

CHINA ENERGY NEWSLETTER

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简介

INTRODUCTION

The year 1980 saw the continuation of the policy of “*readjustment, restructuring and consolidation*” of the national economy.

Changes in the Politburo seemed to be part of the Deng Xiaoping formula for future leadership after the incapacitation of the aged top leadership. A Central Committee Secretariat was reconstituted and the various secretaries tended to be supporters of Deng’s modernization policies. It is the Secretariat that carries on the daily supervisory activities of Party work in the society and economy.

Economic difficulties became increasingly apparent during 1980.

The rate of growth of the Gross National Product (GNP – by value) dropped in 1980 to an estimated 5.5% compared with a 7% increase in 1979 and a 12% increase in 1978.

The Chinese in late 1980 cancelled or reduced additional construction projects. During this period the Chinese officially told the Japanese that China would cut crude oil exports to Japan, contrary to the Long Term Trade Agreement. China stated it would reduce supplies to Japan in 1981 to 8.5 million tons from the 9.5 million ton target and that in 1982 it would supply 8.5 million tons from the 15 million ton target.

According to an official governmental release, China produced 105.8 million metric tons (MMT) of petroleum in 1980. ERAC analysts believe the Chinese have underreported their production, and that production has reached 124.8 MMT. Official Chinese reports state that total coal production reached 600 million tons in 1980. ERAC estimates that Chinese natural gas production reached 100.9 to 106.4 billion cubic meters.

The Chinese are continuing to build pit-head coal power plants which are more economical than those built close to the cities. The additional advantages of such facilities

are reduced coal haulage, transportation problems and urban pollution.

The People's Liberation Army (PLA) continues to play the dominant role in the development of atomic energy in China. It is usually the PLA that engages in uranium exploration and smelting and construction of nuclear facilities.

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SUMMARY

The first quarter of 1980 saw the continuation of the policy of “*readjustment, restructuring and consolidation*” of the national economy.

Changes in the Politburo seemed to be part of the Deng Hsiaoping formula for future leadership after the incapacitation of the aged top leadership. A Central Committee Secretariat was reconstituted and the various secretaries tended to be supporters of Deng’s modernization policies. It is the Secretariat that carries on the daily supervisory activities of Party work in the society and economy.

Production – ERAC estimated that Chinese petroleum production reached 2.3 million b/d in 1979. Coal production reached 551–562 MT and natural gas production reached 95.5 to 96.8 BCM in 1979, according to ERAC estimates. Significant Chinese production increases in these areas this year seem probable, despite official pessimism.

China, reportedly, has completed a design for a pressurized water type atomic power plant. Designs for other types of nuclear power plants are progressing.

简介

INTRODUCTION: PETROLEUM AND THE GENERAL ECONOMY

The first quarter of 1980 saw the continuation of the policy of “*readjustment, restructuring, and consolidation*” of the national economy. This policy included various experimental projects, the essential intent of which was to improve industrial efficiency. The large and populous province of Sichuan (Szechuan) was included within the experimental group. Several sized factories in Sichuan were given greater control over their own management – hence permitting greater decision making authority at lower levels. In addition, peasants in the province were allowed greater individual initiative. Time will indicate the success of such innovations.

At a Central Committee Plenum (technically the Fifth Plenum of the Eleventh Central Committee, February 23–29) several major problem areas were addressed. Four politburo members (Wang Dongxing, Chen Xilian, Ji Dengkui, and Wu De) who had been under considerable criticism for past association with the so called “*gang of four*” “*voluntarily*” stepped down. Two proteges of Vice Chairman Deng Xiaoping – Hu Yaobang and Zhao Ziyang were promoted to the Politburo’s Standing Committee. The promotion to the Politburo’s Standing Committee of the relatively young Hu and Zhao seems to be part of a Deng formula for future leadership after the retirement or death of several aged top leaders. It seems that Hu as head of the Party Secretariat would be influential in Party affairs and Zhao influential in Governmental affairs.

The Secretariat of the Central Committee was restored by the February Plenum with almost all of the eleven made up of Deng’s followers in their fifties and early sixties as secretaries.¹ The Secretariat of the Central Committee reportedly handles the “day to day work of the Party in various fields.”

