


United States Synthetic Fuels Corporation

History of the United States Synthetic Fuels Corporation

Hervey Priddy

University of Texas at Austin, Austin, Texas, United States

Abstract

This paper examines the brief history (1980-86) of the fledgling United States Synthetic Fuels Corporation (SFC). The centerpiece of President Jimmy Carter's July 15, 1979 speech ("The Malaise Speech") to the nation was the creation of this government corporation that aimed to provide financial assistance to the private sector, assisting in the development of a national synthetic fuels industry, based primarily on oil shale, coal, and tar sands. The United States possesses enormous reserves of these resources that are comparable in size to the oil and gas reserves located in the Middle East. In his presentation, Carter referred to this new entity as an "energy security corporation." He also proposed an "energy mobilization board." This board would have had the authority, mandate, and responsibility to cut through the red tape, delays, and other endless roadblocks to ensure the prompt construction and completion of these key energy projects. The corporation would subsequently be renamed the United States Synthetic Fuels Corporation, but the "energy mobilization board" never passed Congress. The paper will discuss the beginning of the SFC, the operational phase, and the close-down during the Reagan Administration. A brief summary will be provided for those projects that received financial assistance and what happened to them. There will be a brief conclusion outlining where the nation is at the present time, as well as the prospects for another effort on the part of the federal government to develop a synthetic fuel industry.

Introduction

In the space provided, I hope to offer an interesting, informative, and brief overview of the short saga – approximately six years – of the United States Synthetic Fuels Corporation (SFC).

I worked for the SFC as a senior financial analyst from late 1980 until early 1982. John Sawhill, the first chairman, recruited me, as employee number 31, from an investment banking firm in New York City, where I specialized in energy sector financing. My friend and colleague from SFC, Larry Lukens, is also here. He was employee number 2, with Sawhill at number 1. Larry and I were there at the same time, but in different areas. This is my first pres-

entation on the topic, as I am currently in the process of writing my Ph.D. dissertation on the history of the Corporation.

The idea of synthetic fuels from oil shale and coal is not a new one. In the February 1918 issue of *The National Geographic Magazine*, there appeared an extensive article about the "Billions of Barrels of Oil Locked Up in Rocks" that would be available to the U.S. for use during and after World War I. In April 1944, the Synthetic Liquid Fuels Act became law, authorizing \$30 million for the construction and operation of demonstration synthetic liquid fuel plants.¹

¹ Richard H.K. Vietor, "The Synthetic Liquid Fuels Program: Energy Politics in the Truman Era,"

Business historian Richard Vietor argues that the oil industry contributed to the demise of this synthetic fuel effort. In 1954, the Eisenhower administration terminated the federal synthetic fuels program. This action set in motion America's increasing dependence on imported oil to satisfy its energy needs. According to the Energy Information Administration, in 1955 the U.S. imported 14.8 percent of its total supply of petroleum liquids, and by June of 2008, that percentage had increased to 65 percent.²

During the latter half of 1973 and early 1974, the U.S. experienced an oil embargo, which was the retaliatory response of the Organization of Petroleum Exporting Countries (OPEC) to America's military support to Israel during the Yom Kippur War.³ This embargo officially put the nation and its leaders on notice as to America's vulnerability from importing a large amount of crude oil in order to meet its escalating energy needs while the domestic production of crude oil continued to experience an inexorable decline.⁴

The Business Review, Spring 1980, Vol. 54, No. 1, p. 8.

² Energy Information Administration, *Annual Energy Review 2007*, p. 125. *Monthly Energy Review*, July 2008, p. 43.

³ There was a 1967 Arab oil embargo against the United States and other nations as a result of the Middle East Six- Day War. This embargo had no appreciable impact on the U.S. because the U.S. had excess production capacity of crude oil and the nation imported little oil from the Middle East. For a brief discussion of this, please see M.S. Daoudi and M.S. Dajani, "The 1967 Oil Embargo Revisited," in *Institute for Palestine Studies*, Vol. 13, No. 2 (Winter 1984), pp. 65-90.

