

Legislating the Highway Act of 1956: Lessons for Climate Change Regulation

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INTRODUCTION

The most frequently proffered argument against greenhouse gas ("GHG") regulation in the U.S. is that such regulation would damage the U.S. economy.¹ Advocates of GHG regulation have responded by highlighting the economic benefits of investing in research and development ("R&D") of GHG-free energy generation technologies.² Economic studies indicate that generating revenue by selling limited GHG allowances is a more economically robust regulatory solution than giving the allowances away.³ The studies also indicate reinvesting at least a portion of such revenue in energy technology R&D can stimulate economic growth.⁴ These results point toward R&D-coupled GHG regulation, in which regulatory revenues are directed to a federal megaproject designed to modernize the nation's energy generation infrastructure; for brevity, I will call such R&D-coupled GHG regulation a "Clean Energy Project." Regulatory advocates have picked up on the idea, literally calling for a "New Apollo Project," using the moonshot as an allegory for an energy technology revolution.⁵

Though warm memories of the Apollo Program may be a useful sales tool for GHG regulation, far more useful lessons toward passing GHG regulation can be drawn from the legislative history of the Highway Act of 1956.⁶ The Highway

¹ The bellwether statement of the federal government's position on GHG regulation is contained among the Whereases of a Sense of the Senate resolution passed during the negotiations leading up to the Kyoto Protocol:

Whereas the Senate strongly believes that the proposals under negotiation, because of the disparity of treatment between Annex I Parties and Developing Countries and the level of required emission reductions, could result in serious harm to the United States economy, including significant job loss, trade disadvantages, increased energy and consumer costs, or any combination thereof . . .

S. Res. 98, 105th Cong. (1997) (enacted) ("Annex I Parties" includes the United States and other developed nations).

Scientific uncertainty is also claimed as a reason for inaction, but in many treatments the scientific uncertainty is ultimately coupled to economic uncertainty. See, e.g., CONGRESSIONAL BUDGET OFFICE, UNCERTAINTY IN ANALYZING CLIMATE CHANGE: POLICY IMPLICATIONS (2005).

² See, e.g., Thomas L. Friedman, *The Power of Green*, N.Y. TIMES, Apr. 15, 2007, § 6 (Magazine), at 40; Apollo Alliance, <http://www.apolloalliance.org> (last visited Oct. 29, 2007).

³ Cameron Hepburn, *Regulation by Prices, Quantities, or Both: A Review of Instrument Choice*, 22 OXFORD REV. ECON. POL'Y 226, 236-37 (2006).

⁴ Terry Barker et al., *The Costs of Greenhouse Gas Mitigation with Induced Technological Change: A Meta-Analysis of Estimates in the Literature* (Tyndall Ctr. for Climate Change Research, Working Paper No. 89, 2006).

⁵ E.g., New Apollo Energy Act, H.R. 2828, 109th Cong. (2005).

⁶ Act of June 29, 1956, Pub. L. No. 84-627, 70 Stat. 374 (1956). The act consists of three titles: "Title I — Federal-Aid Highway Act of 1956," "Title II — Highway Revenue Act of 1956," and "Title III — Separability." The popular name for the entire act is "Federal-Aid Highway Act of 1956," but in the text of this article I refer to all three titles collectively as the "Highway Act of

Act of 1956 authorized nearly \$25 billion in expenditures over a thirteen year period for the purpose of constructing the National System of Interstate and Defense Highways (the "Interstate System"); funded the project with elevated taxes on motor fuel, heavy vehicles, and tires; and created a highway trust fund to ensure that the tax revenues were spent only on highways. The Highway Act of 1956 is the only example in contemporary American history⁷ of a Congressionally passed, tax-funded megaproject that is similar in size to a Clean Energy Project.⁸

The sizes of the two projects can be compared by expressing their annual budgets as a percentage of the country's gross domestic product ("GDP"). Early experience with GHG allowance trading under the Kyoto Protocol indicates that during the Protocol's 2008-2012 commitment period, GHG allowance prices are likely to settle in the neighborhood of \$10 per metric ton carbon dioxide ("CO₂") equivalent.⁹ At this price, auctioning all of the U.S.'s fossil fuel-derived, CO₂ emissions would yield \$57 billion annually, or about 0.5% of the U.S. GDP.¹⁰ The Highway Act of 1956's \$1.9 billion in average annual spending amounted to 0.4% of the U.S. GDP at the time, making the two projects of very similar scale.¹¹

1956" in order to avoid confusion with the first title alone.

⁷ By "contemporary" I mean post-New Deal. The New Deal changed the federal government's role in the U.S. economy in a non-marginal way, so comparisons in or prior to the New Deal would have little political meaning.

⁸ From 1964 to 1969, the Apollo Program was consuming a similar portion of the national budget as the Interstate System, but the associated legislation did not generate tax revenue. RICHARD W. ORLOFF, *APOLLO BY THE NUMBERS: A STATISTICAL REFERENCE* 281 (2000) (noting Apollo Program current-dollar budget appropriations of \$2.27 billion in 1964, \$2.61 billion in 1965, \$2.97 billion in 1966, \$2.92 billion in 1967, \$2.56 billion in 1968, and \$2.03 billion in 1969); U.S. DEPT. OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS, CURRENT-DOLLAR AND "REAL" GROSS DOMESTIC PRODUCT (2007), <http://www.bea.gov/national/xls/gdplev.xls> (Oct. 29, 2007) (noting change in U.S. current-dollar GDP from \$664 billion in 1964 to \$985 billion in 1969). The Superfund program did generate tax revenue, but it is less than one twentieth the size of the Interstate System (measured as a fraction of U.S. GDP). ANNE RABE & STEPHEN LESTER, 25TH ANNIVERSARY OF SUPERFUND: AMERICA'S SAFETY NET IN CRISIS, App. C (2005) (noting Superfund current-dollar budget appropriations of \$1.4 billion in 1987, \$1.6 billion in 1990, \$1.4 billion in 1995, \$1.4 billion in 2000); BUREAU OF ECONOMIC ANALYSIS, *supra* (noting change of U.S. current-dollar GDP from \$4,740 billion in 1987 to \$9,820 billion in 2000).

⁹ Urs Springer & Matthew Varilek, *Estimating the Price of Tradable Permits for Greenhouse Gas Emissions in 2008-12*, 32 ENERGY POL'Y 611, 612 (2004).

¹⁰ Calculated for the most recent year for which U.S. GHG emissions data are available, 2004, using year 2000 dollars for consistency with the Springer and Varilek estimates. In 2004 the U.S. GDP was \$10,704 billion 2000 dollars. CO₂ emissions from combusting fossil fuels were 5,713 million metric tons CO₂-equivalent; at \$10 per metric ton, selling allowances for all fossil fuel emissions would yield \$57 billion in 2000 dollars. \$57 billion/\$10,704 billion = 0.005 = 0.5%. BUREAU OF ECONOMIC ANALYSIS, *supra* note 8; U.S. ENVIRONMENTAL PROTECTION AGENCY, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2004 (2006) (2004 CO₂ emissions).

¹¹ The U.S. GDP was \$437.5 billion in 1956, in nominal dollars. BUREAU OF ECONOMIC ANALYSIS, *supra* note 8.

A Clean Energy Project is, for all practical purposes, a tax-funded megaproject like the Interstate System because both projects are funded by a revenue-generating mechanism that moves national income from the general public to the federal government. The revenue-generating mechanism for GHG regulation would either be taxes on fossil fuels or sale of GHG emissions allowances under a cap-and-trade system.¹² Either way the regulation would extract revenue from the parties benefiting from energy consumption. In the case of the Highway Act of 1956, the revenue-generating mechanism was a suite of taxes on motor fuel, tires and heavy vehicles that extracted revenue from those parties benefiting from the Interstate System.¹³

The two projects also resemble each other in their nature and motivation. Both projects upgrade the country's physical infrastructure. Where the Highway Act of 1956 upgraded a patchwork highway system to a nationally standardized network,¹⁴ a Clean Energy Project would upgrade a CO₂-intensive energy system to renewable, and perhaps also nuclear, energy sources. Both projects are perceived by the American public as having mixed civilian and national security benefits. Many of the renewable energy technologies that displace GHGs are likely to reduce the United States' dependence on imported oil. Though many renewable energy advocates are motivated principally by climate change concerns, they frequently frame renewable energy development as "energy independence."¹⁵ Likewise, many of the political actors that pushed through the Highway Act of 1956 were motivated principally by safety and commercial concerns, yet the Interstate System was framed as, in part, a defense project by renaming the system originally proposed as the "National System of Interstate Highways" to the "National System of Interstate and Defense Highways."¹⁶

The passage of the Highway Act of 1956 was accomplished in two distinct legislative attempts. The first, failed attempt occurred during the first session of the 84th Congress, in 1955.¹⁷ The second attempt occurred during the second

¹² Hepburn, *supra* note 3, at 228. I am assuming that a cap-and-trade solution would auction a large fraction of the allowances. It is also possible to grandfather allowances (give away allowances to industry based on historical emissions), thus putting no new revenue stream under federal control. However, this option does not deserve serious consideration, as it is both economically inefficient and inequitable. *Id.* at 236-37.

¹³ Act of June 29, 1956, Pub. L. No. 84-627, tit. 2, 70 Stat. 374, 387-89 (1956).

¹⁴ The Interstate System was first defined as a nationally-standardized network in 1944. Federal Aid Highway Act of 1944, Pub. L. No. 78-521, § 7, 58 Stat. 838, 842 (1944).

¹⁵ See, e.g., An Act Concerning Energy Independence, Pub. Act No. 05-1, 2005 Conn. Acts 1343 (June Spec. Sess.); Securing America's Energy Independence Act of 2007, H.R. 550, 110th Cong. (2007); Senate Democratic Policy Committee, *Energy Independence: Investing in a Secure Future*, <http://democrats.senate.gov/energy> (last visited Oct. 29, 2007).

¹⁶ Act of June 29, 1956, Pub. L. No. 84-627, § 108(a), 70 Stat. 374, 378 (1956).

¹⁷ Winston W. Riddick, *The Politics of National Highway Policy, 1953-1966*, at 43-67 (1973) (unpublished Ph.D. dissertation, Columbia University) (on file with UMI Dissertation Services).

session, culminating in a presidential signature in June of 1956.¹⁸ Since both attempts occurred in the same Congress, a structured comparison should reveal politically meaningful reasons why the Act failed in the first session and succeeded in the second. These reasons will be independent of the particular elected officials involved since they did not change between attempts. In Sections I and II, I examine the highway policy system and legislative history of the first, 1955 attempt; in Sections III and IV, I examine the highway policy system and legislative history of the second, 1956 attempt. Section V describes the climate policy system as of 2007. Section VI draws five lessons for legislating a Clean Energy Project, each of which arises from a unique episode of political learning differentiating the 1955 and 1956 attempts at passing the Highway Act of 1956. Finally, Section VII examines three important differences between the 1955 highway policy and 2007 climate policy systems that might hinder a modern attempt at legislating a Clean Energy Project and briefly discusses how they could be overcome.

I. U.S. HIGHWAY POLICY SYSTEM AS OF JANUARY 1955

There are of course enormous differences between the political environments in which the two projects occur, so to compare them I required a taxonomic system sufficiently flexible to accommodate political subsystems separated by half a century and featuring distinct sets of actors. For this purpose I chose the Advocacy Coalition Framework (“ACF”), which has been developed in the political science literature for nearly twenty years.¹⁹ Dozens of case studies, including one on climate change policy, provide experience and prior examples.²⁰ Though not merely a taxonomic system, the ACF is characterized in part by familiar block diagrams that allow a graphical layout of actors and events.²¹ With due apologies to the political researchers utilizing the ACF in its full form, I will isolate and borrow its taxonomic features to make comparisons between the 1950s and 2007.

A. ACF Taxonomy

Figure 1 applies the ACF taxonomy to the U.S. highway policy system as of January 1955. This is the ACF diagram format I will repeat throughout the paper, consisting of four boxes.²²

¹⁸ *Id.* at 67-76.

¹⁹ Paul A. Sabatier & Christopher M. Weible, *The Advocacy Coalition Framework: Innovations and Clarifications*, in *THEORIES OF THE POLICY PROCESS* 189 (Paul A. Sabatier ed., 2d ed. 2007).

²⁰ *Id.* at 217-19.

²¹ *Id.* at 190-91.

²² Recent versions of the ACF include a fifth box, LONG TERM COALITION

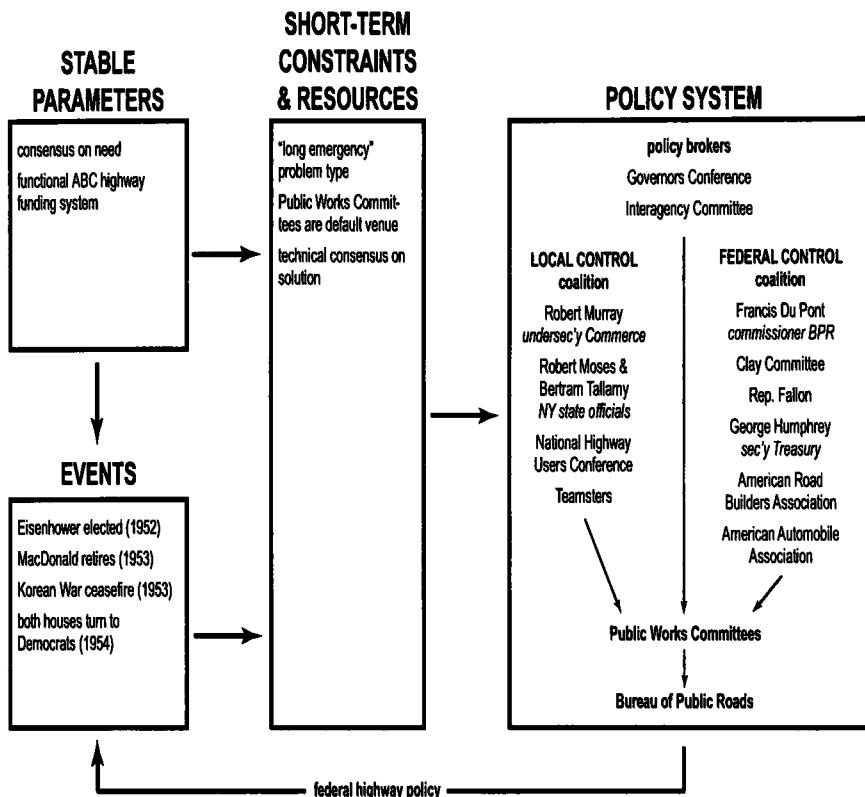


Figure 1 – The federal highway policy system as of January 1955, at the commencement of the 84th Congress. Listed coalition members are illustrative only. Francis du Pont left the Bureau of Public Roads ("BPR") in December 1954 but is included in the *federal control* coalition due to his important role in setting the stage for the 1955 legislative debates.

