constructed this diversion. What relationships, categories, and metaphors are these narratives 'built upon? I can identify three strategies worth mentioning, selective representation, relational definitions, and interchangeable metaphors. I describe these below.

### **5.6 Selective Representations**

First, in creating a discursive context to justify the inclusion of waste coal, lawmakers had to highlight and characterize the relevant and pertinent aspects of this energy source. Fairclough notes that studies of representation should attend to the ways in which a given



portrayal includes some key aspects and excludes various other potentially relevant details (2003:135). In characterizing waste coal, policymakers selectively represented the impacts of waste coal energy production. For example, advocates discussed some environmental pollutants and not others. Namely, they spoke of SO<sub>x</sub> and NO<sub>x</sub> emissions but did not address emissions of CO<sub>2</sub> or mercury. Furthermore, they discussed the impacts on some environmental domains and not on other domains. Specifically they considered how waste coal plants pollute the air and how abandoned gob piles pollute the water and land, but they did not address how burning waste coal also can result in land pollution.

Therefore, unlike environmentalists who argued for a clear and pollutant-free environment, waste coal advocates selectively chose what domains will be cleaned (and what pollutants will be removed) by the operation of waste coal plants. In this sense, they separated a number of the relationships which link the production of energy with the overall environmental system, and consequently enacted a specific form of framing called disentangling, a process in which decision makers draw distinctions between those relations to be included in policy calculations and those to be set aside and ignored (Callon 1998:16). In doing so, they carved a picture which suggests that waste coal plants provide environmental benefits, despite the fact that these plants might both solve one environmental problem (e.g., gob piles) but create others (e.g., CO<sub>2</sub> or mercury emissions).

### **5.7 Inherent vs. Relational Definitions**

Second, in assigning meaning and significance to waste coal, advocates relied upon relational definitions that allowed them to construct a very weak distinction between clean and non-clean energy sources. To clarify this point, note that the environmentalists' established stable and specific boundaries between those energy sources that count as clean energy and those

sources that do not. Here, specific inherent prerequisites determine what energy sources are included in the clean category. By inherent, I mean characteristics or processes that adhere to (or are embodied by) discrete objects, which are set at a specific level. For example, internal requirements might be 'free from mercury' or 'producing no CO<sub>2</sub>'. Under this conception 'clean', energy sources must satisfy a list of absolute requirements before they can be named clean.

Waste coal advocates on the other hand constructed a relational definition: 'cleaner than' traditional coal. Of course, the rules for successful inclusion into the 'cleaner than' category are completely different than the rules for inclusion into the category 'clean'. With the logic 'cleaner than', policy makers do not judge energy sources by specific inherent requisites but by relational requirements (i.e., the relationship to traditional coal). So, if lawmakers can show that waste coal produces fewer quantities (of some) pollutants as compared to traditional coal, they can claim success and name waste coal as 'clean'. And of course, even the smallest incremental increase can be deemed a success.

Thus, when defining the clean category in terms of 'cleaner than', lawmakers enacted a subtle shift in language but a major change in practice. This transposition, of course, has very real practical consequences for the type of renewable policies that legislators pursue. By shifting from internal requirements to relational requirements, lawmakers anchor success to traditional coal practices and do not evaluate energy product by some specific notion of clean. Energy sources are not judged by specific boundaries or standards but by an energy source's success in being 'other' than what it relates to. Furthermore, since 'cleaner than' has no internal logic, policymakers can set success very low, because it is always accurate to say that Y is cleaner than X, even if Y is barely cleaner than X.