⁴ For 1973, the nation imported 36.3 percent of its supply needs and 36.8 percent in 1974. *Twentieth Century Petroleum Statistics 2005*, DeGoyler and MacNaughton, p. 53. In the United States, crude oil production peaked at 4.1 billion barrels in 1970. By 1980, production had declined 9.5 percent. *Twentieth Century*, p. 20.

The Nixon administration demonstrated significant concern over the impact this oil embargo imposed on the U.S. economy and the quality of life for her citizens. With instructions from Nixon, William E. Simon, head of the newly established Federal Energy Administration, "helped plan a standby gasoline-rationing system, one that required the use of ration coupons."⁵ Under a rushed deadline, the Bureau of Engraving and Printing created 4.8 billion ration coupons, each measuring 1.5-by-3.5 inches, at a cost of \$12 million. These were never used and were destroyed in spring of 1984;⁶ however, a few survived.⁷

In March 1974, Nixon initiated Project Independence to evaluate energy problems in the U.S. and provide a framework for developing a national energy policy. The *Project Independence Report* was issued in November 1974; however, due to the pressing issues of Watergate and Nixon's resignation, no action resulted from the *Report*.⁸ In 1975, President Gerald Ford proposed the Energy Independence Authority (EIA), a 10-year, self-liquidating Federal authority, with \$100 billion available for financial assistance to develop a synthetic fuels industry, but the idea quietly died in Congress.

Now let us turn our attention to the administration of President Jimmy Carter. Presi-

⁵ Rochette, Ed, "Ration coupons hit market," *Numismatic News*, 16 June 1987, pp. 1, 17.

⁶ The storage costs for these coupons were about \$20,000 per year. They were stored in Army ammunition igloos with doors welded shut. The cost to destroy them was approximately \$150,000. Concern over the security of the coupons resulted from the engraved image of George Washington, the same one used on the one dollar bill. Thus, if one of the coupons were to be placed into a change machine, the recipient would receive a dollar in change. *Omni*, vol. 7, no. 4, January 1985, p. 57.

⁷ Rochette, *Ibid*.

⁸ John Sawhill, the future chairman of the SFC signed the *Project Independence Report*.

dent Carter confronted energy problems from the moment of his inauguration on January 20, 1977, when record low temperatures gripped most of the nation. Carter promised the country a comprehensive energy policy within ninety days of taking office. On April 18, 1977, he unveiled his National Energy Plan to the nation. In his national address, he stated,

"Our decision about energy will test the character of the American people and the ability of the President and the Congress to govern this Nation. This difficult effort will be the moral equivalent of war, except that we will be uniting our efforts to build and not destroy."⁹

The President also said that, "With the exception of preventing war, this is the greatest challenge that our country will face during our lifetime."¹⁰ In August 1977, Carter created the Department of Energy (DOE) in order to combine "50 different agencies, departments, and bureaus in the federal government."¹¹ Despite the inspired tone at the commencement of the DOE, by 1981 the attitude on Capitol Hill was that "if the Congress turned over the Sahara Desert to the Department of Energy, within 2 years we would have a shortage of sand in the world."¹²

Beginning in 1979 and now again in 2008, with the current domestic and international conditions, the nation is experiencing *déjà vu* all over again. With the Iranian revolu-

tion in early 1979, the significant decline in crude oil production in Iran, and the corresponding escalation in the price of crude oil, the U.S. experienced long and sometimes violence-prone lines for gasoline during the summer of 1979.¹³ At the urging of his domestic policy advisor, Stuart Eizenstat, Carter expedited his return to Washington from a summit in Tokyo to discover a nation in turmoil.

On July 15, 1979, President Carter introduced the nation to his proposal for an Energy Security Corporation. This evening address to the nation, delivered from the Oval Office and titled by the administration the "Crisis of Confidence Speech," was actually two speeches in one.