The adopted Communique of the Fifth Plenum stated that the “*socialist modern-*

ization program has [now] started on a course of sound development.”¹ The Plenum obliquely suggested a National Congress of the Chinese Communist Party late in 1980 and stipulated one of the main items on the agenda would be “the outline of a long-term plan for the development of the national economy.”² Hence we can expect another long term plan revealed around the end of the year.

Early in 1980 (January 16) Deng Xiaoping delivered an important report to a cadre conference in Peking. In this report Deng stated the three major tasks for the 1980s were opposition to Soviet “*hegemonism*” and the “*safeguarding [of] world peace,*” the return of Taiwan, and lastly

to step up economic construction, that is , to step up the building of the four modernizations. In a nutshell, the four modernizations mean economic construction. *National defense construction can not be carried out without a certain economic foundation.** The main aim of science and technology is to serve economic construction.³

In other words, barring an increasingly hostile international environment, China will *stress* economic development as opposed to military modernization. In addition, science policy is geared toward increasing productivity in industry and agriculture.

1. CHEN MING (Hong Kong) April 1, 1980, pp 5–8. See also TOKYO SHINBUN, March 1, 1980, p 2

1. BEIJING REVIEW, No 10 (March 10, 1980), p 7

2. *ibid*, p 10

* Emphasis added

3. CHEN MING (Hong Kong) April 1, 1980, pp 11–12

油田

OIL FIELDS

In January, the Chinese reported that the Liaohe field, begun in 1970 was now producing five million metric tons of oil and 1,700 million cubic meters of gas annually. The Liaohe field stretches across a large area from Shenyang in the north to Bohai Bay in the south and from Yingkou in the east to Jenzhou in the west. This field reportedly has eight oil producing districts with 1,800 wells producing low sulphur light oil.¹

In February, information became available on a new field, Dongpu, which reportedly had a low sulphur oil, and is located along the lower reaches of the Yellow River (Huang He). The new field is in the border area of Shantung (Shandong) and Honan (Henan) provinces along both banks of the river. The new field is close to rail transportation which will speed development. According to reports, more than two hundred producing wells, water injection wells and exploratory wells have been drilled along with over 200 kilometers of underground pipes.²

It was also reported that the Renqui field in Hebei (Hopei) produced more than ten million tons of crude oil in 1979.³ In addition new wells with high production yields have been drilled in the Tarim Basin, in southern Xinjiang (Sinkiang) province.

It was reported in February that a new oil field in the south-western part of the Qaidam (Tsaidam) in Qinghai (Chinghai) Province was discovered. Reportedly, out of the 26 wells drilled so far, 20 have produced oil and natural gas. Daily production in two test wells have exceeded 100 tons of crude oil and 10,000 cubic meters of natural gas.⁴

1. XINHUA, January 28, 1980

2. XINHUA, February 26, 1980

3. BEIJING DOMESTIC SERVICE IN MANDARIN, March 28, 1980

4. URUMQI XINJIANG REGIONAL SERVICE IN MANDARIN, February 16, 1980

生产和中国日本石油关系

PRODUCTION & SINO-JAPANESE PETROLEUM RELATIONS

ERAC estimate for total petroleum production during 1980 is 124.8 MMT. This is an eight percent increase over 1979. The view of ERAC analysts is that China has generally underreported its oil production for the last several years because of strategic stockpiling.

YEAR	ANNUAL PRODUCTION*	
1976	85	ERAC estimates
1976	84.7	released PCR estimates
1977	95.5	revised ERAC estimates
1977	91.5	officially derived PRC estimates
1978	105.1	ERAC estimates
1978	101.6	officially derived PRC estimates
1978	104	officially revised PRC estimates
1979	115.6	ERAC estimates
1979	106.1	released PCR estimates
1980	124.8	ERAC estimates

*in Million Metric Tons

Sino-Japanese economic relations continued to expand in 1980 after the 1.5 billion dollar government to government loan the Japanese extended in 1979 for six major projects and the one billion dollar project for joint development of petroleum in the Gulf of Bohai. In February the Chinese Government presented a formal request for Japan's cooperation in the development of coal and non-ferrous metal mines, particularly copper. It now seems there is a shift in Chinese foreign export policy. The Chinese now believe the development of oil fields will take a good deal of time and moreover the demand for oil at home has begun to significantly increase. As a result the Chinese Government is now seeking to expand production and exports of coal and non-ferrous metals.