## 5.8 Interchangeable Labels-Metaphors

Third, this cosmetic diversion was enabled by the structure of the English language. Language may be historically-contingent and socially created, but certain concepts become publicly salient and can consistently adhere to specific processes and practices. In other words, language is not merely an instrument that people use. It is also a mediator in which people must negotiate and which opens some opportunities and closes others (Chandler 2002:196). In this case, lawmakers would not be able to use selective representations and relation definitions as easily if it were not for interchangeable terms like ‘clean’, ‘renewable’, and ‘alternative’. Indeed, these labels seem to be ambiguous enough to suggest similar meanings and indicate parallel distinctions, and consequently they make up a sort of family of metaphors that people can plausibly interchange without substantial consequences or questions. Granted, they are not equally flexible. Renewable, for instance, appears to adhere to more concrete meanings and to indicate more specific distinctions. However, the labels ‘alternative’ and ‘clean’ are, as of yet, sufficiently ambiguous, and therefore people can plausibly exchange them with each other and with the term ‘renewable.’ Hence, in broad situations, these labels will communicate similar impressions and can also allow an audience to apply any number of meanings to the symbols in question.

Two factors shape this ambiguity and interchangeability. In developing a theory of concept construction, linguists discuss how the meanings indicated by concepts are structured by various properties, assertions, and metaphors, and, furthermore, how concepts can share parts of these structures with other similar but distinct, concepts (Lakoff and Johnson 1980:87). These shared properties create an interconnecting cohesion and similarity between distinct notions. In our case, we can see interconnecting similarities between the notions of clean, alternative, and

renewable. Clean is a very general metaphor-category that carries the sense of a domain free of contaminants, while renewable energy is constructed of a notion of time and pollution. In terms of time, renewable energy sources are generally seen as self-regenerating sources that humans can continue to use long into the future. This is contrasted with fossil fuels which are understood to have limited availability. In terms of pollutants, renewable energy sources are likewise thought of as generating few environmental impacts. The suggestion of pollution-free aligns the notion of renewable with the notion of clean. Since being free of pollutants would be a type of cleanliness, renewable energy is just one object-concept reasonably characterized as clean. Likewise we can see a connection between the notions of renewable energy and alternative energy. Alternative often provides the sense of a substitute to the mainstream. As of yet, renewable energy is not a mainstream energy source, and so we can reasonably characterize renewable as alternative.

A second factor also makes these terms interchangeable. Linguists describe how our concepts and metaphors are ordered and ranked hierarchically (Lakoff 1987:39; Glucksberg and Keysar 1993). This is the case not only because we need communications tools that allow us to speak at different levels of abstraction, but also because there appears to be basic level categories that exist across cultures. (Lakoff and Johnson 1980; Lakoff 1987) So, for instance, the notion of furniture encapsulates a domain that includes chairs, tables, and beds, etc. As such, furniture is a more general term and is therefore ranked higher than the term chair. Chairs, of course, can include such items as office, kitchen, or living room chairs. So it's possible to move between levels of this hierarchy when characterizing various phenomena. Higher ranking concepts, like furniture, are much more general and, consequently, provide less specificity, indicate fewer distinctions, and adhere to multiple objects and processes. Lower ranked concepts adhere to far

fewer objects but provide more specificity and indicate more distinctions.

We can think of this in terms ‘clean’, ‘renewable’, and ‘alternative energy’. Clean is a very general metaphor-category, ranked rather high on the category hierarchy. Hence, it is an ‘umbrella’ under which people insert multiple domains and activities. One can speak of clean language, bathrooms, buses, air, water, etc. While capable of containing a multiple of objects, the label ‘clean’ does little to describe which objects are included and which are not. By combining ‘clean’ with ‘bathroom’ one might reasonably indicate the domain that is supposed to be clean, but the notion ‘clean bathroom’ tells us nothing about what contaminants are absent from the bathroom. Indeed the symbol itself does not intuitively adhere to any specific pollutant, and thus its use is inherently vague.

Alternative is another very general terms that people can apply to multiple domains. One can think of alternative music, choices, lifestyles, etc. The term often suggests an alternative to the mainstream, a substitute to common practices. As such, it is a relational word used to describe a subject or object which is an ‘alternative’ to, some other subject or object. For an object to be included in the category of alternative the entity in question must simply be different from or alternative to some other object. Like the category ‘clean’, the label ‘alternative’ can contain multiple entities, but it communicates almost nothing about these entities.