In the first half, Carter proceeded to tell the American people what was wrong with them and America -- there was a national malaise gripping the entire country. Although Carter never uttered the word "malaise," the moniker stuck to the address. Carter described a listlessness, a lack of confidence in government, and a general lack of hope that had settled over the country. (This is not too dissimilar to feelings many are experiencing today with the worrisome rescue/bailout plan, the erratic stock market, and wars in Iraq and Afghanistan.)

In the second half of the speech, Carter offered his solution to this "malaise" when he stated,

"And we are the generation that will win the war on the energy problem and in that process rebuild the unity and confidence of America. . . . So the solution of our energy crisis can also help us conquer the crisis of the spirit in our country. It can rekindle our sense of unity, our confidence in the future and give our Nation and

⁹ *Presidential Documents*, Vol. 13, No. 17, 18 April 1977, pp. 560-1. This speech subsequently received the title, "The MEOW Speech," reflecting Carter's phrase "moral equivalent of war."

¹⁰ *Ibid.*

¹¹ *Ibid.*

¹² Hearing before the Committee on Banking, Housing, and Urban Affairs, United States Senate Ninety-Seventh Congress, First Session, *TOSCO Loan Guarantee Proposal*, 7 October 1981, p. 103.

¹³ Another factor causing the shortages of gasoline availability was the DOE allocation regulations.

all of us individually a new sense of purpose.”¹⁴

For all of 1979, the U.S. imported 45.4 percent of its total supply of crude oil and related products. As a result of federal control over domestic crude prices, the average domestic price per barrel in 1979 was \$12.64,¹⁵ while the world price per barrel was more than 100 percent higher, averaging \$25.70 for the same year.¹⁶

Carter’s July 1979 energy plan, subsequently named the Energy Security Act of 1980 (ESA or Act), centered on the Energy Security Corporation (ESC), later renamed by the Act as the United States Synthetic Fuels Corporation (SFC). Despite the sense of national urgency, it took almost a year from July 1979 for the ESA to become law. With 66 attendees joining him at the signing ceremony outdoors on the South Lawn of The White House, Monday, June 30, 1980, at four o’clock in the afternoon (perfectly timed to garner coverage on the nationwide network news), Carter reminded the nation that

“[I]n just a few days we will celebrate the birthday of our political independence. I can think of no more fitting birthday present than this declaration of energy security or energy independence which I am proud to sign now with all of you present today. . . . It’s a great day for America.”¹⁷

The SFC was a specific-purpose Corporation, chartered by Congress, with the aim of starting a domestic synthetic fuels industry. The mandated ambitious production goals

for the Corporation were established at a level of at least 500,000 barrels of crude oil equivalent per day of synthetic fuels by 1987, and at least two million barrels per day by 1992. Authorized to exist for only 12 years, the ESA entailed an initial appropriation of \$20 billion (which would equate to over \$51 billion in 2008 dollars), and an additional \$68 billion (over \$171 billion in 2008 dollars) four years later, amounting to a total of \$88 billion (or over \$222 billion in 2008 dollars). The law provided for several forms of financial assistance, backed by the full faith and credit of the U.S., including:

- Price guarantees, purchase agreements, or loan guarantees
- Loans
- Joint ventures

The Act limited the Corporation to 300 full-time employees and annual administrative expenses (adjusted for inflation) of \$35 million. Legislation provided that a board of directors (with staggered terms), consisting of a chairman and six others (nominated by the president and confirmed by the Senate), would manage the SFC, with the chairman serving as the chief executive officer. The directors could be removed from office by the President only for neglect of duty, or for malfeasance in office.

Carter’s nominees were not confirmed by the Senate. Subsequently, the President made recess appointments of his nominees on October 5, 1980. John Sawhill, nominated as chairman, assumed that position by Presidential recess appointment, which also occurred with the other previously nominated board members. Having followed the progress of the Act through Congress as Deputy Secretary of the Department of Energy, Sawhill was especially cognizant of the urgency that Congress had emphasized during the drafting process, and had reiterated in the final bill, the imperative of developing a domestic synthetic fuels industry with alacrity.

