

Submission to the Senate Enquiry on Fuel and Energy

Specifically dealing with sub-section “d” of the Terms of Reference.

“...the impact of an emissions trading scheme on the fuel and energy industry.”

Summary

Australia can play a more effective role in lowering carbon dioxide emissions for itself and its trading partners by introducing a clean coal process, without implementing a potentially harmful emissions trading scheme and in the process a resulting by-product could possibly insulate us from our reliance on imported oil.

The Submission

Emission Trading Scheme

Recent negative reaction to the proposed implementation of an emissions trading scheme, including threats by many large affected businesses to scale down or move their interests offshore, would have dire consequences for our nation’s economy and achieve little or no gain if introduced.

Accordingly, it is contended the planned emission trading scheme should be abandoned as we have too much to lose to proceed with it. This premise is based on the fact that our global contribution of greenhouse gasses is around 1.4%, even though there is a belief held by some that despite this small percentage “...we should lead by example”.

It is questioned that with our trade dependence upon coal exports to India and China, two of the world’s acknowledged heavy carbon dioxide polluters, would not continued provision of massive amounts of coal to these two markets more than counter by a large magnitude any reduction of atmospheric carbon dioxide an Australian emission trading scheme is intended to achieve?

We should continue to “...lead by example” but instead of creating economic hardship to all Australians, by attempting to reduce our pitiful 1.4% with an emissions trading scheme, which would be another form of tax, we should be exploring methods capable of cleaning the coal before export or alternatively send it with the coal.

Such a technology does exist and was developed in the U.S. during the 1920s by Lewis C. Karrick and is known as **Low Temperature Carbonization of Coal** [LTC]. Although relatively unknown in Australia, despite being used in NSW to extract oil from shale during WW2. A report as recent as 2005, which also includes an extensive interview with Karrick concerning his LTC development [See Appendix A], avers its existence has been deliberately suppressed by vested interests in the U.S.

As shown in Professor Emeritus Herbert E. Striner’s, a former Business School Dean at American University, 1979 book “An Analysis of the Bituminous Coal Industry in terms of Total Energy Supply and a Synthetic Oil Program”. Arno Press Inc. Page 204, the Karrick Process is capable of extracting from raw coal all of its chemical ingredients including oil and still retain a smokeless semi-char [coke] which burns much hotter and cleaner than the raw product.

In fact, this technology evidences that burning raw coal is a wasteful polluting extravagance. As an example - coal processed using the Karrick technique would release oil as a by-product which could significantly reduce, if not eliminate the need to import oil. More technical details concerning this process can be found by accessing www.byronwine.com/files/1860%20coal.pdf on the Internet.

The problem in Australia is getting industry to know about and for them to embrace Karrick. Correspondence sent in July 2008 to a major power station concern, which experiences high levels of emission problems and would be harshly affected by an emission trading scheme, making them aware of the merits of Karrick has elicited no reply. This action was taken because all of their activities in relation to cleaning up coal appeared to be concentrated on high temperature gasification which wasn’t producing any notable results.

As there is an element of urgency in the need to physically prove the Karrick Process because of its valuable potential and because of no operational units throughout the world, the Federal Government, in the absence of private industry doing so, would appear to be the most likely candidate to take action by acquiring copies of the expired U.S. patents [appendix B] and have one of its scientific/engineering arms build and test a prototype Karrick retort.

Submitted by –
Alan Harris BA/Llb

August 29, 2008.

[The LTC Process](#)

[Common Ground Common Sense > Issues that Affect Our Lives > Energy Independence, Environment, Science and Technology > Energy, Environment, Science and Technology Issues Archive](#)

jeffmoskin

Sep 16 2005, 10:14 AM

A Clear Example of Crown Monopoly at Work

(True Health is reprinting an old story on a topic other than health and nutrition as a way of illustrating how fascism works in modern America. The same kind of suppression of innovative ideas goes on in many fields of endeavor including health and medicine. We believe this story is apropos for today's times since the rising costs of oil and the nature of air pollution are so much in the news. This story was first written by Harlan Trott, an investigative journalist with the Christian Science Monitor who had written the original expose in that paper back in March of 1950. The author knew Lewis Karrick personally and reported on his project development and the lack of support from bureaucrats and industry alike many times. There are other reports on this Karrick process to be found via Google on the Internet. Harlan Trott updated the original story for Tom Valentine's Newsreal Magazine of June 1977. This is that 1977 version—as poignant today as it was then, if not more so.)