The large, POLICY SYSTEM box on the right is the central feature of the ACF diagram, and tabulates the actors in the policy system itself. The central part of the box is divided into columns that list members of advocacy coalitions vying for control of the system. In the case of the 1955 highway policy system, I find the advocacy coalitions to be a *local control* coalition that believed highway funding should be left to states and/or local leadership, and a *federal*

OPPORTUNITY STRUCTURES, that allows comparisons between differing governmental architectures. *Id.* at 199-201. Since I am comparing two federal-level policy processes in the same country, this box adds no useful comparative information and is omitted from the ACF diagrams in this article. In the political science literature, the POLICY SYSTEM box is often named POLICY SUBSYSTEM to recognize this larger political context.

control coalition that believed the federal government should take financial responsibility for the system. Throughout the early 1950s, prior to the 84th Congress, the various interests involved in highway policy acted along this traditional liberal-conservative divide, representing an opposition between those favoring greater federal control versus those favoring less.²³

At the top of the POLICY SYSTEM box, policy brokers are listed, entities who do not necessarily belong to one of the advocacy coalitions, but who play an important role in finding the common ground to support a compromise or other agreement that allows policy change. At the start of January 1955, the Governors Conference, once an important member of the *local control* coalition, had moved to the policy broker role, a historically significant shift.²⁴ I will discuss the policy brokers in detail in subsection D below. At the bottom of the POLICY SYSTEM box are the agents that create the laws and rules defining highway policy. As of 1955, almost all highway legislation was developed in the House and Senate public works committees, and in turn implemented by the Bureau of Public Roads ("BPR").²⁵

On the left side of the ACF diagram, the STABLE PARAMETERS box lists the relevant political and policy parameters that the actors can count on to remain unchanged, forming a firm background around which to develop policy innovations. During the 84th Congress, the highway policy system was operating against a backdrop of two dependable quantities. First, there was a broad consensus on the problem. Though the *local control* and *federal control* coalitions disagreed on who should be responsible for managing and/or funding an interstate system, there was no disagreement that there should be one.²⁶

Second, the existing, federal-aid highway financing program had a long history. The 50/50 federal-state cost sharing that characterized much of the program was established in the first Federal-Aid Highway Act, passed in 1916.²⁷ Over the years, federal-aid funding evolved to separately target three classes of highways: primary, secondary, and urban extensions of the primary system, popularly referred to as the "ABC system."²⁸ The ABC system was firmly encoded in the federal-aid highway acts by 1944.²⁹ Lawmakers approached the

²³ See *infra* notes 56, 67-70, 89 and accompanying text; see also *infra* Part 0.

²⁴ See *infra* Part 0.

²⁵ Riddick, *supra* note 17, at 211-12.

²⁶ BRUCE E. SEELY, BUILDING THE AMERICAN HIGHWAY SYSTEM: ENGINEERS AS POLICY MAKERS 208 (1987).

²⁷ Federal Aid Highway Act, Pub. L. No. 64-156, § 6, 39 Stat. 355, 357 (1916). A 1912 provision allocating \$500,000 of highway aid was actually the first federal highway aid to states, but was considered experimental. PHILIP H. BURCH, JR., HIGHWAY REVENUE AND EXPENDITURE POLICY IN THE UNITED STATES 236 n.1 (1962).

²⁸ CONGRESSIONAL BUDGET OFFICE, HIGHWAY ASSISTANCE PROGRAMS: A HISTORICAL PERSPECTIVE 6 (1978).

²⁹ Federal Aid Highway Act of 1944, Pub. L. No. 78-521, § 3, 58 Stat. 838, 839 (1944).

Interstate System as a supplement to the existing ABC funding rather than a replacement of it. Indeed, the Highway Act of 1956, besides authorizing \$24.8 billion of Interstate System spending over a 13-year period, also authorized a more customary amount of spending on the ABC system – \$1.89 billion over the 1958 and 1959 fiscal years.³⁰

One core principle of the ACF, beyond its taxonomic features, is that policy subsystems are inherently highly stable, such that major policy shifts require an external shock to the system.³¹ The EVENTS box enumerates candidates for such external shocks and thus is, to a degree, an opposite of the STABLE PARAMETERS box. The first two items in the EVENTS box are the election of President Eisenhower, and the retirement of Commissioner of Public Roads Thomas MacDonald, who had been at the helm of the Bureau of Public Roads for thirty-four years. These two events worked in tandem to destabilize the highway policy system, and I will discuss them in subsection C below.

The third item in the EVENTS box is the Korean War ceasefire. The armistice of July 1953³² did not impact the highway policy system directly, but rather made major initiatives like the Interstate System more realistic by freeing up budget. The Korean War had elevated U.S. military spending to 10.4% of GNP against a background rate of 6.9% during non-hot years of the Cold War.³³

The fourth and final item in the EVENTS box reflects the 1954 election. In the 83rd Congress, both houses had been under Republican majorities.³⁴ But in the November 1954 election, both turned to Democrat majorities.³⁵ The *local control* and *federal control* coalitions are loosely correlated to the Republican and Democratic parties' tendencies at the time to favor weaker and stronger federal government, respectively. The Democratic win in both houses may have shifted Congress from an inclination for sympathy with the *local control* coalition, to an inclination for sympathy with the *federal control* coalition. In the highway policy system, this shift may have been felt especially in leadership of the two subcommittees on Public Roads. In the Senate the chair shifted from Sen. Francis Case (R-SD) to Sen. Albert Gore (D-TN),³⁶ while in the House the chair shifted from Rep. Harry McGregor (R-OH) to Rep. George Fallon (D-

³⁰ Excludes \$125 million authorized for the 1957 fiscal year. Act of June 29, 1956, Pub. L. No. 84-627, § 102(a)(1), 70 Stat. 374, 374 (1956).

³¹ Sabatier & Weible, *supra* note 19, at 198.

³² CONGRESSIONAL QUARTERLY SERV., CONGRESS AND THE NATION 1945-1964, at 113 (1965).

³³ Michael Edelstein, *War and the American Economy in the Twentieth Century*, in 3 THE CAMBRIDGE ECONOMIC HISTORY OF THE UNITED STATES 329, 332-33 (Stanley Engerman & Robert Gallman eds., 2000).

³⁴ CONGRESS AND THE NATION 1945-1964, *supra* note 32, at 21.

³⁵ *Id.*

³⁶ Father of Albert Gore, Jr. Martin Weil, *Vice President Gore's Father Dies*, WASH. POST, Dec. 6, 1998, at B8. Father and son played leadership roles in the liberal coalitions of the highway and climate policy systems, respectively.

MD).³⁷

The stable parameters and events combine to create a set of SHORT-TERM CONSTRAINTS & RESOURCES, the center box of the ACF diagram.³⁸ The stable parameters “*consensus on need*” and “*functional ABC highway funding system*” together define a problem that has the characteristics of a “long emergency:” a problem that is considered to have very serious consequences in the long run, but which develop over time-spans that exceed typical political and business cycles.³⁹ By the time of the 84th Congress, vehicle registrations had been increasing faster than highway capacity for years, and were projected to continue exceeding highway capacity in growth rate for the foreseeable future.⁴⁰ Yet, there was nothing about 1955 (or any other year) that made it the specific year in which the highway problem graduated to emergency status.⁴¹

“*Consensus on need*” had also generated a short-term resource (and constraint) in the form of a concrete plan for the Interstate System. The Federal-Aid Highway Act of 1944 ordered route selection for a 40,000-mile Interstate System,⁴² and the vast majority of that route selection was in place by August 1947.⁴³ This existing definition of the Interstate System simplified the legislative activity necessary to pass the Highway Act of 1956, and in particular helped to enable the focus on revenue generation that I will be discussing below.

Finally, the well-established roles of the Public Works Committees in the highway policy system, combined with the Congressional hearings process, made them the *de facto* venue for discussion of highway policy. The shift of

³⁷ Compare (CCH) 83rd Cong. CONGRESSIONAL INDEX at 4009, 6014 (1953-1954) with (CCH) 84th Cong. CONGRESSIONAL INDEX at 4010, 6014 (1955-1956).

³⁸ Figure 1, *supra* p. 65.

³⁹ Author J. Howard Kunstler popularized the term “long emergency” to mean a particular set of slowly-evolving and collusive catastrophes, chief among them peak world oil production but also including climate change. See JAMES HOWARD KUNSTLER, *THE LONG EMERGENCY: SURVIVING THE END OF OIL, CLIMATE CHANGE, AND OTHER CONVERGING CATASTROPHES OF THE TWENTY-FIRST CENTURY* (2006). I personally find his focus on peak oil misguided, but creating a common name for problems whose timescales evade typical political and business horizons is a valuable contribution to the discussion.

⁴⁰ PRESIDENT’S ADVISORY COMMITTEE ON A NATIONAL HIGHWAY PROGRAM, *A TEN YEAR NATIONAL HIGHWAY PROGRAM 8-9* (1955) [hereinafter CLAY COMMITTEE REPORT].

⁴¹ This indicates a secondary aspect in which the highway problem perceived in 1955 analytically resembles the climate change problem perceived in 2007. The military purpose of the Interstate System, on those occasions when it was discussed, was presented principally as an ability to evacuate citizens from cities under a threat of nuclear attack. See, e.g., *id.* at 7. That is, the highway system was perceived, in part, as an investment in protection against a possible catastrophic emergency. In recent literature on climate policy, a growing awareness of abrupt climate change in the paleoclimatological record has led to a similar re-characterization of climate policy as protection against a possible catastrophic emergency. Michael Oppenheimer & Annie Petsonk, *Article 2 of the UNFCCC: Historical Origins, Recent Interpretations*, 73 CLIMATIC CHANGE 195, 206-08 (2005). See also *infra* note 190.

⁴² Federal Aid Highway Act of 1944, Pub. L. No. 78-521, § 7, 58 Stat. 838, 842 (1944).

⁴³ SEELY, *supra* note 26, at 194.

Congress to Democratic control, by likewise shifting committee leadership to Democratic control, reinforced the Public Works committees as the obvious stage on which a major policy shift could play out.

B. The Iron Triangle

The *iron triangle* is a mainstay of political science literature that predates the ACF by many years.⁴⁴ An iron triangle is a tightly knit political subsystem consisting of three actors representing Congress, the bureaucracy, and interest groups.⁴⁵ The three actors exchange favors with each other and create a highly stable policy environment that resists change. In particular, Congress passes friendly legislation in return for policy execution by the bureaucracy and electoral support from interest groups. The bureaucracy implements unadventurous rules in exchange for Congressional lobby support from interest groups and continued financial support from Congress.⁴⁶

Political scientist Winston Riddick identified a textbook iron triangle dominating U.S. highway policy from at least 1953 to 1966, covering years both prior to and after Congressional action on the Highway Act of 1956.⁴⁷ The iron triangle in place was somehow malleable enough to allow a major shift in federal highway policy, and yet firm enough to stay intact after that shift. The Congress corner of the triangle comprised the House and Senate committees on public works. The bureaucracy corner comprised the Bureau of Public Roads. The interest groups corner was dominated by four groups: the American Association of State Highway Officials, the Association of General Contractors, the National Highway Users' Conference, and the American Road Builders' Association.⁴⁸ The bond between BPR and the House Committee on Public Works was particularly strong, and the American Association of State Highway Officials was the most well connected interest group.⁴⁹ The strength of this political subsystem lay in a long history: all of the entities were in existence by 1918, except for the General Motors-led National Highway Users' Conference, which wasn't created until 1932.⁵⁰

⁴⁴ E.g., JAY M. SHAFRITZ, DORSEY DICTIONARY OF AMERICAN GOVERNMENT AND POLITICS 148-49 (1988) (citations dating to 1971); GORDON ADAMS, THE POLITICS OF DEFENSE CONTRACTING: THE IRON TRIANGLE 28 n.18 (1982) (citations dating to 1955). An iron triangle is sometimes also called a "cozy triangle." SHAFRITZ, *supra*, at 148.

⁴⁵ SHAFRITZ, *supra* note 44, at 148-49.

⁴⁶ *Id.*

⁴⁷ Riddick, *supra* note 17, at 321.

⁴⁸ *Id.* at 3.

⁴⁹ *Id.* at 182.

⁵⁰ SEELY, *supra* note 26 (Office of Roads Inquiry formed in 1895, and subsequent evolution into BPR); *id.* at 26 (American Road Builders Association formed in 1902); *id.* at 41-42 (AASHO formed in 1912); BOOTH MOONEY, BUILDERS FOR PROGRESS: THE STORY OF THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA (1965) (Associated General Contractors of America formed

C. *The Iron Triangle Survives a Double Blow*

Eisenhower was sworn into office in January of 1953 and a scant two months later, in March 1953, BPR Commissioner Thomas MacDonald retired.⁵¹ These two nearly simultaneous events colluded to shake confidence in the highway policy iron triangle. Eisenhower is frequently deemed the “father of the Interstate” in popular writing,⁵² so it might be surprising that his election constituted a threat to the iron triangle. Eisenhower did support an Interstate System in principle, but his position in the *local control* vs. *federal control* standoff was never stated during his election campaign or during the early months of his presidency.⁵³ Riddick believes that “Eisenhower entered office in 1953 committed to returning highway user taxes to the states and holding down federal expenditures”⁵⁴ In his memoirs, Eisenhower claims that he “originally preferred a system of self-financing toll highways,”⁵⁵ a position that neatly avoids commitment to either a state or federal solution.

Meanwhile, state governments had been lobbying for years to reduce federal-aid programs and regain state control of taxation; a return to Republican control of the White House for the first time in 20 years was perceived as an opportunity to advance this agenda.⁵⁶ I will discuss this further in Section IV, when I address the Kestnbaum Commission. It is also important to note that none of Eisenhower’s close allies or policy advisors were actors in the existing iron triangle, so he did not have a personal interest in its maintenance.⁵⁷ His

in 1918); SEELY, *supra* note 26, at 210 (National Highway Users’ Conference formed in 1932).