On Sunday, November 30, 1980, during the nationally televised *Meet the Press* on NBC News, Sawhill confirmed that he was

¹⁴ *Congressional Quarterly Almanac*, 96th Congress, 1st Session, 1979, pp. 45E-47E.

¹⁵ DeGoyler and MacNaughton, *Twentieth Century Petroleum Statistics*, 2005, pp. 34, 53.

¹⁶ *Ibid*, p. 13.

¹⁷ Office of the White House Press Secretary, 30 June 1980.

“spending my time and my effort trying to get the Corporation up and running so that we can have an effective synthetic fuels program.”¹⁸

On October 8, 1980, the first board meeting was held with an overflow crowd. At this and subsequent board meetings, the board established salary levels for present and future officers. These compensation amounts erupted into a firestorm on Capitol Hill and amongst the general public. Elevated salary levels, even though subsequently rescinded by President Reagan, became an albatross that severely tainted the reputation and perceptions of the Corporation by both the public and Congress. Undeniably, these compensation levels were one of the many early obstacles that continued to hamper the Corporation’s credibility, as well as its ability to achieve the production goals mandated by Congress.

Many people read the Act as allowing salaries above the federal pay scale level in an effort to attract the high-caliber of talent thought necessary to achieve, within the short-time frame specified, the legislated objectives.¹⁹ At the outset, the chairman’s salary was set at \$175,000; the senior vice president/general counsel and the chief financial officer were both at \$150,000; the vice president of planning at \$140,000, and the vice president of administration at \$95,000. On the other hand, several members of Congress interpreted the ESA in such a way that these levels exceeded the original intent of Congress.

Meanwhile, the top level for Federal executive salaries, primarily cabinet members, was a modest \$69,630. The annual salary of the president of the U.S. was only \$200,000, the compensation for the vice

president of the U.S. was set at \$62,500, and members of Congress were paid \$60,663 per year. On February 26, 1981, Reagan disapproved the Corporation’s salaries for its officers, as established earlier by Carter’s board.

By mandate, the Corporation had to issue its first solicitation for synthetic fuel projects by the end of December 1980, and this salary ruckus did not make preparations for the solicitation easy. Nevertheless, the SFC did meet the deadline and the first solicitation was issued on November 21, 1980. This “Initial Solicitation for Proposals for Financial Assistance for Synthetic Fuels Projects” was only two and one-half pages in length. The tone to industry from the SFC was one of “we have the mandate, directive, authority, and money, so give us your best shot!” Industry was most surprised by the short length of the solicitation and the requirements it outlined. It was not like the normal solicitations, lengthy and complex, typically issued by entities of the federal government.²⁰

Congress had legislated certain dates for the first solicitation to stress the extreme urgency for getting the nation’s synthetic fuels industry up-and-running in order to abate the risks associated with dependence on imported crude. As further indication of the national emergency, Congress amended the Defense Production Act of 1950 (DPA) to provide for a “fast start” interim assistance program utilizing existing Federal departments and agencies to expedite the development and production of synthetic fuels to meet national defense needs. The President was directed by the ESA to put this program into effect immediately upon enactment. Congressional conferees believed that no time should be lost during the period between the enactment of the ESA and the President’s declaration that the SFC was operational.

¹⁸ Transcript of *Meet the Press*, 30 November 1980, pp. 1-2.

¹⁹ See David Howard Davis, *Energy Politics*, Third Edition, New York: St. Martin’s Press, 1982, pp. 256-7. Davis writes that salaries for senior people were anticipated to be in the vicinity of “100,000 to \$200,000 per year.”

²⁰ This concept is from Larry Lukens, interview 14 October 2008.

With the election of Ronald Reagan and his subsequent oath of office, Sawhill and the board resigned on January 30, 1981. The senior vice president and general counsel, John (Jack) McAtee, became acting chairman. Shortly after his testimony before Congress, he and the SFC received some unsolicited and undesirable press coverage.²¹ The negative brouhaha over the high salaries at the Corporation never dissipated.