By Harlan Trott, 1977

In this time of brownouts and shortened work-weeks called the energy crisis, it may cheer you to know we can make oil from coal cheaper than oil wells can produce it. A Government scientist named Lewis Karrick had a lot to do with improving the basic process, but federal energy officials have been suppressing it for 50 years. They blandly deny this, claiming only the inventor can suppress his patents.

By “suppress” we mean, according to Webster: “to keep from public knowledge --to refrain from divulging.”

The Karrick process involves low-temperature carbonization (LTC) of coal. This means heating coal at from 680 to 1380 degrees F., in the absence of air to prevent combustion, so as to distill out all the oil and gas.

When you treat a ton of coal by LTC, you get back about a barrel of oil; 3,000 cubic feet of rich fuel gas; and 1,500 pounds of smokeless solid fuel. But if you harness the process to an integrated energy plant, using the off-peak steam, the same ton of coal can produce 100 kilowatt-hours of electricity besides.

The Karrick process would combine a carbonizer, a refinery, a city gas works and a central electric station so as to produce oil, gas, smokeless fuel and electricity under the same roof at the same time. If an LTC plant produced more smokeless fuel than it and the community could consume at the moment, you could convert the surplus to water gas. And the water gas can be converted into four barrels of oil by the (Fischer) synthesis process.

Geologists tell us there are enough latent heat units (BTUs) in America's coal reserves to last us for a couple of millennia, give or take a few centuries. The LTC

process is all it would take to dispel the monopoly myth that we must depend on Arabian princes to regulate our thermostats until world petroleum prices have broached some unspecified hole in the sky where it would pay us to begin using it. The energy crisis is really only an information crisis. The cartel is blocking LTC with help from Washington and Wall Street. These three monopoly powers—Big Oil, Big Bureaucracy, and Big Banking—oppose LTC because an integrated LTC energy industry would be amen-able to private enterprise initiative.

Congress is doling out millions to the energy giants to experiment on variations of Friederich Bergius' coal-to-gasoline (hydrogenation) process. Standard Oil of New Jersey (now Exxon) paid \$35 million for it in 1930. The government even built a \$10-million 30,000 barrel-a-day pilot plant with it. But the Secretary of the Interior scrapped it in 1953 saying it was useless to keep "trying to get more than a quart of water in a quart jar."

Our synthetic-fuels program is primarily a charade. In fact, the Department of Interior is so infiltrated with cartel advisers the LTC process has as much chance as a cabbage in a garden tended by goats. But Congress keeps pouring millions in research and development (R & D) funds down the cartel's rat hole, never dreaming our federal synthetic-fuels program is only treading water.

In his 1974 progress report, Interior Secretary Rogers Morton unknowingly conned Congress into thinking his coal experts had achieved a "spectacular scientific breakthrough by fueling a navy destroyer with oil from coal. The newspaper, television, radio and magazine media were aboard," Morton enthused, "to record the spectacle for posterity." Little did the Secretary realize the cartel's favorites in his shop were only putting him "on". His energy advisers were suppressing the fact that in the 1920s, Karrick and his government coworkers were instructed to show Japanese visitors to their Rocky Mountain pilot plants how to make oil from coal and oil shale; and then in 1941, Japan gave us Pearl Harbor with it.

In 1925, the one filling station in Elko, Nevada, was dispensing gasoline made from rocks at the Catlin Oil Shale Company's plant just 10 miles south of town. All during the 1930s, Karrick's engineering students were driving cars around Salt Lake City on gasoline made from coal in their campus lab.