⁵¹ *MacDonald Retires as Commissioner of Public Roads; F. V. du Pont Takes Over*, 150 ENGINEERING NEWS-RECORD, Apr. 2, 1953, at 52.

⁵² See, e.g., Richard F. Weingroff, *The Year of the Interstate*, PUBLIC ROADS, Jan.-Feb. 2006, available at <http://www.tfhr.gov/pubrds/06jan/01.htm> (last visited Oct. 29, 2007).

⁵³ That is, I find no evidence of such statements. Where Eisenhower did talk about the highway system, his stance on the federal-state issue is equivocal, e.g., “A solution [to the highway problem] can and will be found through the joint planning of the Federal, state and local governments.” *Ike Understands Road Problem We’re Facing*, ROAD BUILDERS’ NEWS, Nov.-Dec. 1952, at 7.

⁵⁴ Riddick, *supra* note 17, at 66.

⁵⁵ DWIGHT D. EISENHOWER, *THE WHITE HOUSE YEARS: MANDATE FOR CHANGE 1953-1956*, at 548 (1963).

⁵⁶ *Ike Displays Interest in proposal to Return User Taxing to States*, TRANSPORT TOPICS, Jan. 26, 1953, at 1.

⁵⁷ Advisors important at the outset of Eisenhower’s presidency were John Foster Dulles, a lawyer at Wall Street firm Sullivan and Cromwell, appointed to Secretary of State; Herbert Brownell, an attorney and campaign manager, appointed to Attorney General; General Lucius Clay; Sherman Adams, former governor of New Hampshire, appointed to Assistant to the President; and Milton S. Eisenhower, the President’s brother and a university administrator. CHESTER J. PACH, JR., *THE PRESIDENCY OF DWIGHT D. EISENHOWER* 33-40 (revised ed. 1991). See also *infra* note 79 and accompanying text regarding General Lucius Clay. In Eisenhower’s remarks on the highways in his memoirs, he applauds two individuals for their work: Representative Charles Halleck and Secretary of Commerce Sinclair Weeks, EISENHOWER, *supra* note 55 at 502, 549, though Representative Halleck had no substantive connections to the highway political system, cf. HENRY Z. SCHEELE, CHARLIE HALLECK: A POLITICAL BIOGRAPHY (1966) (containing one incidental mention of

motivation to achieve the presidency arose almost entirely from an interest in international issues rather than domestic ones,⁵⁸ and he entered office with the Korean War a paramount issue.⁵⁹ A specific plan for the highway system was not on his agenda.⁶⁰

When Thomas MacDonald retired two months after Eisenhower's inauguration, he had been the country's Commissioner of Public Roads for thirty-four years, since 1919.⁶¹ Under MacDonald's long, respected tenure, BPR had gained a great deal of freedom to set its own path.⁶² MacDonald's retirement compromised that freedom, and control of BPR's role in the government would now lie more firmly in the hands of Eisenhower appointees — Secretary of Commerce Sinclair Weeks and his undersecretary for transportation Robert B. Murray.⁶³ Murray in particular was an advocate of state-financed toll roads,⁶⁴ so there was merit in the concern that federal (iron triangle) control of the highways was in jeopardy.

The savior of the highway policy system may have been MacDonald's replacement, Francis duPont. In one history, du Pont's appointment to head BPR is described as follows:

Partly because of the Governors Conference position [opposing gasoline taxes and the Federal-aid program] Mr. duPont had been asked to take the office for the purpose of terminating the Bureau of Public Roads. He advised that he would accept the office, but would not terminate the Bureau of Public Roads for the highway needs of this country were so critical that they could only be alleviated by accelerating the Federal-aid program, and the Bureau would have to play a prominent role in the highway future of the country.

Mr. duPont, a very progressive and active individual, decided to make it his personal project to get the Interstate program underway.⁶⁵

highway system in 270-page biography), and Secretary of Commerce Weeks began his term under Eisenhower with no significant connections to or opinions on the highways, Federal Highway Administration, *Sinclair Weeks: Secretary of Commerce*, <http://www.fhwa.dot.gov/infrastructure/weeks.htm> (last modified May 7, 2005).

⁵⁸ FRED I. GREENSTEIN, *THE HIDDEN-HAND PRESIDENCY* 47-49 (1982).

⁵⁹ CONGRESS AND THE NATION, *supra* note 32, at 17.

⁶⁰ In fact his administration didn't produce a single formal statement about the highway for at least 10 months after taking office. MARK H. ROSE, *INTERSTATE: EXPRESS HIGHWAY POLITICS, 1941-1956*, at 48 (1979).

⁶¹ *MacDonald Retires as Commissioner of Public Roads*, *supra* note 51.

⁶² *Id.*

⁶³ *Id.*

⁶⁴ ROSE, *supra* note 60, at 70.

⁶⁵ *A History of the Interstate Program*, in AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS: A STORY OF THE BEGINNING, PURPOSES, GROWTH, ACTIVITIES AND ACHIEVEMENTS OF AASHO 185 (A. E. Johnson ed., 1965). This story, if true, would make du Pont a candidate for

If du Pont had access to the White House, as he well may have,⁶⁶ he is a likely source for an apparent turnaround in Eisenhower's opinion, from one probably in favor of state financing of the highways, to one that supported a strong federal role.

D. The Governors Conference Becomes a Policy Broker

For years, the *local control* coalition was almost literally led by the Governors Conference (now the National Governors Association). The Governors Conference had a long history of opposing federal involvement in either financing or construction of highways,⁶⁷ and in particular had the habit of passing resolutions at its annual meetings calling for repeal of the federal gasoline tax.⁶⁸ For example, as late as 1953 Governor James F. Burns of South Carolina opened the annual meeting's first roundtable with a statement that included:

But the conditions that justified federal aid and federal control of highway construction no longer exist. If the federal government will withdraw its tax upon gasoline, leaving this field to the states, I am sure the states can build more highways for less money.⁶⁹

The roundtable over which Governor Burns presided eventually drafted a resolution calling for withdrawal of the federal government from gasoline taxation, and a corresponding reduction in federal aid for highways. The resolution was approved unanimously by all governors in the executive session.⁷⁰

"father of the Interstate" as much as Eisenhower. Riddick cites du Pont together with Secretary of Commerce Sinclair Weeks, White House Special Assistant Sherman Adams, and major campaign contributors as combined sources of Eisenhower's shift in opinion. Riddick, *supra* note 17, at 66.

⁶⁶ Frank Turner, an assistant to the BPR Commissioner at the time, says:

So having been and being the Republican National Committee Chairman for Delaware with a du Pont name, he had access to any political office he wanted, including the White House. The White House staffers knew that. So did the Secretary of Commerce, who had received his instruction to liquidate the Bureau of Public Roads and the Highways Program. He started out by firing MacDonald and got du Pont in his place. I'm sure he wasn't in on that selection, but du Pont started calling on Weeks and reminding him who was and so forth and the new result of it was that they set up the Clay Committee.

Interview by John T. Greenwood with Frank Turner, former Director, Bureau of Public Roads, in Arlington, Va. (Feb. 7, 1988) (on file at American Association of State Highway and Transportation Officials).

⁶⁷ GLENN E. BROOKS, *WHEN GOVERNORS CONVENE* 78 (1961).

⁶⁸ Richard F. Weingroff, *Federal Highway Administration, Highway History — Infrastructure, "Clearly Vicious As A Matter Of Policy": The Fight Against Federal-Aid*, pt. 4, available at <http://www.fhwa.dot.gov/infrastructure/hwyhist07a.cfm> (last visited Oct. 29, 2007).

⁶⁹ 1953 PROC. GOVERNORS CONF. 8.

⁷⁰ *Id.* at 194, 205.

At the July 1954 annual meeting of the Governors Conference, President Eisenhower was scheduled to speak, but had a death in his family and Vice President Richard Nixon took his place.⁷¹ Nixon delivered the address from Eisenhower's notes, which focused almost exclusively on describing a "grandplan" to expand the nation's highway system over ten years at a cost of \$50 billion.⁷² Eisenhower proposed that the plan feature "self liquidation" either through tolls or gas tax hikes; federal-state partnership in administration of the funds; and federal, centralized planning of the system, including federal financial guaranties when necessary.⁷³ Nixon put special emphasis on Eisenhower's specific, immediate request that the Governors Conference study his proposal and provide a recommendation for implementing it prior to the start of the 84th Congress.⁷⁴

The effect of the presidential message was remarkable. Earlier on the same day the governors were expressing their customary opinion that the federal government should withdraw from gasoline taxes and highway financing;⁷⁵ while the records of the next day reveal a shaken Conference trying, unsuccessfully, to come to grips with a powerful blow to that customary opinion.⁷⁶ All that could be concluded was that a study would be undertaken. Over the ensuing months, under the leadership of Governor Walter J. Kohler of Wisconsin, a special highway committee slowly came to accept that federal highway authority was here to stay.⁷⁷ The committee delivered a supportive report endorsing a federal system on December 3, 1954.⁷⁸ In this way the Governors Coalition, a former leader of one advocacy coalition, built a bridge to the other coalition and earned itself a listing as a policy broker in the ACF diagram.

Over the two months following the "grand plan" speech, Eisenhower formed two important committees. The President's Advisory Committee on a National Highway Program was headed by Lucius Clay, a former General who at the time was Chairman of the Board at ContinentalCan.⁷⁹ Clay chose four other members for the Advisory Committee: Steve Bechtel of Bechtel Corporation, Sloan Colt of Bankers' Trust Company, Bill Roberts of Allis-Chalmers Manufacturing Company, and Dave Beck of the International Brotherhood of

⁷¹ 1954 PROC. GOVERNORS CONF. 87.

⁷² See *Address of Vice President Richard Nixon to the Governors Conference*, 1954 PROC. GOVERNORS CONF. 87-96, available at <http://www.fhwa.dot.gov/infrastructure/rw96m.htm> (last modified Jan. 18, 2005).

⁷³ *Id.* at 90-92.

⁷⁴ *Id.* at 92.

⁷⁵ *Id.* at 31-41.

⁷⁶ *Id.* at 98-139.

⁷⁷ BROOKS, *supra* note 67, at 80.

⁷⁸ CLAY COMMITTEE REPORT, *supra* note 40, at 3; Riddick, *supra* note 17, at 42.

⁷⁹ ROSE, *supra* note 60, at 73.

Teamsters.⁸⁰ This committee became known among all the actors in the policy subsystem as the "Clay Committee."⁸¹

The second committee was an Interagency Committee including representatives of the secretaries of Defense, Agriculture, Treasury, and Commerce as well as the director of the Budget Bureau and chairman of the Council of Economic Advisers.⁸² In principle, its role was to supply concrete design and financing proposals to the Clay Committee for consideration.⁸³ In practice, the Interagency Committee was hampered by internal disagreements. One of its most active members, General John H. Bragdon (U.S. Army, ret.), was the head of the Public Works Planning Unit in the Council of Economic Advisers.⁸⁴ Bragdon had already been working heavily on the highway question prior to appointment of the Interagency Committee, and advanced very federally-centered plans that would allow the government to control highway building for the purpose of regulating the nation's economy.⁸⁵ Other members of the Interagency Committee, and General Clay, felt the level of federal control should be lower.⁸⁶ In the end, the Clay Committee went its own way with little formal participation from the Interagency Committee.⁸⁷

The Clay Committee's January 1955 report took a moderately federal viewpoint proposing continuation of the ABC system, but also giving the federal government "primary responsibility" for funding completion of the Interstate System by spending an additional \$25 billion, or \$2.5 billion per year for 10 years.⁸⁸ This basic recommendation would survive the legislative process over the ensuing two years: the final Highway Act of 1956 authorized almost exactly this amount.⁸⁹ However, the proposed method of financing became a magnet for criticism.⁹⁰ The Clay Committee proposed funding the system by creating an independent Highway Corporation that would issue \$25 billion in bonds over the course of ten years. The revenue for repaying the bonds was to come from

⁸⁰ Riddick, *supra* note 17, at 40.

⁸¹ John M. Martin, Jr., *The Proposed Federal Highway Legislation in 1955: A Case Study in the Legislative Process*, 44 GEO L.J. 221, 226 (1956).

⁸² CLAY COMMITTEE REPORT, *supra* note 40, at 2.

⁸³ ROSE, *supra* note 60, at 73.

⁸⁴ *Id.* at 71.

⁸⁵ *Id.* at 74-75.

⁸⁶ *Id.* at 75-76.

⁸⁷ *Id.* at 77.

⁸⁸ CLAY COMMITTEE REPORT, *supra* note 40, at 19.

⁸⁹ The final amount authorized was \$24.825 billion over 13 years. Act of June 29, 1956, Pub. L. No. 84-627, §108(b), 70 Stat. 374, 378 (1956).

⁹⁰ See, e.g., *National Highway Program: Hearings on S. 1048, S. 1072, S. 1160, and S. 1573 Before the Subcomm. of the S. Comm. on Public Works*, 84th Cong. 281-83 (1955) (testimony of Edwin C. Johnson, Governor of Colorado) [hereinafter *Senate Hearings 1955*]; *id.* at 368-77 (testimony of Sinclair Weeks, Secretary of Commerce); *id.* at 609-39 (testimony of Joseph Campbell, Comptroller General of the United States).

existing motor fuel and lubricating oil taxes over a thirty-year period ending in 1987.⁹¹ This financing mechanism was the outcome of the Clay Committee having its hands doubly tied. First, the Eisenhower administration was committed to lowering taxes. Second, the Administration was committed to balancing the budget, so that a simple increase in appropriations was also impossible.⁹² The unsecured Highway Corporation bonds provided financing while meeting the two constraints placed upon it by the Administration.

Many members of the *local control* coalition had been contesting the existing gasoline tax for years.⁹³ Though the Clay Committee's unusual financing mechanism can be ascribed to the Administration's constraints, it would function practically during the legislature's first session as an attempt avoid explicitly discussing taxation, which partially defined the *local control* vs. *federal control* standoff. As it turned out, simply sweeping a divisive issue under the rug was the wrong way to make the highway policy system shift.