In early April 1981, another changing-of-the guard ensued at the Corporation when President Reagan nominated Edward Noble as chairman. The Senate confirmed Noble on May 14, 1981. McAtee resigned shortly after Reagan's nominated, confirmed, and sworn-in chairman assumed leadership. Other Reagan nominated board members received Senate confirmation on September 11, 1981, and were sworn in on October 28, 1981. Finally, on February 8, 1982, the SFC was declared "operational" by the President, 589 days after the enactment of the ESA, when Congressional urgency was supposedly the word of the day.

During its brief existence, the SFC issued four general solicitations and eight focused competitive solicitations. The Corporation provided financial assistance to four projects. During the interim "fast track" program, as authorized by the Defense Production Act Amendments of 1980 (DPA), DOE provided financial assistance to three projects: TOSCO/Colony Oil Shale, Union Oil Parachute Creek Oil Shale, and the Great Plains Coal Gasification project. When Reagan declared the Corporation "operational," only the TOSCO/Colony and the Union Oil Parachute Creek Projects transferred to the SFC. Noble was not favorably disposed towards the Great Plains Project, as he had "expressed strong

doubts about the need for plants that produce natural gas" ²²

Exxon Corporation operated the TOSCO/Colony Oil Shale Project. TOSCO requested a loan guarantee under the "fast track" DPA program. With the assistance of SFC personnel in the negotiations, on August 6, 1981, DOE granted a loan guarantee of \$1.2 billion to TOSCO for its share of the project costs. Following a spiraling increase in costs (an increase of up to 200 percent and possibly higher) and a concurrent 15 percent decline in crude prices, on Sunday, May 2, 1982, Exxon unexpectedly announced the termination of any further funding for the Colony project.²³ In a May 2, 1982 press release, the president of Exxon USA, Randall Meyer, stated,

"Exxon still believes that alternate fuels such as shale oil will be required to meet future U.S. energy needs. . . . Exxon believes that the final cost [to build the plant] could be more than twice as much as we thought it would be when we entered the project. . . . [I]n our judgment, the investment economics no longer support our continuing to fund the present project."²⁴

This Sunday became known as "Black Sunday," and the headline in *The Weekly Newspaper* of Glenwood Springs, Colorado, read "Jolt: Exxon's overnight shutdown stuns county." In part, the article said:

²² Robert D. Hershey, Jr., "Synthetic Fuel Chief Doubts Gas Need," *The New York Times*, 22 June 1981, p. D1.

²³ "Exxon's Abrupt Exit from Shale," *Fortune*, 31 May 1982, pp. 105-6. Exxon stated, "Exxon believes that the final cost could be more than twice as much as we thought it would be when we entered the project." Exxon estimated "that the cost had risen from \$2 billion or \$3 billion to \$5 billion or \$6 billion or perhaps more."

²⁴ Exxon Press Release, "Exxon to Discontinue Funding of Present Colony Shale oil Project," 2 May 1982.

²¹ See Royko, Mike, "Reagan aide's troubles - \$150,000 sacrifice," *Chicago Sun-Times*, 25 February 1981, p. 2.

The Sunday afternoon announcement rolled like a thunderbolt across Garfield County Monday and Tuesday, effecting [sic] virtually everyone of its citizens. Some were jolted. Others confused. Many were angry. Some wept. Some cheered. Some got drunk on the proceeds from their last paycheck.²⁵

As recently as July 1980 in a "white paper," Exxon projected that by 2010, the nation's production of crude oil from oil shale would reach 8 million barrels per day.²⁶ Exxon subsequently purchased TOSCO's share and TOSCO repaid the government loans in full. Many observers interpreted this abrupt cancellation by Exxon as sounding the death knell for synthetic fuels for the foreseeable future. John O'Leary, formerly Deputy Secretary of the new Department of Energy, who was instrumental in drafting the ESA,²⁷ stated that the Exxon decision was "a very, very serious blow for the entire synthetic fuels effort in this country."