Nor was Secretary Morton's 1974 "progress" report the first time Congress got "taken" by the cartel. When a Senate Committee went to Pittsburgh to hold public hearings on the first synthetic-fuels research subsidy bill during World War II, the Bureau of Mines made a big deal out of driving the senators from their hotel to the federal building in limousines fueled with gasoline whipped up just for the occasion in the Government's Pittsburgh lab.

Said Senator Gurney to Senator O'Mahoney, "My, what won't science think up next!" The trouble with our government-sponsored science is the cartel won't let it get its thinking untracked.

Exxon's Bergius process is so massive and complex it cannot be made to stand on its own financial feet. The cartel insists the taxpayers must prop it up for them with a subsidy program "comparable to the U.S. Merchant Ship Subsidy Act." This means

fuel bills and taxes will go up.

Big Oils' Wall Street spokesman is H.C. Bailey, vice president at Kidder, Peabody where he is "responsible in corporate finance for petroleum." Big banking's scheme for subsidizing oil from coal is defined in the Nov/Dec 1973 Defense Transportation Journal. Bailey concedes "only the largest corporations" are sophisticated or experienced enough in the promotion of massive debt to manage an open-ended pork barrel of this inflationary magnitude. Our federal energy officials endorses Bailey's concept.

Even though the Government has no viable alternative to its suppressed Karrick process, the Interior Department is calling for an "Apollo-size" oil-from-coal program. Last September the cartel tried to ram a Ford-backed bill through the House without debate. The measure would have provided up to \$4 billion in government loan guarantees to begin building synthetic-fuels plants that aren't even on paper. The House voted 193 to 192 against buying something less even than a pig in a poke. (American taxpayers have been ripped off for these porky subsidies non-stop since— editor)

There is nothing "miraculous" about LTC, nor did Karrick invent it. Before 1860, more than 50 plants were extracting oil and gas from coal. Boston had five LTC plants producing oil and gas for heat and light; and axle grease and paraffin for candles. But in 1873, "too much" cheap petroleum had forced the last coal-oil plant to shut down. Free enterprise made oil from coal before the rise of the Rockefeller dynasty, and it could revive the art, especially with crude oil selling around \$12 a barrel. The prospect terrifies the cartel. A small rural co-op can make and distribute electricity. A big farmers' co-op can refine and transport petroleum products. A New England town can make its own gas, its own electricity. This has been going on for years. Scores of them still do. So why can't a big city or a small village -- or a Federal TVA -- combine all these steps with LTC of coal under the same roof? The fact that they can is backed by Karrick and his federal coworkers, and eight years of pilot plant tests at the University of Utah.

Every year we consume over half a billion tons of raw coal, This means we destroy 400 million barrels of oil a year; and 1.4 trillion cubic feet of rich fuel gas, plus billions of dollars worth of coal chemicals used in making fertilizers and plastics. Energy officials continue to shrug off this staggering waste. They are the ones who know, but aren't telling the public what LTC is all about. Meanwhile all this enormous energy wealth goes up the flue in the form of smoke, soot and sulfuric fumes -- all for want of a national fuels conservation and development policy.

There isn't the slightest question about the economic feasibility of the so-called Karrick process. Our Government admits it. Listen to this colloquy between a senator and the Government's top synthetic-fuels adviser.

Senator Murdock: The statement by Mr. Karrick, I will read the statement and then see what you have to say about this: "Therefore, these coals, where there is a market for the smoke-less fuels and the gas, can produce oil cheaper on an average, cheaper than the average cost at the well of petroleum in the western part of the United States..."

“Dr. Fieldner: “I think that is a fair statement, if you can get a market for the solid products. That is the main product. They will obtain from this coal from 20 to 35 gallons of tar oil as a by-product.” (Hearings, on U.S. Senate Res. 53, Oct. 1942, p. 1546).

Ahah! By simply labeling LTC coal oil a “by-product” is all it takes to exclude it from our federal R & D program. If our energy officials ran out of gas on the desert, would they spurn a gallon of LTC gasoline because it was a byproduct?”

Would the engine balk? Germany fueled its wartime Luftwaffe on oil from coal. Japan bunkered her battleships with LTC oil from Manchuria shale. Did Hitler or Tojo object?