II. LEGISLATIVE HISTORY, 1955

The new, 84th Congress convened on January 3, 1955. Congress was eager to find out whether the White House would endorse the Clay Committee's specific recommendations, perhaps in the State of the Union message to be given on January 6. Instead, Eisenhower waited until February 22 to deliver a special message on highways to Congress, one and a half months after the earliest hoped-for date.⁹⁴ Consistent with Eisenhower's personal tendency to favor international issues over domestic, the apparent cause of the delay was that "the full White House staff was devoting substantially all its time to the crisis over Formosa."⁹⁵

During the frustrating wait for action from the White House, Senator Gore, the chair of the Public Works Committee's subcommittee on Public Roads, introduced his own bill. Senate Bill 1048 proposed a "balanced program"⁹⁶ that called for doubling the annual authorizations normally made under the ABC system, with the greatest increase targeted at the Interstate System, and an increase of the federal match for Interstate System funds to 66⅔%. The bill would authorize a five-year period rather than the two years traditionally authorized by prior federal-aid highway acts.⁹⁷ Hearings on the Gore bill began on February 21, before the Administration had made any position statement on

⁹¹ CLAY COMMITTEE REPORT, *supra* note 40, at 25.

⁹² Martin, *supra* note 81, at 227.

⁹³ *Senate Hearings 1955*, *supra* note 90, at 255 (testimony of Robert J. Kennon, Governor of Louisiana).

⁹⁴ Martin, *supra* note 81, at 229-30.

⁹⁵ *Id.* at 230.

⁹⁶ *Id.* at 235.

⁹⁷ S. 1048, 84th Cong. § 2(a) (1955).

highway policy.⁹⁸

On February 22, the same day on which the President delivered his special message, Sen. Edward Martin (R-PA), together with cosponsors Sen. Francis Case (R-SD) and Sen. Dennis Chavez (D-NM), introduced Senate Bill 1160 to implement the Clay Committee's plan, as endorsed by the White House.⁹⁹ The Administration bill implemented a ten-year program for completion of the entire Interstate System, and created a Federal Highway Corporation authorized to issue \$21 billion in bonds that were to be repaid from proceeds of the existing, 2-cent, federal excise tax on motor fuel. The Federal Highway Corporation also had authority to settle disputes between BPR and state highway departments.¹⁰⁰ The Administration bill was significantly more adventurous than Gore's "balanced program."

The White House's late action, a day after hearings on highway policy had begun, meant that the Senators sponsoring the Administration bill had had no opportunity to review it. Senators Case and Chavez were present at the introduction, but provided disclaimers rather than support. Sen. Case stated, "I do not think I can say... that the bill expresses the personal views of any of the Senators because we have not had an opportunity to examine the proposal in detail."¹⁰¹ Sen. Chavez went even further: "I do not wish any inference to be drawn, in any way, shape, or form, that because I have joined the Senator from South Dakota I am in complete agreement with the proposals of the President."¹⁰²

The Senate subcommittee on Public Roads heard testimony from some eighty-five witnesses over the course of twenty-one days in February, March and April.¹⁰³ The characteristic issue of the prior years' political coalition alignment, state vs. federal primacy in project finance and administration, was clearly broken open by the Governors' Conference shift in position. James Nance, President of the Automobile Manufacturers Association, offered testimony typical of the Congressional hearings in the 84th Congress: "Historically our industry has always favored leaving the gas tax as a State proposition."¹⁰⁴ But when asked whether he supported the federal gasoline tax, he deferred to Congress: "We have no objection to [continuation of the federal gasoline tax], if Congress feels it is necessary."¹⁰⁵

Instead, attention shifted to a concern that new federal road taxes, if collected,

⁹⁸ Martin, *supra* note 81, at 230.

⁹⁹ 101 CONG. REC. 1898 (1955).

¹⁰⁰ S. 1160, 84th Cong. §§ 2, 102(d), 105 (1955).

¹⁰¹ 101 CONG. REC. 1898 (1955).

¹⁰² *Id.*

¹⁰³ *Senate Hearings 1955*, *supra* note 90, at I-IV.

¹⁰⁴ *Id.* at 492.

¹⁰⁵ *Id.*

be spent on roads rather than simply absorbed into the general budget. Governor Robert Kennon of Louisiana, chairman of the Governors' Conference, described this shift in concern on the fifth day of hearings:

The governors have traditionally taken the position that the gasoline tax is a highway users' tax and it is a field in which the Federal Government might never well have entered but left to the states . . . As to what their position is today . . . they have the feeling that if the Federal Government kept the gasoline tax, that it would not be unwise for the Federal Congress to at least use the gasoline tax toward roads.¹⁰⁶

Participants in the hearings discussed the method of federal financing as well. Witnesses argued either for "pay-as-you-go" tax financing or for credit financing. Although the issue came up consistently in the hearings, there was no clear consensus on the proper approach.¹⁰⁷ Nonetheless the Clay Committee's proposal for unsecured bonds came under heavy fire from advocates of both financing mechanisms, and before the hearings were over the Administration bill was considered by experienced observers to be dead in the Senate.¹⁰⁸

The Administration bill also elicited concern for the continued health of the existing ABC funding system. Gore's "balanced" bill ensured that continued attention would be paid to the existing highway systems, while the Administration bill addressed only the Interstate System, leaving many stakeholders' most important projects with no obvious destiny.¹⁰⁹ On May 13, the Committee on Public Works reported the Gore bill, with amendments. The majority opinion on the Administration's funding mechanism was unequivocal: "[T]he special corporate system of financing as proposed by S[enate Bill] 1160 is not conducive to sound fiscal management."¹¹⁰

Republicans on the Committee, excepting Sen. Case, vowed to take the fight for the Administration bill to the Senate floor,¹¹¹ where debate spanned from May 20 through 25. On May 25, a motion to substitute the Administration bill for the Gore bill was rejected in a roll-call vote of thirty-one to sixty.¹¹² The Gore bill was adopted by voice vote later that evening.¹¹³

In the House, historically meaningful action opened on the floor rather than in

¹⁰⁶ *Id.* at 255.

¹⁰⁷ Martin, *supra* note 81, at 238.

¹⁰⁸ *Id.* at 239.

¹⁰⁹ *Id.* at 237. An excellent example is the testimony of Keith Seeglmiller, executive secretary of the National Association of County Officials, *Senate Hearings 1955*, *supra* note 90, at 243-47.

¹¹⁰ S. REP. NO. 84-350, at 8 (1955).

¹¹¹ Martin, *supra* note 81, at 240. One of these Republicans was Sen. Prescott Bush (R-CT), grandfather of the current President George W. Bush. Adversarial positioning of the Gore and Bush families in the highway policy system is now being replayed in the climate policy system.

¹¹² 101 CONG. REC. 7018 (1955).

¹¹³ *Id.* at 7033.

committee. On February 24, when Representative Charles Buckley (D-NY) introduced the Administration bill as House Resolution 4260, Rep. Clarence Cannon (D-MO) moved to have the bill re-referred from the Committee on Public Works to the Appropriation committee because it involved both authorizations and appropriations. The motion was defeated 87 to 131,¹¹⁴ but Rep. Cannon had opened questions of jurisdiction that would haunt the process for the entirety of the first session.¹¹⁵

Hearings in the House Committee on Public Works covered twenty-six days in April, May, June, and July.¹¹⁶ The hearings largely echoed those of the Senate, but differed substantially in tone. Only the Administration bill was under consideration for most of the hearings, and the Administration's witnesses were much better prepared and received than in the Senate.¹¹⁷ Still, it was apparent from the representatives' questioning that the committee members intended to draft their own, alternative bill.¹¹⁸

As in the Senate, historical concerns with state vs. federal financing were replaced by a new focus of contention "on pay-as-you go" versus credit financing; there was even concern that a bill failing to designate a specific financing mechanism would be vetoed.¹¹⁹ Committee members were also concerned that an overly powerful Highway Corporation, as it was defined in the Administration bill, would remove too much responsibility from BPR.¹²⁰ This is consistent with the House Public Works Committee's historic tie to BPR through the iron triangle, and goes a long way toward explaining how the iron triangle exhibited both strength and malleability during the Interstate System political process. The Administration unwittingly gave the Public Works Committee an opportunity to protect BPR, through advancing their own proposal that likewise advanced the Interstate System but without threatening BPR's position in the triangle.

On June 28, long after the Senate had approved the Gore bill, Rep. Fallon, the chair of the Roads subcommittee, introduced House Resolution 7072.¹²¹ The bill built upon the now-evolved discussions of financing by proposing a portfolio of motor fuel, tire, and truck taxes to generate about \$24 billion over twelve years for construction of the Interstate System.¹²² Introduction of the Fallon bill precipitated two important events that would eventually lead to

¹¹⁴ *Id.* at 2029.

¹¹⁵ See *infra* note 123 and accompanying text.

¹¹⁶ *National Highway Program: Hearings on H.R. 4260 Before the H. Comm. on Public Works, 84th Cong., at 1 (1955).*

¹¹⁷ Martin, *supra* note 81, at 221.

¹¹⁸ *Id.* at 248-50.

¹¹⁹ *Id.* at 250.

¹²⁰ *Id.*

¹²¹ 101 CONG. REC. 9418 (1955).

¹²² Martin, *supra* note 81, at 251-52.

important political learning.

First, introduction of an explicit tax schema again brought up the sensitive topic of committee jurisdiction. Traditionally only the Ways and Means committee has jurisdiction over revenue legislation, so during the period between the Fallon bill's introduction and first hearing, representatives worked out a compromise in which a five-person, *ad hoc* subcommittee of the Ways and Means Committee would sit on the Public Works Committee hearings, but without voting privileges. The arrangement was not so well received by Ways and Means Committee members. At the first hearing in which both the Administration and Fallon bills were in play, Rep. Richard Simpson (R-PA), one of the two Republican members of the *ad hoc* subcommittee, declared for the record:

We emphatically, in the Republican membership of the Ways and Means Committee, wish to have it known that we believe the jurisdiction on revenue matters should be confined to the Ways and Means Committee, and we protest the fact that another committee has been given that authority We sit here unhappily without a right to vote on the matter of who is to pay the tax.¹²³

Second, Fallon's proposed tax hike elicited one of the largest, well-coordinated lobbying campaigns Congress had ever seen.¹²⁴ At the hearings, the large number of witnesses and observers was apparently a surprise to some of the Committee on Public Works members, who were unaccustomed to such attention.¹²⁵ Ironically, the crowd became so large at one point that the hearings needed to be moved to the Ways and Means Committee room.¹²⁶ The lobbying campaign was responsible for winning significant changes to the tax schema, which then became embodied in a revised Fallon bill, House Resolution 7474, that the Public Works Committee drafted in executive session after all hearings were completed, and reported on July 21.¹²⁷ Interestingly, the minority statement, rather than endorsing the Administration bill, echoed the two prevailing sentiments in the majority statement of the Senate report, namely that the Clay Committee's financing plan was unsound, and that passage of Interstate System financing isolated from ABC financing was unwise.¹²⁸ The dissenting congressmen found the tax plan contained in the revised Fallon bill hasty, however, and promised a more cautious substitute bill for consideration on the

¹²³ *National Highway Program: Hearings on H.R. 4260 and H.R. 7072 Before the H. Comm. on Public Works*, 84th Cong. 1104 (1955).

¹²⁴ Martin, *supra* note 81, at 252.

¹²⁵ *Id.* at 253.

¹²⁶ *Id.*

¹²⁷ H.R. REP. NO. 84-1336 (1955).

¹²⁸ *Id.* at 36. The dissenting congresspersons were Robert E. Jones, Jr. (D-AL), Frank E. Smith (D-MS), Theo Thompson (D-LA), and Iris Blitch (D-GA). *Id.* at 38.

House floor.¹²⁹

The revised Fallon bill made it to the floor on July 26 in a special rule that allowed substitution of House Resolution 7494, an Administration bill introduced by Representative George Dondero (R-MI) to represent the Clay Committee plan.¹³⁰ However, before a vote on substituting the Administration bill for the Fallon bill came to pass, Rep. Theo Thompson (D-LA) fulfilled the committee minority's promise to submit a more cautious bill with no new taxes, in the form of House Resolution 42.¹³¹ Representative Thompson motioned to substitute his own bill for the Administration bill, but the motion failed 89 to 178.¹³² This apparently minor vote is historically significant, because it signals the final blockade to any meaningful *local control* coalition: by leaving itself with the choice between the Administration and Fallon bills, the House focused attention on the choice between two major, federally-centered projects. The new choice was between two financing mechanisms (bonds vs. taxes) rather than between two loci of control (local vs. federal).¹³³

On July 27, a vote to substitute the Administration bill for the Fallon bill failed 178 to 184.¹³⁴ Later in the day, a second test — a vote to send the Fallon bill back to committee with instructions to substitute the Administration bill — also failed, 193 to 221.¹³⁵ But despite the two prior victories for Representative Fallon, the day ended with a surprise: the final vote to approve the Fallon bill failed by a wide margin: 123 to 292.¹³⁶ On August 2, the first session of the 84th Congress adjourned with no highway act in place.¹³⁷ Blame for the failure of the Fallon bill was placed squarely on the trucking, rubber and oil industries' intense lobbying effort.¹³⁸

¹²⁹ *Id.* at 38.

¹³⁰ 101 CONG. REC. 11,525 (1955).

¹³¹ *Id.* at 11,563-65.

¹³² *Id.* at 11,571. Technically, the Administration bill was not offered as a substitute to the Fallon bill but rather as an amendment, where the amendment consisted of striking the entirety of Fallon and replacing it with new text. This allowed Thompson to offer a substitute for the amendment, as opposed to a substitute for a substitute, which would not have been permitted. *Id.* at 11,565.

¹³³ I make this statement in support of my own analysis based on the ACF, yet Martin and Riddick both make fundamentally the same point. *Cf.* Martin, *supra* note 81, at 260; Riddick, *supra* note 17, at 67.

¹³⁴ 101 CONG. REC. 11,696 (1955).

¹³⁵ *Id.* at 11,717.

¹³⁶ *Id.* at 11,718.

¹³⁷ Riddick, *supra* note 17, at 62-63.

¹³⁸ Martin, *supra* note 81, at 262.

III. U.S. HIGHWAY POLICY SYSTEM AS OF JANUARY 1956

A. ACF Taxonomy

Having dispensed with local control options during the 1955 legislative process, the highway policy system entered the second session of the 84th Congress with a new coalition structure polarized on the bond-vs.-tax axis. The *bonding* coalition believed that federal debt was an important tool for highway financing, and was also characterized by the belief that highway financing should be integrated in a fluid way with the nation's macroeconomic conditions. The *pay-as-you-go* coalition believed that highway construction should induce no federal debt. The new alignment appears in Figure 2. The remaining fragments of the *local control* coalition were effectively sidelined, and do not appear in the new schema.