The Union Oil Parachute Creek Oil Shale Project that transferred to the SFC involved a price guarantee, adjusted for inflation, of \$42.50 per barrel. DOE and Union executed this financial guarantee on July 29, 1981. "The change in world energy conditions, coupled with difficulties in achieving satisfactory operation of Phase I, led Union in 1985 to reassess" its program.²⁸

²⁵ "Jolt: Exxon's overnight shutdown stuns county," *The Weekly Newspaper*, 5 May 1982, p. 1.

²⁶ Presentation to Club 20 in Grand Junction, Colorado, "The Role of Synthetics in the United States Energy Future," by Exxon Corporation executives on 25 July 1980, p. 18.

²⁷ TOSCO Corporation *Newsletter*, Report to the Nation, May 1982, p. 5. This newsletter included a copy of the transcript from the 12 May 1982 MacNeil/Lehr Report.

²⁸ *1985 Annual Report United States Synthetic Fuels Corporation*, pp. 10-13.

Discussions between the staff of the Corporation and Union during the spring of 1985 resulted in an amendment to the original DOE financial assistance contract in August 1985. The terms of this amendment, executed in October 1985, provided for additional assistance up to a maximum of \$500 million in the form of loan guarantees and price guarantees.²⁹

Union submitted a new request proposal to the SFC on December 14, 1982 that would assist Union in the development of Phase II of the Parachute Creek program. By June 1984, the SFC and Union had negotiated a final draft agreement for financial assistance. However, the board of the SFC lacked a quorum, which prevented the Corporation from taking any formal action.

James Weith, the retort process foreman, writes that Union Oil "shut down the project in [June] 1991,"³⁰ with Union saying, in essence, that the company believed it had learned all that they had to learn. The chairman of Unocal (Union Oil had modified its corporate name), Richard Stegemeier, stated that "We [Unocal] have operated the project for nearly 5 years and produced nearly 4.5 million bbl of high quality synthetic crude oil, making this the largest oil shale effort in U.S. history."³¹

Weith recently commented that the "plant was able to operate in the black in random months. . . . [It] needed to run for 20 days in any month in order to get into the black." Weith continued by observing that as they "learned more about the process, [they] began to have a quarter in the black as well." He offered that Unocal was making "real progress in the field" when the plug was pulled.³²

²⁹ *Ibid.*

³⁰ Letter from James D. Weith to the Editor, *Oil & Gas Journal*, 27 September 2004, p. 10.

³¹ "Unocal to close sole U.S. commercial oil shale plant," *Oil & Gas Journal*, 8 April 1991, p. 38.

³² Email from James Weith to the author, 3 October 2008.

Weith points out that a major contributing factor to the shutdown was the unfriendly takeover offer for Unocal from T. Boone Pickens in 1985. To defeat this bid, Unocal increased its outstanding indebtedness from \$1.2 billion to \$5.3 billion. This huge debt obligation severely curtailed the operations of Unocal, and one project that suffered was the Parachute Creek Oil Shale facility.³³

SFC awarded a \$120 million price guarantee in July 1983, at an inflation-adjusted price of \$12.50 per million btu, to the Cool Water Coal Gasification Project, which generated electric power for Southern California. Cool Water was completed within budget and on schedule. Due to declining energy prices and reduced demand for electricity, Cool Water went off-line in 1989, and a formal closure plan was submitted in 1998.³⁴

The Dow Syngas Project, which produced power in existing gas turbines, received a ten-year price guarantee of \$620 million at \$12.50 per million btu, inflation-adjusted, on April 26, 1984. The Dow Syngas Project was completed within budget and on schedule. After operating for a little less than ten years, the plant ceased operations in 1996. Dow Syngas operated, for all intents and purposes, flawlessly and provided a significant learning experience for the operators.³⁵

In September 1985, the Forest Hill Heavy Oil Project (heavy oil recovery program) received a maximum loan guarantee of \$24.4 million and a price guarantee of \$35.6 million, increasing to a maximum of \$60 million, with the inflation-adjusted price guarantee set at \$40 per barrel. This project was completed within budget. "Af-

ter two years of operation, it defaulted on its guaranteed loan, and filed for protection under the bankruptcy code."³⁶