After commercial-scale test runs on Appalachian coal in 1947, Karrick told the Ohio Society of Professional Engineers it is feasible to produce oil from coal in the Hocking Valley for 0.00 a barrel. (Yes zero!) The going market price or the upgraded coal byproducts—as, electricity, smokeless fuel and phenols—would let you give away the oil and still net a fair return.

Today (1955) this startling economic claim or Karrick’s oil-from-coal method is being demonstrated on a commercial scale in England. The Rexco Company is using the very process our Bureau of Mines developed with our tax dollars and then discarded. Rexco owns and runs five LTC plants producing smokeless fuel for industrial and domestic users in Britain’s official clean-air zones.

“It is a very efficient plant,” according to Rodney Coltart, “carbonizing 1,000 tons per day, 75 percent of which is recovered as high grade smokeless fuel for industrial and home use.”

This San Francisco mechanical engineer visited Rexco’s Snibston plant at Coalville in Leicestershire, England, in October 1974. He was taken on an all-day tour of the plant with Hahn Brown, director; M.J. Platts, manager; and Robert Ingliam, chief engineer.

Coltart’s written report to president C.D. Allen of the Natural Resources Corp. explains: “They have to meet rigid standards on their product set up by the Government.” What Coltart didn’t say was that the Government is in the smokeless fuel business, too. It’s a competitor of Rexco’s. Only the Government’s works aren’t as efficient. Perhaps that’s why Rexco has to operate with one hand tied behind its back. Listen:

“The original plant contemplated six retorts in line but only five were installed since the Coal Board limits their coal allocations.” In other words, Rexco is bucking a state monopoly!

The Snibston plant makes 750 tons of smokeless fuel a day. At the same time the retorts produce three million cubic feet of fuel gas, and around 650 to 700 barrels of tar oil. The Coltart report states:

“Because of the lack of space for processing the oil and phenols into saleable products

they are burned at high temperatures in a furnace using the excess gas from the retorts. No smoke or odors are discernible. If the tars and phenols were processed and sold, the revenue derived would pay off the cost of the entire plant in about two years, according to the Rexco people.

“The conveying and processing part of the plant involves the services of three men and a supervisor per shift. All were easily trained from scratch. Adding a few more retorts in line would not require any additional personnel.”

Secretary of Commerce Herbert Hoover (the Bureau of Mines was then in Commerce) made Karrick—not the Bureau—custodian of the Government’s pioneer oil-from-coal research data. Hoover advised Karrick to file patents—as scientists in the Department of Agriculture had been doing—rendering the broadest public service with them, and giving the Government full credit.

Sixteen patents were issued to Karrick outright. One was held jointly with Douglas Gould, who was destined to have an outstanding career as a petroleum chemist with a major oil company. One, covering underground distillation and gasification of coal and oil shales, was held jointly with his brother Col. Samuel N. Karrick, builder of the underground works on Corregidor. All of the Karrick patents have expired, either before or after his death in 1962. If Karrick’s process was any good, you say, Standard Oil would have bought him out! Actually, Old John D. tried.

In 1929, Standard Oil officials assisted in drawing up a charter for a subsidiary tentatively titled Oil & Gas Development Company. They tendered Karrick the position of vice president, chief engineer and one-third of the stock. In exchange, Karrick was to turn over his patents and supporting data.

That offer followed months of talks between Karrick and a patent broker named Leo Ranney. Ranney was officed a few doors down a corridor from Col. Robert Hayes, at 26 Broadway. Hayes was Standard’s chief counsel. Standard (N.J.) is now known as Exxon.

In March 1930, Ranney wrote Standard Oil officials for advice on handling Karrick’s three blanket patent applications on the underground gasification of coal. “As you know, your patent attorneys and technologists have investigated these processes since December,” Ranney reminded them. “Mr. Howard [President of Esso (N.J)] has called to my attention that there is a vast amount of work ahead in connection with hydrogenation and that there would be probable delay in the development of the gasification processes by Standard alone... He has asked whether I would feel disposed to fully protect Standard in any event (which, of course, goes without saying)...”