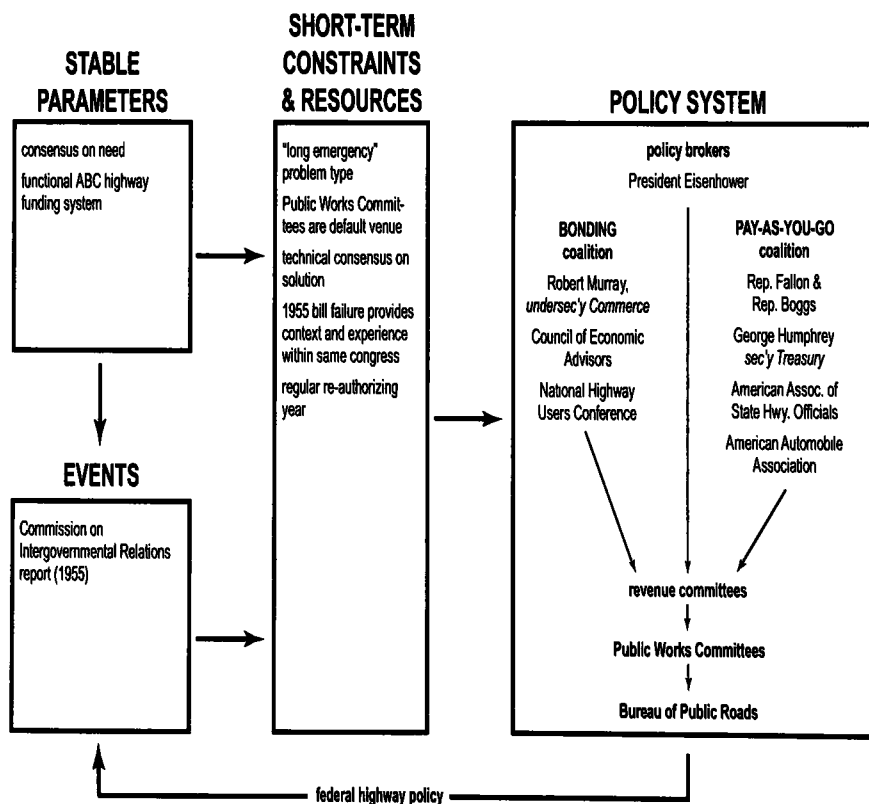


Figure 2 – The federal highway policy system as of January 1956, when the

second session of the 84th congress began. Listed coalition members are illustrative only.

The parties in the POLICY SYSTEM box are now realigned into the *bonding* and *pay-as-you-go* coalitions, per the 1955 developments discussed above.¹³⁹ The single pair of policymaking bodies in 1955, the House and Senate Public Works Committees, has been augmented with a second pair, the revenue committees. In the House, this is the Ways and Means Committee, and in the Senate, the Finance Committee. The involvement of the additional committees was a response to the complaints regarding jurisdiction raised during the first session.¹⁴⁰ The policy broker role at the top of the POLICY SYSTEM box is no longer occupied by the Governors Conference but rather by Eisenhower; I discuss this change separately in subsection C below.

SHORT-TERM CONSTRAINTS AND RESOURCES remain as in 1955, but are augmented by two new items. First, there is the obvious new resource of 1955's legislative experience. Second, 1956 brought with it the regular highway financing cycle. Federal aid to highways was habitually renewed for two years on even-numbered years, and the 1954 authorization followed this pattern¹⁴¹ so that new funding for the ABC system would have been on the agenda in 1956 anyway.

B. *The Kestnbaum Commission*

There was one new EVENT germane to the highway policy process that occurred between the beginnings of the first and second legislative sessions. On June 28, 1955 President Eisenhower transmitted to Congress the report of the Commission on Intergovernmental Relations.¹⁴²

Eisenhower had called for the creation of the commission shortly after entering office,¹⁴³ and Congress passed the required legislation in July 1953.¹⁴⁴ There was a widespread perception that the Commission "was being established to recommend a raid on the federal services and sources of revenue and a transfer of a number of governmental functions and taxes from the national government to the states."¹⁴⁵ Consistent with this impression, Eisenhower's first

¹³⁹ See *supra* pages 26-29.

¹⁴⁰ Riddick, *supra* note 17, at 68.

¹⁴¹ Federal Aid Highway Act of 1954, Pub. L. No. 83-350, 68 Stat. 70.

¹⁴² 101 CONG. REC. 9368 (1955).

¹⁴³ COMMISSION ON INTERGOVERNMENTAL RELATIONS, A REPORT TO THE PRESIDENT FOR TRANSMITTAL TO THE CONGRESS, at v (1955).

¹⁴⁴ An Act to Establish a Commission on Intergovernmental Relations, Pub. L. No. 83-109, 67 Stat. 145 (1953).

¹⁴⁵ William Anderson, *The Commission on Intergovernmental Relations and the United States Federal System*, 18 J. POL. 211, 223 (1956).

appointee to chair the Commission, Clarence E. Manion, was a devout advocate of states' rights.¹⁴⁶ But Manion's convictions proved sufficiently extreme to damage the efficacy of the organization, and in early 1954 Eisenhower took a second try and appointed Meyer Kestnbaum instead.¹⁴⁷ Kestnbaum became highly regarded by his colleagues and the commission thrived under him, to the point that it became popularly known as the "Kestnbaum Commission."¹⁴⁸

During Kestnbaum's tenure, the Commission witnessed a local-to-federal shift itself, similar to that experienced by the Governors Coalition but at a slower and subtler pace.¹⁴⁹ The Commission's final report did not call for the termination or transfer of a single federal-aid grant program.¹⁵⁰ In the particular case of the highway program, the report called for an expansion in grants.¹⁵¹ The recommendation was arrived at through a contentious process that reflected the Commission's shifting opinion on the federal-states continuum.¹⁵² As a result, several Commission members provided a minority opinion emphasizing that control of the highways should return to the states as soon as the emergency of their degraded state had been handled.¹⁵³ The Commission also recommended that the expansion of highway aid "be financed substantially on a pay-as-you-go basis and that Congress provide additional revenues for this purpose, primarily from increased motor fuel taxes."¹⁵⁴ Interestingly, there was no similar minority opinion on this recommendation,¹⁵⁵ consistent with the easy victory that the pay-as-you-go coalition would win in the next year's Congress, once the much more difficult task of moving political attention away from the federal-local impasse was achieved.

¹⁴⁶ *Id.* at 221.

¹⁴⁷ *Id.* at 221-22.

¹⁴⁸ Deil S. Wright, *The Advisory Commission on Intergovernmental Relations: Unique Features and Policy Orientation*, 25 PUB. ADMIN. REV. 193, 193 (1965).

¹⁴⁹ Anderson, *supra* note 145, at 223. Not entirely coincidentally, Kestnbaum himself was present at the 1954 Governors Conference, where Nixon's "grand plan" speech was delivered. He was an invited guest to the opening "Round Table on Intergovernmental Relations," and clearly foreshadowed the message that Nixon would deliver later that night in his answers to governors' questions. 1954 PROC. GOVERNORS CONF. 32.

¹⁵⁰ Delphis C. Goldberg, *Intergovernmental Relations: From the Legislative Perspective*, 416 ANNALS AM. ACAD. POL. & SOC. SCI. 52, 56 (1974).

¹⁵¹ COMMISSION ON INTERGOVERNMENTAL RELATIONS, *supra* note 143, at 216. The Kestnbaum Commission's support for project-specific grants was a reversal of the Hoover Commission's 1949 recommendation to supply broad aid to states. Goldberg, *supra* note 150, at 55.

¹⁵² Anderson, *supra* note 145, at 223-24.

¹⁵³ COMMISSION ON INTERGOVERNMENTAL RELATIONS, *supra* note 143, at 216 n.2.

¹⁵⁴ *Id.* at 219.

¹⁵⁵ There is a minority opinion on the pay-as-you-go recommendation, but it is one of detail that does not conflict with the substantive consensus on tax revenue. *See id.* at 219 n.4.

C. Eisenhower as the Passive Policy Broker

In Figure 1 the Governors Conference and the Interagency Committee are placed as policy brokers between the *local control* and *federal control* coalitions. The 1956 realignment around the financing issue as in Figure 2 points to a new policy broker role that catalyzes agreement between the two new coalitions. I assert that the most important policy broker role was played by Eisenhower, ironically through his disinterest in the details of highway policy.¹⁵⁶ Once the Clay Committee plan had failed in Congress, Eisenhower simply got out of the way: "[T]hough I endorsed General Clay's recommendation, I grew restless with the quibbling over methods of financing. I wanted the job done. This difference disposed of, the Federal Aid Highway Act . . . moved quickly through the Congress."¹⁵⁷ Secretary Weeks put the story in particularly few words when he was interrogated by Rep. Thomas Boggs (D-LA) in February of 1956:

Mr. BOGGS. Well, the President of the United States has recommended to pay as you go, as I understand it

Secretary WEEKS. I think the suggestion was made to him that pay as you go might be in order, and I believe he acquiesced in that method of handling it. I do not know that he recommended it. I should have to look up the record.¹⁵⁸

With the Administration no longer attempting to direct the process, the actors traditionally comprising the iron triangle were free to rally around the suggestions of the widely respected Kestnbaum Commission and create a well-coordinated process toward a solution.

IV. LEGISLATIVE HISTORY, 1956

Eisenhower's willingness to accept a pay-as-you-go solution was conveyed

¹⁵⁶ Challenging Eisenhower's "father of the Interstate" status may be perceived as heretical. I do acknowledge his drive to get an Interstate System built, but assert that he had little interest in designating the policy necessary to do so. The extent to which other, especially international, issues dominated Eisenhower's interest is especially clear from his memoirs: the published volume covering the four years 1953-1956 numbers some 600 pages; less than five discuss the nation's highway system. See EISENHOWER, *supra* note 55 at 501-02, 547-49.

¹⁵⁷ *Id.* at 548. Following the phrase "This difference disposed of," Eisenhower includes the following footnote: "The bill as enacted included a provision, which I approved, for financing the interstate system out of revenues from increased taxes, including taxes on gasoline, diesel oil, tires, trucks, buses, and trailers." *Id.* at 548 n.1.

¹⁵⁸ *Highway Revenue Act of 1956: Hearings Before the Committee on Ways and Means, House of Representatives on H.R. 9075, 84th Cong. 187 (1956) [hereinafter Committee on Ways & Means Hearings].*

through his staff and to Congress quickly,¹⁵⁹ so lawmakers had opportunity to plan a new strategy accordingly. The result was an extraordinarily orderly sequence of legislative activity in which the House acted prior to the Senate per the constitutional requirement that revenue legislation begin in the House.¹⁶⁰ As well, two complementary bills deliberately segregated the hot financing issues from the less contentious details of Interstate System specification and authorization. House Resolution 8836 was introduced on January 26 by Representative Fallon and assigned to the Committee on Public Works;¹⁶¹ it resembled the prior year's Fallon bill but with the tax provisions removed.¹⁶² House Resolution 9075 was introduced on February 6 by Representative Boggs and assigned to the Committee on Ways and Means;¹⁶³ it contained the revenue (tax) measures designed to fund Fallon's authorizing bill.¹⁶⁴

The Committee on Ways and Means held hearings on the revenue bill over six days in February,¹⁶⁵ and issued its report on March 19.¹⁶⁶ The revenue bill as reported contained a noteworthy amendment championed by Republican members of the Committee, in which a highway trust fund was established.¹⁶⁷ The trust fund would receive all road user taxes (including the existing motor fuel tax) and dispense these only for the purpose of administering and building highways.¹⁶⁸ The intention of the trust fund was to answer the principal concern raised by the anti-tax lobby in the first session: that road user taxes would be diverted toward non-road purposes. Representative Boggs, one of the Ways & Means committee members who had sat in on the Public Works hearings the year before, explained it on the House floor:

[V]irtually every highway user group — from the American Automobile Association to the various trucking organizations — has for years recommended that the Federal excise taxes levied upon highway users be dedicated and set aside for the purpose of financing the improvement and extension of the Federal highway system. This recommendation is premised upon the intense feeling of highway groups that it is only fair to utilize the Federal excise taxes on gasoline, diesel fuel, special motor fuel, lubricating oil, passenger automobiles, trucks, buses and trailers,

¹⁵⁹ *Id.* at 7.

¹⁶⁰ U.S. CONST. art. I, § 7.

¹⁶¹ 102 CONG. REC. 1417 (1956).

¹⁶² Compare H.R. 8836, 84th Cong. (1956) with H.R. 7474, 84th Cong. (1955).

¹⁶³ 102 CONG. REC. 2133 (1956).

¹⁶⁴ H.R. 9075, 84th Cong. (1956).

¹⁶⁵ *Committee on Ways & Means Hearings*, *supra* note 158.

¹⁶⁶ H.R. REP. NO. 84-1899 (1956).

¹⁶⁷ Nine Republican committee members claim responsibility for the amendment in a Supplemental View offered in the report. The nine representatives are Reed (NY), Jenkins, Simpson (PA), Kean, Mason, Byrnes, Sadlak, Baker and Curtis (MO). *Id.* at 46.

¹⁶⁸ *Id.* at 45.

automobile parts and accessories, and tires and tubes, for the purpose of constructing roads.

[The highway trust fund] will carry this recommendation into effect.¹⁶⁹

The Committee on Public Works held hearings on the authorizing bill over seven days in February and March.¹⁷⁰ Public Works combined its amended version of the authorizing bill, with Ways & Means' amended version of the revenue bill, to create Title I and Title II of a single, clean, combined bill, House Resolution 10660. The combined bill was reported out on April 23,¹⁷¹ and on April 27, after two days of debate, passed the House floor 388 to 19.¹⁷² The combined bill then went to the Senate.