The Corporation also entered into a cost-sharing agreement in the spring of 1983 with Peat Methanol Associates (PMA) partnership to refine further the design of their project. The maximum obligation to the Corporation was \$820,750, of which only \$467,507 was provided to PMA. Following the withdrawal of support by the sponsors, this project was eliminated from further consideration.³⁷

As required by the ESA, the Corporation submitted to Congress the Comprehensive Strategy Report on June 28, 1985. Although it was a year late in its delivery to Congress, the Strategy Report set forth recommendations of the SFC's board to Congress on the goals of the Corporation and schedules for the SFC to achieve these goals. In this Report, the board stated:

After careful and extensive consideration, the Board has now concluded that, under current conditions, it is not possible to achieve the national production goal within the requirements of the Act; accordingly, the Board cannot formulate a strategy to achieve the production goal.³⁸

During its existence, the SFC had an incredibly high turnover level in both board membership and senior positions. It had one recess appointed chairman, followed by an acting chairman, and finally a presidentially nominated and confirmed chairman. The four board members, who received recess appointments from Carter, all resigned on the same day as Sawhill, January 30,

³³ Second email from James Weith to the author, 3 October 2008.

³⁴ Status of the Cool Water Project from portions of a draft book by Ralph Bayrer. In author's possession.

³⁵ *Ibid* for Dow Syngas Project.

³⁶ Bayrer, Ralph L., "Appraisal of current projects in synthetic fuels technology," *Fuel*, 1991, Vol. 70, November, p. 1328.

³⁷ *Comprehensive Strategy Report*, Appendices, pp. F43-F46.

³⁸ *Ibid*.

1981. Reagan's original board of four, outside of Noble, experienced several resignations as well. Several of the replacement board members also resigned, as well as fifteen senior officers. This made it difficult, if not impossible, for the SFC to maintain any continuity and forward momentum in its operations.

At the time of the December 19, 1985 legislation that terminated any further funding, the Corporation was in negotiations with various parties on 13 projects, in addition to those previously mentioned. Following the passage of the funding termination legislation, the Corporation turned off its lights and closed the doors on April 18, 1986.³⁹ Ongoing projects and other business were transferred to the Department of the Treasury. Noble had previously submitted his resignation to Reagan on January 28, 1986, with an effective date of February 15, 1986. In his letter to the President, Noble wrote:

As you know, from the beginning I had reservations about how a national synthetic fuels program should be approached, and this job as Chairman of the Corporation has proven to be a lot tougher at times than I'd imagined. It has also, however, provided moments of deep satisfaction in knowing that we were doing a necessary job in a limited way which would serve the long term interests of the country and bring credit to your administration.

Mr. President, I believe that true conservatives build for the future in ways that promote opportunity and growth within our free enterprise system. . . . We have given the country a few diverse plants which will provide a national insurance policy against future energy disruptions and which in time will lead to expansion of a synthetic fuels industry fully within the private sector. We have

³⁹ From 30 June 1980 to 19 December 1985, 1,998 days; to 18 April 1986, 2,118 days.

done this with less than two percent of the monies the Carter Administration anticipated spending⁴⁰

Noble ended his letter mentioning that he returned to the private sector "with a heightened understanding of the political process."⁴¹ After all the travails of the Corporation, this was undeniably an understatement.

The total amount of funds that the Corporation spent during its life approached \$960.4 million (about 2% of its original authorization), as follows:⁴²

Project assistance:

Cool Water	\$105.0 million
Forest Hill	\$36.5 million
Union Oil/Parachute Creek	\$134.2 million
Dow Syngas	\$576.9 million

Administrative expenses:

SFC (1981-1986)	\$96.3 million
Treasury	<u>\$11.5 million</u>

Total: \$960.4 million

From 1980 to 1986, the price per barrel of domestic crude oil declined over 42 percent, from \$21.59/bbl. to \$12.51/bbl.⁴³ This impacted the economic viability of synthetic fuel plants for private industry. Equally important, the political winds had shifted 180 degrees, from a belief that government is capable of solving the nation's

⁴⁰ Letter to the President from Edward Noble, 28 January 1986. Author's possession.