Ranney added that the inventions have been explained to the techno-legists of the Insull group Cities Service, Columbia, United Gas Improvement, Allied Chemical and Consolidation Coal, “all of whom are interested and some of whom are waiting for me to tell them how large an interest they may secure and for how much. The reason for this rather hurried letter is that I have a telegram from Mr. Insull that he and their engineers will be in New York on April second to see whether some sort of deal can be made.

“Considering that Standard and Consolidation are close together, I have talked the processes over several times with Mr. Barrington, and at the last conference he wondered whether the whole underground gasification business might not be a matter that Mr. Rockefeller himself would like to father, to benefit both his coal and oil interests...”

The next day Karrick wrote Ranney: “I see no fault with the letter to President Clark of the Standard Oil Development Company of March 21, a draft of which you handed me yesterday, it being understood that it refers to our processes for the underground gasification of coal, as per our agreement of November 1, 1929. Also that Standard interests have no rights or equity at the present time in these processes.”

The same day Standard bid for Karrick’s process, the New York Times reported South Jersey had purchased patents rights to Frederick Bergius’ process for hydrogenation of coal directly to gasoline, from I.G. Farben in Germany. Thus the cartel was on the verge of controlling two contrasting and controversial methods of making, oil from coal — hydrogenation and LTC.

One of the flimsier sophistries advanced by the Bureau of Mines is that the LTC process is a last-gap effort to reinstate the family coal shovel. The Bureau contends that to produce oil and gas in any appreciable amounts, LTC would “glut the country with mountains of char.” Not so! Listen to this from the Hearings, HR. 7330, May 12, 1950, p. 136. (Emphasis added):

Congressman Barrett (directed to Karrick): Would you produce at the same time considerable amounts of gas with your process?

Karrick: The Rocky Mountain coals, as far north as Rock Springs, Wyoming, in Colorado and Utah, all yield from 30 to 45 gallons of oil per ton. They vary within the same seams. You get from 2,000 to 2,700 cubic feet of gas out of it, but we learned to heat only until just the last trace of oil is out. Then it can’t be made to smoke under any conditions. It burns with a clear, very long, clear, blue flame. The gas yield can be varied. The more gas you drive out of this smokeless fuel, the lower the B.T.U. of the gas; so you can boost it up to 6,000 cubic feet of 800 B.T.U. gas per ton of coal processed.

“Then it was demonstrated that all of the solid smokeless fuel could be made into water gas. In that case you get about 40,000 cubic feet of 300 to 350 B.T.U. gas from a ton of processed coal. And out of that you could make four barrels of oil by the [Fischer] synthesis process.

“The thing to do is to distill the oil out of the coal, while making a smoke-less fuel and high B.T.U. gas. In a national crisis you could quickly go to converting this reactive, solid smoke-less fuel into oil ... Those who have been using this smokeless fuel [i.e., industries and electric power plants] will then go to burning raw coal for the duration of the emergency. That is the way we think the national fuels economy ought to be handled.”

As soon as Karrick and his coworkers proved they could make oil from coal cheaper

than oil wells, the Government stopped work on the oil-rich coals in the Rocky Mountains. Karrick was transferred to the Bureau's Pittsburgh station where experts from the oil, steel and chemical giants, and their faculty friends at Carnegie Tech, could "assist" in the Government's work. The cartel's assistance has been largely of a mortuarial nature ever since.

A storm broke out in the early 1950s over the relative merits of the Bergius and Karrick techniques. The Bureau put out so much wrong information about both processes that Dr. Eugene Ayres was brought into the Government arena to untangle the information mishmash in private. Ayres was Director of Research at Gulf Oil, the ablest fuels economist on the cartel's prestigious Paley Commission. Ayres left the Bureau's "30 coal experts" with these blunt conclusions:

- Bergius is too costly in terms of dollars and coal.
- About half the thermal value of coal is destroyed.
- The process requires much precious water.