The Senate Public Works Committee filed its report on an amended authorizing title without holding hearings on May 10.¹⁷³ The Senate Finance Committee held hearings on the revenue title on May 17 and 18,¹⁷⁴ and, though they were largely an abbreviated repetition of the Ways & Means hearings, they included one important, new development. Secretary of the Treasury George Humphrey proposed an amendment to restrict spending from the highway trust fund to the projected balance in the same year,¹⁷⁵ which later became known as the "pay-as-you-go" restriction or the "Byrd amendment" after Senator Harry Byrd (D-VA) who chaired the committee and endorsed the amendment.¹⁷⁶ The Byrd amendment, by severely limiting the trust fund's ability to borrow, firmly underlined the policy system's need to abandon a credit pathway. The Finance Committee reported out on May 25.¹⁷⁷

On May 29 the Senate finished two days of floor debate with a voice vote passing an amended version of the combined bill.¹⁷⁸ A House-Senate conference committee reported out on June 25,¹⁷⁹ on June 26 the House passed the conferenced bill on a voice vote,¹⁸⁰ and the Senate on a roll-call vote of 89 to

¹⁶⁹ 102 CONG. REC. 7150-51 (1956). One highway user group, the National Highway Users Conference, was even organized per se around this issue. SEELY, *supra* note 26, at 210.

¹⁷⁰ *National Highway Program, Federal Aid Highway Act of 1956: Hearings on H.R. 8836 Before the Subcomm. on Roads of the H. Comm. on Public Works*, 84th Cong. (1956).

¹⁷¹ H.R. REP. NO. 84-2022 (1956).

¹⁷² 102 CONG. REC. 7221 (1956).

¹⁷³ S. REP. NO. 84-1965 (1956). The committee in fact substituted the prior year's Gore bill for Title I of H.R. 10660, but amending the Gore bill to fund a 13-year schedule consistent with the House's version. 102 CONG. REC. 9069-70 (1956).

¹⁷⁴ *Highway Revenue Act: Hearings on H.R. 10660 Before the S. Comm. on Finance*, 84th Cong. (1956).

¹⁷⁵ *Id.* at 71.

¹⁷⁶ Riddick, *supra* note 17, at 72.

¹⁷⁷ S. REP. NO. 84-2054 (1956).

¹⁷⁸ 102 CONG. REC. 7221 (1956).

¹⁷⁹ H.R. CONF. REP. NO. 84-2436 (1956).

¹⁸⁰ 102 CONG. REC. 11,004 (1956).

- 1.¹⁸¹ Eisenhower signed the Highway Act of 1956 three days later.¹⁸²

V. U.S. CLIMATE POLICY SYSTEM *CIRCA* 2007

The Advocacy Coalition Framework has been applied to the U.S. climate policy system once before, in a 2005 dissertation by Granville Sewell.¹⁸³ Sewell surveyed the global climate policy system and sampled policy subsystems in a few countries, including the United States. He overlaid the same adversarial coalition pair on all of the systems, which consisted of an *economic growth* coalition and a *precautionary* coalition. I adopt this coalition structure, and use it to classify a few of the actors in the U.S. policy debate per the ACF diagram in Figure3.

¹⁸¹ *Id.* at 10,969.

¹⁸² *Id.* at 12,336.

¹⁸³ Granville C. Sewell, *Actors, Coalitions and the Framework Convention on Climate Change* (June 28, 2005) (unpublished Ph.D. dissertation, Massachusetts Institute of Technology), *available at* <http://hdl.handle.net/1721.1/33743> (last visited Oct. 29, 2007).

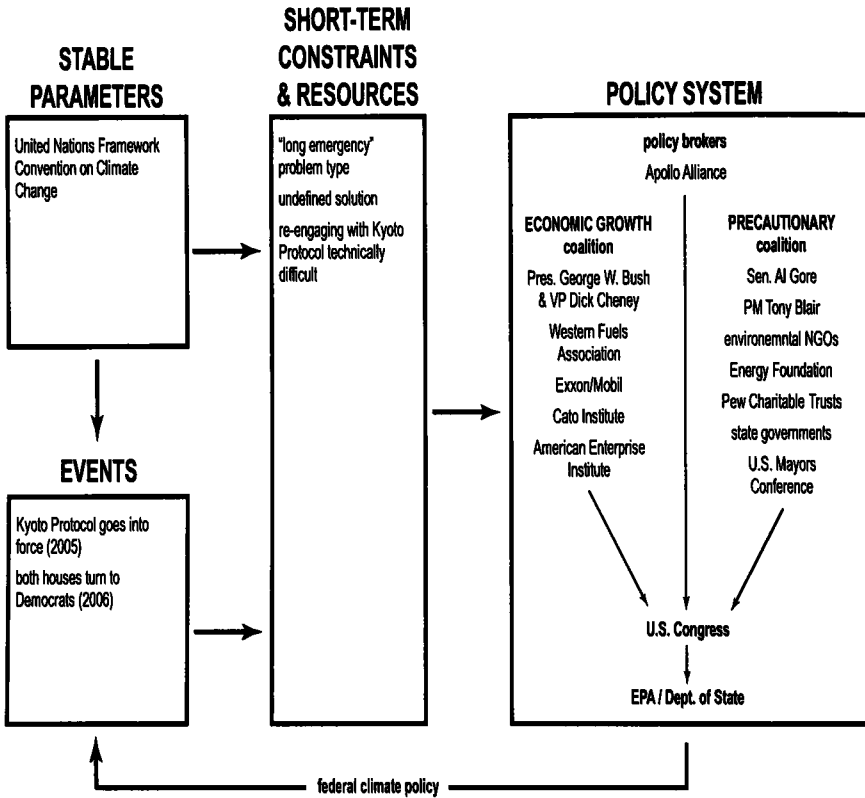


Figure 3 – The climate policy system *circa* January 2007. Listed coalition members are illustrative only. IPCC is the Intergovernmental Panel on Climate Change; NGOs are non-governmental organizations; RGGI is the Regional Greenhouse Gas Initiative.

The climate policy system in 2007 is relatively younger than the highway policy system was in 1955, which began assuming its contemporary form sixty-two years earlier when BPR's progenitor, the Office of Roads Inquiry, was created in 1893.¹⁸⁴ In contrast, the climate policy system is only about 20 years old, dating back to 1987. In that year Senators Joseph Biden (D-DE) and Claiborne Pell (D-RI) sponsored the Global Climate Protection Act,¹⁸⁵ which passed Congress and placed responsibility for GHG policy development on the

¹⁸⁴ See *supra* note 50.

¹⁸⁵ S. 420, 100th Cong. (1987). Though not a sponsor, Sen. Albert Gore, Jr. (D-TN) was also party to originating and stewarding the Global Climate Protection Act. 133 CONG. REC. 2326 (1987); Sewell, *supra* note 183, at 139.

Environmental Protection Agency ("EPA") and the Department of State.¹⁸⁶

In the years since Congress passed the Global Climate Protection Act, the *economic growth* and *precautionary* coalitions have pulled control of U.S. climate policy to various agencies and White House bureaus, so that today there is still no cohesive, domestic GHG policy.¹⁸⁷ The tug-of-war over jurisdiction and the issue's short history have conspired to leave no clear venue for U.S. climate change policy development. There is no lead agency, and no Congressional committee of first resort. Recent Senate hearings on climate change have been held in the Committee on Environment and Public Works, the Committee on Energy and Natural Resources, the Foreign Relations Committee, and the Committee on Commerce, Science and Transportation.¹⁸⁸ In the House, hearings have been held before the Committee on Science, the Committee on Energy and Commerce, and the Committee on Government Reform.¹⁸⁹ Hence, in the POLICY SYSTEM box of Figure 3, the regulatory entity on which the two advocacy coalitions act is labeled simply as "U.S. Congress," for lack of any more precise, available definition. The administrative entity on which the Congress acts is indicated as "EPA / Dept. of State" reflecting the jurisdiction legislated in 1987, though in practice Congress is not directing climate policy in either agency in a continuing, substantive way.

The 2007 taxonomy finds the states clearly associated with the liberal coalition. Ten eastern states have formed the Regional Greenhouse Gas Initiative ("RGGI"), a regulatory partnership featuring a cap-and-trade program;¹⁹⁰ five western states recently pledged to implement a second regional cap-and-trade schema as well.¹⁹¹ These state partnerships are attempts to substitute for an absence of federal regulation; simultaneously, states are also attempting to force federal action with legal initiatives. For example, attorneys general from twelve states joined in a successful bid to require EPA to include carbon dioxide among pollutants eligible for regulation by the Clean Air Act.¹⁹²

¹⁸⁶ Global Climate Protection Act of 1987, Pub. L. No. 100-204, Title XI, 101 Stat. 1407 (1987). Earlier legislation exists, but addresses climate generally without identifying global warming mitigation as a specific goal. National Climate Program Act, Pub. L. No. 95-367, 92 Stat. 601 (1978).

¹⁸⁷ Alan D. Hecht & Dennis Tirpak, *Framework Agreement on Climate Change: A Scientific and Policy History*, 29 CLIMATIC CHANGE 371, 393-96 (1995); Sewell, *supra* note 183, at 139-55.

¹⁸⁸ American Geological Institute, *Government Affairs Program*, <http://www.agiweb.org/gap/> (last visited Oct. 29, 2007).

¹⁸⁹ *Id.*

¹⁹⁰ Press Release, Office of the Governor, State of Md., Governor Martin O'Malley Signs Greenhouse Gas Agreement, Climate Change Executive Order (Apr. 20, 2007), available at <http://www.gov.state.md.us/pressreleases/070420.html> (last visited Oct. 29, 2007).

¹⁹¹ Juliet Eilperin, *Western States Agree to Cut Greenhouse Gases*, WASH. POST, Feb. 27, 2007, at A08.

¹⁹² *Massachusetts v. Environmental Protection Agency*, 127 S. Ct. 1438 (2007). The intention on the part of the plaintiffs to invoke federal action is stated perfectly in a news article reporting on

The behavior of the states in the climate policy system, expressed by legal actions against the federal government and regional agreements independent of it, contrasts strongly with the Governors' Conference of the 1950s working as a single body to reach consensus with the federal government. Today's extremely strong identification with the liberal coalition disables a shift into a policy broker role such as that played by the Governors Conference, and a generally "poisonous" relationship between governors and Washington means the National Governors Association is unlikely to work closely with the federal government on this issue.¹⁹³

The STABLE PARAMETERS rubric includes just one item, the UN Framework Convention on Climate Change, which was signed and ratified by the United States in 1992,¹⁹⁴ and which appears uncontested even though it is the supporting convention of the Kyoto Protocol. The presence of only one identifiable stable parameter once again reflects the relatively young state of the climate policy system.

The Kyoto Protocol went into force in 2005 without U.S. ratification,¹⁹⁵ and therefore appears as one of the EVENTS outside the policy subsystem.¹⁹⁶ The global cooperation implied by the entry into force of the Protocol, is putting international pressure on the United States to enact equivalent climate policy, and is also resulting in domestic pressure via non-governmental organizations ("NGOs") and some international corporations that would prefer a globally uniform regulatory environment.¹⁹⁷ The other significant event is the simultaneous turning of both Congressional houses from Republican to Democratic control in a mid-term election, which happened in the 1954 election

the decision: "The ruling could also lend important authority to efforts by the states either to force the federal government to reduce greenhouse gas emissions or to be allowed to do it themselves." Robert Barnes & Juliet Eilperin, *High Court Faults EPA Inaction on Emissions*, WASH. POST, Apr. 3, 2007, at A01.

¹⁹³ David S. Broder, *Contempt for Congress*, WASH. POST, Aug. 8, 2006, at A21. In profound contrast to the Governors Conference habit of inviting the President to speak at its annual summer meetings in the 1950s, in 2006 "[n]ot a single figure from Capitol Hill was invited to address the meeting. . . ." *Id.*; see also Paul L. Posner, *The Politics of Preemption: Prospects for the States*, 38 PS: POL. SCI. & POL. 371 (2005) (confirming weakened political relationship between federal and state governments generally); Dale Krane, *The Middle Tier in American Federalism: State Government Policy Activism During the Bush Presidency*, 37 PUBLIUS 453 (2007) (documenting alienation of states under Bush presidency in particular).

¹⁹⁴ United Nations Framework Convention on Climate Change, May 9, 1992, S. TREATY DOC. No. 102-38 (1992), 1771 U.N.T.S. 107.

¹⁹⁵ Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, 37 I.L.M. 22 (entered into force Feb. 16, 2005).

¹⁹⁶ Figure 3, *supra* p. 88.

¹⁹⁷ Henrik Selin & Stacy D. VanDeveer, *Political Science and Prediction: What's Next for U.S. Climate Change Policy?*, 24 REV. POL'Y RES. 1, 2, 12-17 (2007); cf. Guri Bang et al., *Future U.S. Climate Policy: International Re-engagement?*, 6 INT'L STUD. PERSP. 285, 286, 297-98, 300-01 (2005) (confirming pressures but forecasting continued policy stasis).

of the 84th congress, as well.¹⁹⁸ Comparisons with Figure 1 imply that the climate policy system EVENTS box might acquire a correlate of 1953's Korean War cease-fire, at whatever point the current conflict in Iraq ceases to draw substantial funds from the federal budget.¹⁹⁹

The SHORT-TERM CONSTRAINTS AND RESOURCES box lists "'long emergency' problem type", as do the ACF diagrams for the highway policy system.²⁰⁰ In 1955, the nation's uncoordinated system of highways was perceived as being in a slowly deteriorating state, unable to keep up with the growth in commercial and private vehicle traffic.²⁰¹ There was no obvious threshold beyond which the problem would suddenly become an emergency, but there was a sense of impending economic harm.²⁰² Climate change also plays out on a timescale of many years, with no obvious threshold beyond which the problem would suddenly become an emergency.²⁰³ However, this time the impending harm is likely irreversible, which lends an additional sense of urgency beyond what was felt regarding the highways.

The item "undefined solution" contrasts with "technical consensus on solution" in Figures 1 and 2.²⁰⁴ While the Federal-Aid Highway Act of 1944 and subsequent state plans defined the routes of the Interstate System by 1947, there is no similar definition of the Clean Energy Project.²⁰⁵

The final item in the SHORT-TERM CONSTRAINTS AND RESOURCES

¹⁹⁸ Dan Balz, *Democrats Take House*, WASH. POST, Nov. 8, 2006, at A1 (reporting 2006 House election); *Democrats Take Control of Senate as Allen Concedes to Webb in Va.*, WASH. POST, Nov. 10, 2006, at A1 (reporting 2006 Senate election); CONGRESS AND THE NATION, *supra* note 32, at 21 (reporting 1954 election)

¹⁹⁹ One reviewer of this paper, Anita Landa, has pointed out that the onset of the Iraq conflict might also be considered a GHG policy-relevant EVENT since it is perceived by many to be motivated by American dependence on oil, a GHG-intensive fuel.