⁴¹ *Ibid.*

⁴² This analysis is from work done by Ralph Bayrer, vice president of projects for the Corporation. Bayrer is the only SFC employee who was present at the creation, during its life, and after-life at the Department of the Treasury. The author is most appreciative for the assistance that Bayrer has provided to him on this project.

⁴³ *Twentieth Century Petroleum Statistics 2005*, DeGoyle and MacNaughton, p. 34.

problems (Carter) to a conviction that government is the crux of the problem and not the solution (Reagan). Reagan advocated limiting the role of government activity in the private sector, and let the free market operate free from intrusions from the federal government.

Energy is a complex issue which is intrinsic and essential in the daily lives of all Americans, as well as in the defense of the nation. When addressing this issue, the nation's leaders must take into account the short- and long-term impacts energy plants have on local communities, such as occurred with the Colony Project. Additionally, the economic and political problems require attention. Among these is the fact that these plants often take ten years or more to develop and construct, while presidents are elected every four years, presenting continuity questions. Each state and region has its own specific problems, priorities, and issues related to energy. The nation is undeniably addicted to the consumption of oil, and efforts to reduce this addiction present problems that will take decades to solve, as well as uncharacteristic levels of patience on the part of the entire citizenry.

With respect to synthetic fuels plants, demonstration plants should precede commercial-size plants to permit the perfection of the technology as plants are replicated and scaled-up in size.

To untangle the Gordian knot of energy, the nation requires a president who combines Rooseveltian persuasion, sprinkled with Sorensenian eloquence, combined with Reaganesque imaging, and an LBJ mastery of the political process.⁴⁴

We can, must, and will solve our energy dilemma. It is just going to take time and perseverance.

⁴⁴ Lewis L. Gould, *The Modern American Presidency* (Lawrence: University Press of Kansas, 2003), p. ix. This is a paraphrase of Professor Gould's sentence.

References Cited

Annual Energy Review 2007.

Bayrer, R.L., 1991, "Appraisal of current projects in synthetic fuels technology": *Fuel*, v. 70, pp.1327-1329.

Bayrer, R.L., pages from a draft book in author's possession and email communication in author's possession.

Chicago Sun-Times.

Congressional Quarterly Almanac, 96th Congress, 1st Session.

Daoudi, M.S. and M.S. Dajani, 1984, "The 1967 Oil Embargo Revisited": *Journal of Palestine Studies*, v. 13, pp. 65-90.

Davis, D.H., 1982, *Energy Politics*, Third Edition: New York, St. Martin's Press, 323 pages.

DeGoyler and MacNaughton, 2005, *Twentieth Century Petroleum Statistics 2005*: Dallas, DeGoyler and MacNaughton, 127 pages.

Fortune.

Gould, L.L., 2003, *The Modern American Presidency*: Lawrence: University Press of Kansas, 301 pages.

Lukens, Larry, personal interview, 14 October 2008.

Meet the Press, 30 November 1980, Transcript.

Monthly Energy Review, July 2008.

New York Times.

Noble, Edward, letter of 28 January 1986, in author's possession.

Numismatic News.

Oil & Gas Journal.

Omni.

Presidential Documents.

Project Independence Report.

TOSCO Corporation Newsletter.

TOSCO Loan Guarantee Proposal, Hearing
before the Committee on Banking,
Housing, and Urban Affairs, United
States Senate, Ninety-Seventh Con-
gress, First session, 7 October 1981.

*United States Synthetic Fuels Corporation,
Comprehensive Strategy Report.*

*United States Synthetic Fuels Corporation
1985 Annual Report.*

Vietor, R.H.K., 1980, "The Synthetic Liquid
Fuels Program: Energy Politics in the
Truman Era": *The Business History Re-
view*, v. 54, pp. 1-34.

Weekly Newspaper (The).

Weith, James, email communication with
the author.