‘Renewable’ and ‘fossil fuels’ are far more specific concepts that we use to characterize a select range of objects, namely energy sources. They tend to suggest fairly simple characteristics based on notions of time, origin, and ecological impact. Fossil fuels are thought of as finite resources created from sources existing prior to human history. Renewable fuels are thought of as infinite sources emerging from gravity or from the sun, are expected to last far into the future, and seem to have few environmental impacts (Jaccard 2005:22). As such, these two terms are

far simpler, and consequently are subordinate to the notions clean and alternative. Plus, while the notions of 'fossil fuel' and 'renewable' may be distinct in terms of time and pollutants, we can fairly easily assert that they share a common cleanliness and alternativeness, particularly when it comes to waste coal. Hence, we might not characterize waste coal as renewable, but we can describe it as 'clean' in some sense. Since we can also characterize renewable energy as clean, we can reasonably include both of these sources in the same domain, namely the domain of 'green energy'.

Thus policymakers can interchange these labels 'alternative', 'clean', and 'renewable' because the notions themselves contain interconnecting properties and because these notions indicate different levels of generality. In other words, both 'clean' and 'alternative' can plausibly include 'renewable' and 'fossil fuels', as they are not specific enough to articulate the distinction between these two notions. In a sense by describing waste coal in terms of 'clean energy' and labeling the final policy with the term 'alternative', policymakers cleverly moved between ranks of metaphors and furthermore played with the multiple meanings that bring these concepts together.

To summarize, this shows how jumping to general categories is a smooth rhetorical technique to reshape category boundaries, particularly when aiming to, in effect, disregard salient oppositions like 'renewable' and 'fossil fuels'. As Fairclough notes, highly abstract representations are perfect cosmetic tools to "erase or even suppress difference" (2003:144; see also Eldeman 1985:116-119). We quite often use metaphors to abstract from concrete objects and situations. Thus abstract metaphors, like clean, can become the perfect rhetorical instrument to instantly organize a range of phenomena, along the way highlighting some similarities, deemphasizing differences, and hiding some characteristics. As Lakoff and Johnson note, "a

given metaphor may be the only way to highlight and coherently organize [certain] aspects of an experience” (1980:156). Without the metaphor ‘clean’, it might be difficult to consider solar and waste coal sufficiently similar to promote under the same green energy policy. One could easily see the differences if one were to observe the production of energy from solar and waste coal. However, debates must often occur in linguistic discourse, and so, with one word policy makers can very easily draw attention to the similarities of waste coal and renewable energy.

In this sense, we can argue that the established structures of the language provided lawmakers an opportunity to rearrange categories and provide a conceptual justification for rewriting the relationship between green and non-green energy practices (that has typically been driven by the distinction between renewable and fossil fuels). Namely, the notion of ‘alternative’ allowed policy makers to merge the categories of ‘renewable’ energy with the notions of ‘advanced’ and ‘environmentally beneficially energy’. Consequently, waste coal advocates don’t necessarily redefine ‘clean’ or ‘alternative’ energy; rather they exploited the inherent generality and ambiguity embedded in the concept itself.

## **5.9 Conclusions, Limitations, Future Research**

In recent years, a number of private and governmental organizations have produced environmental initiatives to help stimulate the use of sustainable products and processes. Creators of such programs rely upon what we might call environmental boundary work, a procedure involving the discursive attribution of selected qualities to products and behaviors for the purpose of drawing a rhetorical boundary between acceptable environmental practices and those deemed unacceptable or ecologically harmful. Consumers, corporations, and lawmakers then use the resultant ‘green’ classifications in efforts to move towards more sustainable economies and practices.