²⁰⁰ Figure 3, *supra* p. 88; compare *id.* with Figure 1, *supra* p. 65 and Figure 2, *supra* p. 82.

²⁰¹ O. H. Brownlee & Walter W. Heller, *Highway Development and Financing*, 46 AM. ECON. REV. 232, 232-33 (1956).

²⁰² 1954 PROC. GOVERNORS CONF., *supra* note 72, at 90-91.

²⁰³ In any case, no such threshold is known. Climate scientists have characterized various threshold events that might be related to a fairly specific level of GHG concentration such as disintegration of the West Antarctic and/or Greenland ice sheets, Michael Oppenheimer, *Defining Dangerous Anthropogenic Interference: The Role of Science, the Limits of Science*, 25 RISK ANALYSIS 1399, 1401-04 (2005), or shutdown of the thermohaline circulation, Thomas Bruckner & Kirsten Zickfeld, *Low Risk Emissions Corridors for Safeguarding the Atlantic Thermohaline Circulation*, presented at Expert Workshop on Greenhouse Gas Emissions and Abrupt Climate Change: Positive Options and Robust Policy, Paris at 2-4 (Sep. 30, 2004), available at <http://www.iut-berlin.de/~bruckner/Publications/paris04.pdf> (on file with author).

²⁰⁴ Figure 3, *supra* p. 88; compare *id.* with Figure 1, *supra* p. 65 and Figure 2, *supra* p. 82.

²⁰⁵ The Apollo Alliance has issued an outline for a Clean Energy Project. Apollo Alliance, THE APOLLO PROJECT: A BOLD TEN-POINT PLAN FOR ACHIEVING AMERICA'S ENERGY INDEPENDENCE (2003), available at www.apolloalliance.org/document.cfm?documentID=109 (last visited Oct. 29, 2007). However, I did find there to be no evidence of uniform endorsement of this particular plan, as there was of the Interstate System plan.

box indicates that re-engaging with the Kyoto Protocol would be technically very difficult. The Kyoto Protocol requires U.S. emissions to average seven percent below 1990 levels during the five-year commitment period of 2008-2012.²⁰⁶ 1990 emissions were 5.2 billion metric tons of CO₂-equivalent,²⁰⁷ which makes the target rate 4.8 billion metric tons per year. Meanwhile, by 2004, U.S. emissions rose to 6.3 billion metric tons,²⁰⁸ more than thirty percent above the target. The implication for the policy system is that, as far as setting quantitative GHG emissions targets goes, the U.S. may need to go it alone since the window for entry into substantive international cooperation has passed.²⁰⁹

VI. APPLYING THE 1955-1956 POLITICAL SHIFTS TO CLIMATE POLICY

Five identifiable episodes of political learning²¹⁰ characterize the policy system shift from 1955 to 1956 that enabled passage of the Highway Act of 1956 on the second try. Each of these episodes of political learning finds a potential correlate in the 2007 political environment surrounding climate change. In the following five subsections, I try to draw a prescriptive lesson for 2007 from each of the five 1955-1956 political shifts.²¹¹

A. *Realign Coalitions Away from the Conservative-vs.-Liberal Polarization*

When 1955 opened, the liberal, *federal control* coalition faced a traditional

²⁰⁶ Kyoto Protocol, *supra* note 195, art. 3, para. 7.

²⁰⁷ INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS, *supra* note 10, at 2-6 tbls.2 & 3.

²⁰⁸ *Id.*

²⁰⁹ See Selin & VanDeveer, *supra* note 197, at 19. Selin & VanDeveer actually go a step further, intimating that domestic policy is a prerequisite to international reengagement. *Id.* at 22.

²¹⁰ I hope political scientists will forgive my loose application of the term "political learning." Using much more precision, Peter May has proposed that "[p]olitical learning entails lessons about policy processes and prospects. Policy advocates become more sophisticated in advancing problems and ideas by learning how to enhance the political feasibility of policy proposals." Peter May, *Policy Learning and Failure*, 12 J. PUB. POL'Y 331, 332 (1992). In contrast, "[i]nstrumental policy learning entails lessons about the viability of policy instruments or implementations designs." *Id.* The five shifts I outline here include instances of both.

²¹¹ By focusing exclusively on political learning between 1955 and 1956, I exclude one possible lesson from the history that deserves mentioning. This is the effort to make taxation more politically tenable by renaming it "pay-as-you-go." Though the *pay-as-you-go* coalition was advocating a tax-based financing mechanism, the nomenclature put the commonsense wisdom of avoiding debt up front, putting the bonding coalition on the defense. The "pay-as-you-go" term probably also widened the variety of actors that felt comfortable positioning themselves in this coalition.

A 1993 attempt by the Clinton administration to legislate a "Btu tax" was destroyed by a powerful anti-tax lobby, a failure that is still fresh in the memories of climate policy advocates. Thomas P. Lyon, *Voluntary versus Mandatory Approaches to Climate Change Mitigation*, RESOURCES FOR THE FUTURE, Feb. 2003, 11-12, <http://www.rff.org/rff/Documents/RFF-IB-03-01.pdf>. I argue later that bringing a carbon or GHG tax into the discussion has merit; if climate advocates agree they may wish, however, to give the tax approach a different name analogous to "pay-as-you-go."

conservative-liberal standoff. The conservative side opposed federal spending; the liberal side supported it.²¹² The Clay Committee, in hindsight, represents an attempt at compromise by proposing federal-level spending while neither imposing taxes nor accumulating debt.²¹³ But the 84th Congress, during its first session, quickly and correctly recognized the Clay Committee's Highway Corporation scheme as an attempt to sweep a major revenue issue under the rug. Acknowledging the revenue issue allowed political actors to shift into a new pair of coalitions that took opposing views on *how* to produce the revenue.²¹⁴

One fundamental feature of the ACF beyond its taxonomic system is the hypothesis that political actors change their policy core beliefs extremely rarely, especially those related to the traditional liberal-conservative divide such as federalism or anti-federalism.²¹⁵ But secondary beliefs, for example financing mechanisms, are more malleable.²¹⁶ By shifting the focus of discussion to bonding vs. taxation, rather than local control vs. federalism, the coalition shift that occurred in response to the Clay Committee's scheme presented highway policymaking choices that were less morally loaded for the participants.

Riddick's analysis is that the coalition realignment allowed successful resistance to the anti-tax lobbying effort, by organizing tax proponents into one coalition able to coordinate efforts.²¹⁷ The importance of this aspect of the coalition realignment gains weight when one considers the intensity of anti-tax lobbying experienced during 1955:

From the day of introduction of H.R. 7072, there occurred one of the most intense pressure campaigns observed on Capitol Hill for many years. The trucking, oil, rubber, and certain allied interests, it appeared, worked unceasingly to arouse sentiment against the tax provisions. This campaign moved with increasing intensity until the revised tax bill was defeated on the floor of the House. It has been estimated that more telegrams and letters were received by members of Congress during this period than at any time since the dismissal of General MacArthur, which was supposed to have set a record.²¹⁸

The *economic growth* coalition in the climate policy system and the *local control* coalition in the 1955 highway policy system are conservative correlates: they both favor minimizing federal involvement in the respective policy system. 2007's *economic growth* coalition is opposed to federal spending on GHG

²¹² See *supra* notes 56, 67-70 and accompanying text.

²¹³ See *supra* note 92 and accompanying text.

²¹⁴ See *supra* Figure 2 and accompanying text, page 82.

²¹⁵ Sabatier & Weible, *supra* note 19, at 194-96.

²¹⁶ *Id.*

²¹⁷ Riddick, *supra* note 17, at 65.

²¹⁸ Martin, *supra* note 81, at 252.

regulation (or any government's spending on GHG regulation), and 1955's *local control* coalition was opposed to federal spending on the highway system. 2007's *precautionary* coalition is an explicit supporter of federal control, though it often does not acknowledge that it may be a supporter of federal *spending*; 1955's *federal control* coalition was likewise an explicit supporter of federal control, without necessarily acknowledging support of federal spending.

Aggressively reducing GHG emissions requires spending money on engineering and commercializing alternative energy technologies.²¹⁹ Though GHG emissions reduction is usually perceived as a traditional environmental regulation, in fact it can only reasonably be enacted as a Clean Energy Project. Focusing the debate on *how* that project will be financed moves the debate away from the morally loaded domains of federalism and economic freedom. Note how important it is for GHG regulation to be properly portrayed as a megaproject, for the realignment to happen. If GHG regulation is unimaginatively portrayed only as regulation, there is, by definition, no way to form coalitions on any axis other than conservative vs. liberal,²²⁰ a core policy value not amenable to change. In contrast, portraying GHG regulation as a Clean Energy Project allows the finer and less morally loaded detail of revenue and spending mechanisms to dominate the discussion.

Discussion thus far regarding GHG regulation has revealed a straightforward, obvious axis for coalition construction surrounding revenue mechanisms: price vs. quantity controls, often expressed as tax vs. cap-and-trade controls.²²¹ The *economic growth* coalition opposes constraining a free-market economy.²²² By choosing to make arguments of economics the centerpiece of its resistance, the conservative coalition has set a perfect stage for realignment into *price* and *quantity* coalitions that would bring political conflict into the productive, relatively objective domain of economics.

B. Look for the Right Policy Broker

The inconclusive but very productive activities in 1955 were profoundly enabled by the 1954 move of the Governors Conference from the *local control* coalition to a policy broker position.²²³ In 2007, the policy broker highlighted

²¹⁹ See INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CONTRIBUTION OF WORKING GROUP III TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE: SUMMARY FOR POLICYMAKERS, 12-13 (2007), <http://www.ipcc.ch/SPM040507.pdf> (last modified Oct. 31, 2007).

²²⁰ "Conservative vs. liberal" is perhaps too broad a characterization. I really mean "less federal government involvement vs. more federal government involvement," but use "conservative vs. liberal" throughout this article for brevity and readability.

²²¹ Hepburn, *supra* note 3, at 228.

²²² In economic terms, the *economic growth* coalition wishes to minimize deadweight loss.

²²³ See *supra* Section II.D, pages 72-75; *supra* notes 102-104 and accompanying text.

by the Apollo Alliance is labor; as of this writing the project boasts endorsements from thirty-five labor unions.²²⁴ But labor was not previously active in either coalition, so its presence in the 2007 ACF diagram does not present a *shift* by one of the prior coalition actors the way that the Governors Conference does in the 1955 taxonomy.

The *economic growth* coalition has been led by fossil fuel-allied industries, in particular the oil, coal and automotive industries.²²⁵ A publicly visible shift of these leaders to a more neutral position would be the true equivalent of the Governors Conference move, and early indications of such a move are visible. For example the Global Roundtable on Climate Change, formed in 2004 by the Earth Institute at Columbia University, brings together advocacy and industrial groups concerned about climate change.²²⁶ It is an international group, but notably includes a few large American companies formerly associated with the *economic growth* coalition such as Dow Chemical and Ford Motor Company, and surprising international industry advocates like the World Coal Institute and World Petroleum Council.²²⁷ In February 2007 the Global Roundtable released a joint statement endorsing ambitious, global GHG regulation through mid-century.²²⁸ Though only a few American, fossil fuel-associated companies are part of the Roundtable, a more complete endorsement of a Clean Energy Project by industry could play a powerful catalyzing role as the Governors Coalition did at the end of 1954.

By 1956, the impact of the Governors Conference shift had played out and the policy broker role moved to the White House. Eisenhower's explicit flexibility gave the legislature *permission* to solve the problem as it best saw fit. Today's White House certainly has not given permission for GHG regulation, but its power as an opponent may be exaggerated nearly as much in contemporary reporting, as Eisenhower's action as a proponent is exaggerated in oral history. In the waning days of an eight-year administration struggling to leave a positive legacy, President Bush may find giving Congress permission to legislate a visionary Clean Energy Project to be one of the most positive, lasting

²²⁴ Apollo Alliance, The Apollo Alliance Has Been Endorsed by the Following Labor Unions, available at http://www.apolloalliance.org/about_the_alliance/who_we_are/labor.cfm (last visited Oct. 29, 2007).

²²⁵ The Global Climate Coalition, a leader in the *economic growth* coalition from 1989 to the late 1990s, included representatives from the American Petroleum Institute, Amoco, Arco, Phillips, Texaco, Shell, BP, the Association of International Automobile Manufacturers, the Motor Vehicle Manufacturers Association, the American Mining Congress, the National Coal Association, and others. JEREMY LEGGETT, THE CARBON WAR: GLOBAL WARMING AND THE END OF THE OIL ERA 10-11 (2001).

²²⁶ Global Roundtable on Climate Change, *About the Global Roundtable on Climate Change*, <http://www.earthinstitute.columbia.edu/grocc/about.html> (last visited Nov. 6, 2007).

²²⁷ Global Roundtable on Climate Change, *Roundtable Participants*, <http://www.earthinstitute.columbia.edu/grocc/participants.html> (last visited Oct. 29, 2007).

²²⁸ Matthew Dalton, *Group Seeks Greenhouse-Gas Cuts*, WALL ST. J., Feb. 21, 2007, at B13.

impressions he can make on history.²²⁹

C. *Propose a Trust Fund*

The introduction of the highway trust fund into House Resolution 9075 by the Committee on Ways and Means may contain the most important lesson available from this historical study. The industrial interests that lobbied so hard against taxes when the Fallon bill was introduced in 1955 stood to profit from an Interstate System by a margin at least as much as the taxes that would be imposed on them. These interests found themselves in the *bonding* coalition because they perceived gasoline and other road taxes as susceptible to redirection or other abuse by the federal government. The trust fund solved this issue.

Recall the tax vs. cap-and-trade axis I described above, along which most discussion regarding GHG regulation takes place. Either method of generating revenue will be perceived as an economic burden, and only an economic burden, unless the revenue is clearly connected to an inspirational or visionary purpose such as a Clean Energy Project. Creating a climate trust fund analogous to the highway trust fund is a method by which GHG regulation can be rigorously connected to the Clean Energy Project, both in the public's and lawmakers' eyes.

There is no national consensus on which technologies might compose the Clean Energy Project, so a climate trust fund may play a second important role, by serving as a conceptual proxy for the ultimate goal of climate stabilization. I will return to this topic when I discuss the differences between the climate and highway policy systems in section VIII, subsection C.