Bergius Hydrogenation need not be used to any large extent in the future because:

- Simple, continuous LTC techniques exist, such as the Bureau of Mines developed, in which moderate yields of oil are accompanied by major yields of smokeless fuel.
- The oil can be converted to liquid fuels while the smokeless fuel is an excellent fuel for steam boilers.
- The Karrick method—including the conversion of the oil to motor fuel—destroys only 25 per cent of the thermal value—half as much as the Bergius method.
- LTC is an interesting process because of the ratio of national demands for liquid fuels for electric power and other essential coal uses is not very far away now [1952] from the ratio of yields from LTC, and is expected to balance before 1980 because demand for electric power is growing faster than demand for liquid fuel.
- Welding together the petroleum, gas, coal and electric power industries to form an integrated energy industry is plausible for several reasons.
- The cheapest liquid fuel from coal will come when coal is processed by LTC for both liquid fuel and electric power.
- This should also give the cheapest electricity.
- The private sector can handle the job without subsidy, but not in competition with those who skim off the oil from coal and sell the residual smokeless fuel to power plants.

Federal antitrust lawyers advised Karrick not to sign up with Standard Oil, believing the cartel intended to bury him until (A) his patents covering the underground distillation and gasification of coal had all expired; (B) the country had run out of

natural gas, at which time pipelines crossing the country's big coal fields would all have been paid for; and © the cartel would then be ready to pump gas from Karrick's underground gasification process into the hungry gas lines.

Instead, Karrick was advised to go back to Utah and teach students at the university how to produce four clean energy products from coal at the same time under the same roof; and show the people of Salt Lake City how their city-owned LTC multi-energy plant could erase their state capital's bad name as the smoky "Pittsburgh of the Rockies."

A Karrick plant was built at the university large enough to be classed as a pilot plant. Here are some of the findings combed from theses submitted by candidates for bachelors' and master's degrees in arts and sciences during Karrick's eight-year tenure as director of coal products research:

- The gasoline obtained from Utah coal is equal in quality to any of the tetraethyl gasolines.
- More horsepower is developed in internal combustion engines with Utah coal.
- Increase in mileage of about 20 per cent is obtainable under the same conditions.
- Yields by volume of about 25 per cent of gasoline, 10 per cent kerosene and 20 per cent good quality fuel oil may be obtained from coal.
- The smokeless fuel when burned in an open grate or in boilers delivers 20 to 25 per cent more heat than the raw coal.
- As a complimentary product in the process of distilling coal, electrical energy can be produced at a minimum cost.
- In a Karrick plant with 1,000 tons of daily coal capacity there would be sufficient steam generated to develop 100,000 kilowatt-hours of electrical power with no extra cost (except for capital investment of electrical equipment) other than the loss of temperatures of the steam passing through the turbines.
- Marketing of these products in most cases will be competitive with other products of coal and petroleum, according to Clarence Schmutz, candidate for Master of Arts.
- This coal gas should deliver more heat than natural gas, per heat unit contained, because of the greater amount of combined carbon and less dilution of the combustion gases with water vapor.
- The gasoline, fuel oil and other oil products would be a small part of the volume of petroleum products now imported into the State, and therefore, should find a ready and enthusiastic market.
- A 30-ton plant and oil refinery will show a profit over and above all operating and capital costs. And the products will sell at present prices for like products.

- A large commercial plant treating 1,000 tons of coal per day or more will be able to affect many economies in investment and operating costs.
- The process steam cost would be very low since this steam would be derived from the off-peak boiler capacity, or steam bled from turbines, in central electric stations. Fuel for raising steam and superheating would likewise be reduced in cost.
- The chief criticisms voiced are: (1) that a commercial-sized plant based on the principles worked out by Mr. L.C. Karrick and his associates in the Government service will not succeed because of mechanical troubles, reference of a plausible nature having been made to failures of other plants that treated other coals with other processes under other conditions; and (2) that the markets for the coal products described in this thesis are limited, and therefore, such a venture is economically unsound.
- No difficulties whatsoever were encountered with the successful mechanical operation of the plant used for it to work smoothly.
- A commercial-sized plant of a few units should be built and operated as a “ward” of a public-spirited body in Utah. The Utah Research Foundation was initiated by Mr. Karrick for the endowment of the University of Utah and to bring other public benefits. This should be the logical organization to father this movement.
- When such a plant has operated for a reasonable period it will then be time for those who oppose such development to present facts and figures, if any, in support of the claim that such enterprise is not economically feasible, according to George Carter, candidate for master of science; and S. Clark Jacobsen, co-worker and co-investigator in the engineering research contained in this thesis.