State legislatures have begun to apply green classifications to energy sources in efforts to promote renewable energy. As such, they must conduct environmental boundary work in order to draw lines (or establish borders) between those sources to promote and those sources to exclude. The conceptual opposition between fossil and renewable fuels has typically driven these sorting activities. Pennsylvania's Renewable Portfolio Standard is unusual in this regard. Called the Alternative Energy Portfolio Standard (AEPS), this policy promotes at least three energy sources that are typically thought of as non-renewable: waste coal, coal mine methane, and coal gasification. Since the public readily identifies these energy sources as 'fossil fuels', we can reasonably ask how policy makers overcame this categorical opposition.

This thesis answers this question by examining how Pennsylvania lawmakers inserted waste coal into this renewable energy policy. Analysis first assembled testifiers into discourse coalitions based on their asserted assumptions (or 'first principles') regarding the economy and the environment. Next it demonstrates how stakeholders characterized the concrete situation at hand, namely the production of energy in Pennsylvania, and how they selectively problematized different domains of Pennsylvania's economy and the environment. Third, I show how stakeholders portrayed waste coal energy production and argued for its inclusion or exclusion in the policy. Finally, the study examines how preexisting linguistic structures offered opportunities to stakeholders as they worked to ascribe meaning and significance to their representations of waste coal.

In doing so, this study shows how waste coal supporters successfully sidestepped the opposition between renewable and fossil fuels by splitting the domain of 'green' energy into two categories, 'clean' and 'renewable'. It also discusses the rhetorical border work that advocates enacted to justify this splitting. Namely, they drew upon the ambiguous terms 'alternative' and



‘clean’ to argue that waste coal plants ‘clean up’ abandoned gob piles and produce ‘cleaner’ energy ‘than’ traditional coal plants.

The results of this study are relevant beyond Pennsylvania’s borders. First, the arguments used to justify the promotion of waste coal may be used to justify the promotion of other energy sources. For instance, cleaning up can be (and has been) used to promote poultry waste and municipal solid waste as renewable energy sources. Perhaps more importantly, others have invoked the label ‘clean energy’ and the argument ‘cleaner than’ to justify the burning of traditional coal (Fishkin 2002). Indeed coal industries have much to lose if the public and policy makers decide to build policies around the logical distinction between renewable and fossil fuels. This case provides one example of how coal interests have worked to find a place for coal in a political climate concerned with CO<sub>2</sub> emissions and global warming. Namely it shows how the policy makers can undermine the distinction between fossil and renewable fuels by invoking the notion of clean energy which can logically include all sorts of energy practices. Future studies should continue to examine this effort. For instance, additional research might investigate coal industry’s attempts to market coal as ‘green’ energy to the public via media commercials and to consumers via energy bills and other publications.

Second, this case study demonstrates how publicly salient labels and categories can play an important role in policy making arenas. Over time certain identities, categories, and problems will rise to public prominence and consequently will influence the concerns, objectives, and discussions of various public debates (Hilgartner and Bosk 1988). As these concepts migrate through different situations, they will often take on a ‘life of their own’ and become organized by structures that impact how they move, transform, and stabilize. In some cases, they will come to have strict boundaries, adhere to specific objects or processes, and indicate concrete distinctions.

Policy makers will frequently work to affiliate themselves with these concepts in order to justify their decisions and to garner public legitimacy.

In order to accrue the legitimacy associated with salient categories, policy makers must demonstrate that they have truthfully engaged these notions and therefore have maintained the integrity of the notions in question. In another words, lawmakers must show that they have not substantially distorted or altered the concepts with which they associate. Accordingly, when invoking publicly salient concepts, lawmakers will be constrained to some extent by the meanings which adhere to these notions. This is particularly the case when categorical meanings are inelastically structured and thus resist redefinition and cooptation.