D. *Involve the Revenue Committees*

In the first session of the 84th Congress, highway bills were first considered in the Senate. But as early as March of 1955, Sen. Case foreshadowed the tension that would arise later in the session, by failing to begin revenue legislation in the House Committee on Ways and Means:

[I]f we follow the system and leave to the Ways and Means Committee of the House, the initiation of revenue legislation or of authorization of bonds or dedicating taxes, we would save ourselves a lot of trouble.²³⁰

In the second session, when the Highway Act of 1956 was finally poised to pass the House, Representative Boggs took care, on the House floor, to attribute the "happy state" of the legislation in part to the orderly assignment to

²²⁹ Henrik Selin and Stacy D. VanDeveer predict that mandatory GHG regulation will be enacted in either the 110th or 111th U.S. Congress. Selin & VanDeveer, *supra* note 197, at 18.

²³⁰ *Senate Hearings 1955*, *supra* note 90, at 493.

committees.²³¹

As of September 2007, the 110th Congress had introduced ten bills that included cap-and-trade GHG regulation; of these, eight originated in the Senate.²³² As with the 1955 attempt at Interstate System legislation, the early bills originated mostly in the Senate, even though only the House has the constitutional authority to originate bills that include revenue provisions.²³³ This constrains GHG regulation proposals to a subset of possibilities that include no new revenue generation. A megaproject approach, the only kind of approach that can succeed either economically or politically, is not even within the political imagination until the House originates legislation.

E. Link to Existing Legislative Cycles

Federal aid to highways was typically renewed on even-numbered years. During the 1955 highway program action in the Senate, the Gore bill was repeatedly distinguished from the Administration's proposal as a "balanced program" that expanded the existing federal aid to highways, as opposed to the President's program, which legislated the Interstate System independently of the existing ABC system.²³⁴ The "balanced system" approach had appeal to lawmakers, yet there was no pressure to pass a highway act continuing the traditional funding until the following year. And indeed, the Highway Act of 1956 as passed includes all of the usual funding for the ABC system, along with the new Interstate System funding.²³⁵ The value of existing legislation as a host for new legislation is underlined by the fact that where the Highway Act of 1956 is concerned, the dependent is more than twelve times the size of the host.²³⁶

Unfortunately there is no obvious, regular, authorizing legislation on which a Clean Energy Project could piggyback.²³⁷ However, Congress does occasionally bundle multiple, energy-related measures into a single energy policy act; the most significant of these were passed in 1975, 1992 and 2005.²³⁸ The most

²³¹ 102 CONG. REC. 7149 (1956).

²³² The ten bills are: S. 280, S. 309, S. 317, H.R. 620, S. 485, H.R. 1590, S. 1177, S. 1168, S. 1201, S. 1766, 110th Cong. (2007). *Legislation*, CARBON MARKET N. AM., Sept. 26, 2007, at 7.

²³³ U.S. CONST. art. I, § 7.

²³⁴ Martin, *supra* note 81, at 235.

²³⁵ Act of June 29, 1956, Pub. L. No. 84-627, §§102-107, 70 Stat. 374, 374-78 (1956).

²³⁶ Measured in terms of gross appropriations. The ABC system and other conventional recipients of federal aid to highways together received \$2.0 billion over two years, while the Interstate System received \$24.8 billion over thirteen years. Act of June 29, 1956, Pub. L. No. 84-627, 70 Stat. 374 (1956).

²³⁷ Ironically, and perhaps cleverly, some climate regulation advocates are attempting to piggyback only transportation-sector GHG emissions policy onto the "TEA" series of transportation acts that continues the Federal-Aid Highway Act series. Steve Winkelman, *Linking Green-TEA & Climate Policy*, Center for Clean Air Policy webinar (Feb. 26, 2007), available at <http://www.ccap.org/transportation/documents/LinkingGreen-TEAandClimatePolicyMarch2007.pdf>.

²³⁸ Energy Policy and Conservation Act, Pub. L. No. 94-163, 89 Stat. 871 (1975); Energy Policy

recent energy policy act features a large number of tax breaks,²³⁹ and is a revenue drain rather than revenue source for the federal government.²⁴⁰ The best way to handle Clean Energy Project legislation might be to propose it as an amendment to the Energy Policy Act of 2005, and in particular redirect funding for the various provisions of the original Act to come from the newly created climate trust fund. This would relieve some pressure on the general budget, and would be consistent with the history of the Highway Act of 1956, which gathered the existing, ABC funding system together with the Interstate system under the umbrella of the highway trust fund.

VII. OVERCOMING DIFFERENCES BETWEEN 2007 AND 1955

Clear instances of political learning from 1955 to 1956 can be drawn from the history of the Highway Act of 1956. These instances of political learning imply relatively clear lessons for legislating a Clean Energy Project. But such lessons are meaningful only if the climate policy system in 2007 sufficiently resembles the highway policy system in 1955, so that applying the lessons will move the climate policy system in the same way that they moved the highway policy system. Similarities do exist, most notably the political suppression of a revenue issue and the conservative vs. liberal polarization in the advocacy coalitions, but also the potential for industry to mirror the Governors Coalition by moving from the conservative coalition to a policy broker role, and a "long emergency" problem type. However there are three significant differences too, which I briefly review here. I also suggest a technique by which each difference can be overcome, if not entirely at least sufficiently to enable application of the political lessons from 1955-1956.

A. *An Iron Web Rather than an Iron Triangle*

An iron triangle such as the one described by Riddick comes with an implication of impermeability. Yet, the highway system's iron triangle also offered a clear venue for the policy bargaining necessary to create progress, in the form of the two Public Works committees. The climate policy system offers no such obvious venue, which raises jurisdiction issues among the Congressional committees. Furthermore, there is an "iron web" (my terminology) consisting of multiple, old alliances around the coal, oil, electric and automobile industries that perform an iron triangle's negative function of

Act of 1992, Pub. L. No. 102-486, 106 Stat. 2776 (1992); Energy Policy Act of 2005, Pub. L. No. 109-058, 119 Stat. 594 (2005).

²³⁹ Energy Policy Act of 2005, Pub. L. No. 109-058, tit. 13, 119 Stat. 594, 986 (2005).

²⁴⁰ See, e.g., Letter from Douglas Holtz-Eakin, Director, Congressional Budget Office, to Joe Barton, Chairman, Committee on Energy and Commerce, U.S. House of Representatives (July 27, 2005), <http://www.cbo.gov/ftpdocs/65xx/doc6581/hr6prelim.pdf>.

resisting change, while failing to perform an iron triangle's positive function of venue provision.

Clean Energy Project advocates can mitigate the missing function of venue provision by designating the appropriate Congressional committees themselves and shepherding debate to those committees, to the greatest extent possible. Taking the step of segregating the revenue and authorization portions of a Clean Energy Project would help direct the conversation more cleanly. If the discussion of GHG taxes or allowance auctions is properly initiated in the revenue committees, then the spending portion of the Clean Energy Project becomes divorced from the politically loaded issues of GHG regulation. Once that has been done, the choices of companion committees are singularly obvious: Energy & Commerce in the House, and Energy & Natural Resources in the Senate.

B. Weak Consensus on the Problem

In 1955, agreement on the U.S. highway system's inadequacy, and the need for additional spending (either local or federal) was universal.²⁴¹ In contrast, as of 2007 the *economic growth* coalition still disputes the need for GHG regulation to begin with, let alone the need for a federal government role in solving it.²⁴² Several members of Congress also remain unconvinced.²⁴³ This is probably the single most profound difference between the politics of highways in 1955 and the politics of climate change in 2007. Though the ten bills already proposed in the 110th Congress indicate a recent escalation in legislative activity on climate change, a sense of public urgency will be difficult to develop.²⁴⁴

Still, recent work in sociology and political science identifies modes of "punctuated equilibrium" in which both public opinion and political systems can shift rapidly in short amounts of time.²⁴⁵ Reframing GHG regulation as a Clean Energy Project, with all its attendant benefits to technical advancement and the nation's economy, helps to move the nation away from fear of climate action and toward the excitement that could precipitate a sudden change. This is the

²⁴¹ See *supra* note 26 and accompanying text.

²⁴² Aaron M. McCright & Riley E. Dunlap, *Defeating Kyoto: The Conservative Movement's Impact on U.S. Climate Change Policy*, 50 SOC. PROBS. 348 *passim* (2003).

²⁴³ See, e.g., *Climate Change: Are Greenhouse Gas Emissions from Human Activities Contributing to a Warming of the Planet? Hearings Before the House Committee on Energy and Commerce*, 110th Cong. (March 7, 2007).

²⁴⁴ Irene Lorenzoni & Nick F. Pidgeon, *Public Views on Climate Change: European and USA Perspectives*, 77 CLIMATIC CHANGE 73, 87 (2006).

²⁴⁵ Frank R. Baumgartner, *Punctuated Equilibrium Theory and Environmental Policy*, in PUNCTUATED EQUILIBRIUM AND THE DYNAMICS OF U.S. ENVIRONMENTAL POLICY 24 (Robert Repetto, ed., 2006); William A. Brock, *Tipping Points, Abrupt Opinion Changes, and Punctuated Policy Change*, in PUNCTUATED EQUILIBRIUM AND THE DYNAMICS OF U.S. ENVIRONMENTAL POLICY, *supra*, at 47.

obvious intention of the Apollo Alliance's "New Apollo Project" framing. The anticipated move of industry from the *economic growth* coalition to a policy broker position will also help to eliminate the economic basis for fear of climate regulation, since entities that are by definition profit-driven will then be advocating for a Clean Energy Project. And in the history of the Highway Act of 1956, the analogous move by the Governors Coalition was indeed a precipitous event.

C. *An Undefined Solution*

The layout and specifications of the Interstate System were largely agreed upon by 1947.²⁴⁶ In contrast, the solution to climate change is mostly unspecified. A 2004 *Science* article by Pacala and Socolow lists some fifteen relatively mature technologies available for the purpose of cutting emissions.²⁴⁷ Uncountable, less mature technologies will likely play roles in the more distant future, as well. The less mature technologies include geo-engineering proposals with varying risks and ethical implications.²⁴⁸ Meanwhile, discussion of potential solutions is further complicated by mixed feelings about nuclear energy, a largely GHG-free source with other environmental and social impacts.²⁴⁹

In 2007 there is agreement neither on the problem nor the technical solution, while in 1955 there was agreement on both. Advocates of GHG regulation are already doing everything they can to induce agreement on the problem, but the importance of a well-defined engineering *solution* seems to be lacking. Attempts made at defining a solution are often vague or confusing. The New Apollo Energy Act of 2005 bill, for example, offered a collection of literally dozens of climate-related tax credits and statutory revisions that is quite the opposite of its singular, goal-oriented namesake.²⁵⁰

The lack of a well-defined solution underlines the importance of a climate trust fund. If the trust fund is associated with an organization that can assume cachet as a center of technology innovation, presumably an expanded Department of Energy, then that organization becomes a proxy for the vision of a clean energy future in the same way that NASA was, for eight years, a proxy for the vision of a yet unachieved lunar landing.²⁵¹

²⁴⁶ See *supra* note 43.

²⁴⁷ Stephen W. Pacala & Robert H. Socolow, *Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies*, 305 *SCIENCE* 968 (2004).

²⁴⁸ David W. Keith, *Geoengineering the Climate: History and Prospect*, 25 *ANN. REV. OF ENERGY & ENV'T* 245 *passim* (2000).

²⁴⁹ DAVID BODANSKY, *NUCLEAR ENERGY* 579-615 (2d ed. 2004).

²⁵⁰ New Apollo Energy Act, H.R. 2828, 109th Cong. (2005).

²⁵¹ The Federal-Aid Highway Act of 1944 offers inspiration for a different approach to the undefined solution problem. It might be possible to legislate a well-defined Clean Energy Project

CONCLUSION

A structured comparison of the two attempts to pass the Highway Act of 1956 reveals several clear instances of political learning. A comparison of the 1955 highway policy system with the 2007 climate policy system, on the other hand, reveals both significant similarities and differences. I believe that the clarity and value of the 1955-1956 lessons are substantial enough, that with some concerted work to overcome or adapt to the differences, they can be applied to the climate policy system with great success. Coupling GHG regulation to energy R&D — that is, defining a Clean Energy Project — by proposing a climate trust fund is a prerequisite to applying those lessons.

Frustrated with a lack of federal action, advocates of climate regulation have turned to state and local governments for leadership on the issue. However, when and if the climate issue is addressed on the federal level it will play out in Congress, just like the Interstate System did. GHG regulatory advocates would do well to build as much presence in Congress as possible, so they are ready when attention moves from the states back to the federal government. Explicit, central coordination of legislative lobbying is crucial because of the “iron web” problem. A well-coordinated *precautionary* coalition could build a stable and recognized venue for climate change negotiations by directing traffic — from both coalitions — toward one or two carefully chosen committees in each house.

Equally importantly, political actors will need to move the discussion away from morally loaded domains in order to allow a coalition shift. I believe this can best be done with a two-pronged approach. First, move the debate toward the realm of economics by introducing taxes as an alternative to cap-and-trade. This will be an uncomfortable move for advocates of climate regulation to make, because it is a concession to the *economic growth* coalition insofar that it makes economics the apparent central issue, and because it associates a politically unpopular concept — taxes — with climate regulation. But creating a healthy tax vs. cap-and-trade debate will ultimately enable a coalition realignment that moves away from unchangeable, conservative vs. liberal core policy beliefs. Second, leverage the introduction of taxes to the discussion by involving the House Committee on Ways and Means. This will lay the groundwork for, eventually, segregating the Clean Energy Project into revenue and authorizations sides that are each more politically wieldy than a combined approach.

The Highway Act of 1956 was the only successful legislation of a tax-funded, federal infrastructure megaproject in contemporary American history — a landmark event. Passing it required the courage to abandon old coalition

without funding, and then approach the GHG regulatory system that will provide the funding separately, as a second step. However, I don't think this is a wise choice because it would limit room for the most innovative and cost-efficient development of appropriate energy technologies.

alignments, the creativity to invent policy tools like the highway trust fund, and the flexibility to allow policy negotiations within the appropriate Congressional venues. An equal application of courage, creativity and flexibility could pass contemporary America's second tax-funded megaproject, this time helping to solve a long emergency that extends outside America's borders, as well as within them.