Jacobsen won the Mechanical Engineering Honor for the “best under-graduate thesis of the year” awarded by the American Society of Mechanical Engineers, Utah Chapter. The Carter-Jacobsen thesis was summarized in a number of scientific and industrial journals.

Carter’s point — about suspending criticism until a process has been fairly tested under commercial conditions—is well taken. The Rexco plant in Leicestershire, England, is such a plant.

Karrick was a prime mover in the early development of Rexco’s basic N.T.U. retorts. More recent proof that LTC is a powerful engine for the creation of wealth is found in the fact Rexco has completed drawings of a plant that will process 1,000,000 tons of coal a year. The blueprints were ordered by a client in Denmark intending to import coal from Poland to process into smokeless fuel for markets in Sweden.

Only one question clouds this newest Rexco undertaking, and that is of monopoly’s making. The Danes will be processing a million tons of coal a year. They will at the same time be producing about 700,000 barrels of oil. The question is: Will the Danes be permitted to process their oil from coal into saleable products; or will they, too, find it expedient to destroy it?

(Editor's note: Folks, nothing has changed since this story was printed in my Newsreal magazine back in 1977. Government and business have forged many monopolies that retard innovation and old-fashioned American ingenuity—no matter how you look at such monopolies, the word that clearly defines this evil is "conspiracy." We have the same brutal monopoly control in matters of health and nutrition. It is long past due for American citizens to become citizens, instead of subjects, and rise up together to remove these politically and economically imposed chains.)

<http://www.tomvalentine.com/html/karrick2.html>

This is a "lo-fi" version of our main content. To view the full version with more information, formatting and images, please [click here](#).

Invision Power Board © 2001-2008 [Invision Power Services, Inc.](#)

U.S. Patents Issued to Lewis C. Karrick for LTC of Coal

- 1,835,878 (Cl. 2-268), 8 December 1931; "Leaching & Treating Apparatus".
- 1,894,691 (Cl. 202-7), 7 January 1933; "Destructive Distillation of Carbonaceous Material".
- 1,899,154 (Cl. 251-29), 28 February 1933; "Valve".
- 1,901,169 (Cl. 202-15), 14 March 1933; "Distillation of Carbonaceous Material".
- 1,901,170 (Cl. 48-206), 14 March 1933; "Gasification of Carbonaceous Material".
- 1,906,755 (Cl. 202-9), 2 May 1933; "Method of Improving the Properties of Solid Fuel by LTC"
- 1,913,395 (Cl. 262-1); "Underground Gasification of Carbonaceous Material- Bearing Substances".
- 1,919,636 (Cl. 262-1), 25 July 1933; "System of Mining Oil Shales"
- 1,923,213 (Cl. 203-3), August 1933; "Process & Apparatus for Carbonizing Coal".
- 1,938,596 (Cl. 202-221), 12 December 1933; "Retort".
- 1,942,650 (Cl. 202-17), 9 January 1934; "Apparatus for Coking Bituminous Coal"
- 1,945,530 (Cl. 202-16), 16 February 1934; "Destructive Distillation of Solid Carbonizable Material".
- 1,950,558 (Cl. 202-15), 13 March 1934; "Process for the Production of gas, Oil & Other Products".
- 1,958,918 (Cl. 202-15), 15 May 1934; "Process of Destructively Distilling Solid Carbonaceous Material".
- 2,011,054 (Cl. 202-6), 13 August 1935; "Process of Destructive Distillation of Carbonaceous Material".
- 2,268,989 (Cl. 202-15), 6 January 1942; "Process for Improving Fuel".
- 2,283,556 (Cl. 221-145), 19 May 1942; "Valve".