‘Renewable’ and ‘fossil’ fuels appear to be categorical identities of this sort. Indeed these notions tend to indicate fairly consistent meanings and consequently appear to have some stability and salience with lawmakers and with the public in general. In national debates, commentators consistently use ‘fossil fuel’ to categorize coal energy, while discussants consistently invoke ‘renewable’ to categorize wind energy and solar energy. In our case, waste coal advocates’ decision to sidestep these categories altogether further suggests that these categories carry fairly consistent meanings. Indeed, this decision suggests that some notions can become clear and specific enough to avoid outright manipulation and to place some limitations on lawmakers as they construct policy. As a result, it does seem possible to create environmental notions that maintain somewhat rigid distinctions and meanings as they migrate through various policy debates and public discussions.

While some concepts can be structured to limit redefinition, others can be structured to evolve and adapt. In our case, the category ‘renewable’ constrained policy makers somewhat, although other notions also offered opportunities to them as they worked to generate a

justification for the promotion of waste coal. Namely, the ambiguous terms 'clean' and 'alternative' provided policymakers the opportunity to rhetorically sidestep the opposition between renewable and fossil fuels. Indeed policy makers can draw upon this resource of interchangeable labels when attempting to change boundary lines. As mentioned, environmental boundary work involves drawing a conceptual border between green and non-green practices. Greenwashing names attempts to redefine this 'green' - 'non-green' opposition while simultaneously maintaining the identity of this relationship. This case shows how these families of ambiguous labels are a resource to draw upon when attempting to disrupt, change, or blur the conceptual borders between green and non-green practices. In a sense, these ambiguous labels constitute a linguistic structure for policy makers as they attempt to both disrupt 'environmental borders' and to obscure that this disruption has occurred.

The malleability of 'clean' and the stability of 'renewable' suggest that some publicly salient notions can become inelastically structured, carry consistent meanings, and thus can more effectively indicate environmental distinctions. If this is the case, one might ask why some categories remain stable and adhere to certain objects as they migrate through various policy situations and discussions, while others change and are easily manipulated. Indeed, we might search for ways to construct environmental notions that place greater limits on policy makers. As Hall notes, "Throughout their careers, identities can function as points of identification and attachment only because of their capacity to exclude, to leave out, to render 'outside', abjected" (1996:5). And so, environmental studies might ask whether activists can create publicly salient green identities that resist manipulation and therefore stay true to their conceptual origins. This study discusses a few of the reasons why certain notions retain their meaning more consistently than others, namely it shows how the meanings embedded in language have some impact on the

evolution of concepts as they migrate through multiple situations. However, future research could further study how publicly salient notions limit policy activities, how lawmakers work around these constraints, and why some categories provided greater restrictions than others. Indeed understanding why some environment notions resist redefinition more than others may offer useful tools to activists as they label and categorize environmental beneficially practices and products.

That said it is worth noting a few of this study's limitations. This study examined recorded public testimony that was readily available from the Pennsylvania state government. With such data, we cannot determine the interests, beliefs, or intentions of stakeholders, unless they included them in their public statements. We also cannot make concrete claims about behind-the-scenes political strategies. One-on-one interviews with relevant stakeholders would be needed to address such questions. On the other hand, it is also important to recognize that the public forums are where citizens and lawmakers frame their positions in ways that they think will garner the most political traction. Understanding these framing strategies is a worthy pursuit in itself.

Furthermore, I have limited the focus of this study to the legislative debates that led to the enactment of the RPS statute. I did not address the administrative process that led to the promulgation of the regulations implementing the statute. It is conceivable that the statutory definitions might have changed, and so, additional research would be needed to explain how the RPS statute was implemented. That said, the provided analysis is still valuable for understanding the rhetorical arguments one might use to overcome the categorical opposition between renewable and fossil fuels.

Additionally, the study does not interrogate the power relations that potentially structure

this case. For instance, commentators have noted that the coal industry's political influence does not match its economic contributions to Pennsylvania. Coal contributes a small percentage to the state's overall economy, but it has proved successful in pursuing its legislative interests (e.g., blocking global warming initiatives). Some have argued that this success arises because coal is the dominant industry in a number of state-wide legislative districts. Therefore, even if the industry does not contribute substantially to the overall state economy, the industry does contribute economically to a large number of legislative seats. From this we can make inferences regarding the coal industry's political influence, but we would need to examine Pennsylvania's geographic arrangement of political districts (and distribution of coal resources) to determine direct relationships between the coal industry and political outcomes.

## APPENDIX A

### NAMES OF STATE RENEWABLE PORTFOLIO STANDARDS

<b>State</b>	<b>Policy Name</b>
Arizona	Renewable Energy Standard & Tariff
California	Renewable Portfolio Standard
Connecticut	Renewable Portfolio Standard
Colorado	Renewable Energy Standard
DC	Renewable Energy Portfolio Standard
Delaware	Renewable Portfolio Standard
Hawaii	Renewable Portfolio Standard
Iowa	Alternative Energy Law
Maine	Renewable Resource Portfolio Requirement
Maryland	Renewable Portfolio Standard
Massachusetts	Renewable Energy Portfolio Standard
Minnesota	Non-Mandated Renewable Energy Objective
Montana	Renewable Resource Standard
Nevada	Portfolio Standard for Renewable Energy
New Jersey	Renewable Energy Portfolio Standard
New Mexico	Renewable Energy Act
New York	Retail Renewable Portfolio Standard
North Carolina	Renewable Energy and Energy Efficiency Portfolio Standard
Pennsylvania	Alternative Energy Portfolio Standard
Rhode Island	Renewable Energy Standard
Texas	Goal for Renewable Energy
Vermont	Renewable Portfolio Goal
Washington	Renewable Portfolio Standard
Wisconsin	Renewable Portfolio Standard

## APPENDIX B

## ENERGY SOURCES SELECTED BY STATE RPS POLICIES

	Photo- voltaics	Wind	Biomass	Hydro- electric	Landfill Gas	Solar Thermal Electric	Geo- thermal Electric	Anaerobic Digestion	Fuel Cells	Tidal Energy	Wave Energy
Arizona	x	x	x	x	x	x	x	x	x		
California	x	x	x	x	x	x	x	x	x	x	x
Colorado	x	x	x	x	x		x	x	x		
Connecticut	x	x	x	x	x	x			x	x	x
District of Columbia	x	x	x	x	x	x	x		x	x	x
Delaware	x	x	x	x	x	x	x	x	x	x	x
Hawaii	x	x	x	x	x	x	x	x	x	x	x
Iowa	x	x	x	x	x			x			
Illinois	x	x	x	x	x	x					
Massachusetts	x	x	x		x	x			x	x	x
Maryland	x	x	x	x	x	x	x	x	x	x	x
Maine	x	x	x	x	x	x	x		x	x	
Minnesota	x	x	x	x	x	x		x			
Missouri	x	x	x	x	x	x	x				
Montana	x	x	x	x	x	x	x	x	x		
New Hampshire	x	x	x	x	x	x	x	x		x	x
New Jersey	x	x	x	x	x	x	x	x	x	x	x
New Mexico	x	x	x	x	x	x	x	x	x		
Nevada	x	x	x	x	x	x	x	x			
New York	x	x	x	x	x			x	x	x	x
Oregon	x	x	x	x	x	x	x	x		x	x
Pennsylvania	x	x	x	x	x	x	x	x	x		
Rhode Island	x	x	x	x	x		x		x	x	x
Texas	x	x	x	x	x	x	x			x	x
Vermont	x	x	x	x	x	x		x	x		
Virginia	x	x	x	x		x	x	x		x	x
Washington	x	x	x	x	x	x	x	x		x	x
Wisconsin	x	x	x	x	x	x	x		x	x	x







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