The major direction of the Chinese request was the joint development of eight coal mines and two non-ferrous mines. Four of the coal mines the Chinese requested are to be jointly developed based on the formula of compensatory trade, whereby loans are to be paid back in kind or according to a joint venture formula.¹

In March, China agreed to lower the price of Taching crude by \$0.075 (from the present \$33.20 per barrel) to \$33.125 beginning in April. At the same time, China agreed to increase its oil exports to Japan in 1980 by 150,000 tons. An amount, based on the Japan-China Long Term Trade Agreement, which China failed to deliver to Japan in 1979.

1. NIHON KEIZAI, February 8, 1980, p 11. Additional details on request. See also US Japan Trade Council, SINO-JAPANESE ECONOMIC RELATIONSHIP: A NEW PHASE IN 1979, Council, Report No. 1 (January 4, 1980), *passim*

Thus, Japan will receive 8.15 MMT of Chinese crude in 1980.¹ The lowering of the Taching crude oil price may have been affected by the current international oil situation as well as the extensive financial aid offered to China by Japan.

精炼预留油油端口和罐车

**REFINING, RESERVES, OIL
PIPLINES, OIL PORTS
AND TANKERS**

In February it was reported that the second oil pipeline from the Karamai field to Urumqi (Urumchi), Sinkiang province was being accelerated. This 500 kilometer artery is designed to speed up the transportation of petroleum to Urumqi and points further east.²

探险索赔海上钻井设备和计算机

**EXPLORATION, CLAIMS,
OFFSHORE DRILLING EQUIPMENT
AND COMPUTERS**

The first US Government research vessel in more than 30 years will conduct joint research this summer in the East China Sea.

According to a recent report, China will permit on shore exploration for oil by foreign companies. Reportedly the Chinese will permit several foreign companies (Exxon Corp., Occidental Petroleum Corp., Union Oil Co. of California, Conoco Inc., Tenneco Inc., ENI [of Italy], the Romanian State Oil Company, Shell Oil Co., and Royal Dutch / Shell) would inspect Xinjiang (Sinkiang), Qinghai (Chinghai), Ningxia (Ninghsia), Shaanxi (Shansi) and Jiangsu (Kiangsu) provinces for petroleum. One contract has been signed with Compagnie Generale de Geophysique of France for a seismic survey in southeast Xinjiang.³

In January, 1980 the Chinese Foreign Ministry released a document asserting China's sovereignty over the Xisha (Hsisha) and Nansha Islands.⁴ This document was obviously produced to counter a Vietnamese report published last year.

Several foreign computer science delegations have travelled to China and each has generally reported the deleterious effects of the Cultural Revolution on the computer science area. Early in 1980 the British Computer Society published a report citing similar conclusions but reported seeing a two million instructions per second (Mips) computer working at the Academy of Science and were told a 5 Mips machine was under development.⁵

The first Chinese designed semisubmersible oil drill is being built at the Shanghai Shipyard. The vessel will be used for offshore drilling and is 55 meters long, 75 meters wide and 100 meters high with a 4,200 meter square deck with a

1. ASAHI, March 29, 1980, p 9

2. BEIJING XINHUA DOMESTIC SERVICE IN CHINESE, February 23, 1980

3. WALL STREET JOURNAL, February 22, 1980, p 46

4. XINHUA, January 30, 1980

5. COMPUTERWORLD, March 3, 1980, pp 1 & 6

helicopter landing pad. The vessel has a 200 ton displacement and can survive gale force 12 winds.¹

采煤

COAL

The Minister of the problem plagued Coal industry, Hsiao Han was replaced during the first quarter of 1980 with Gao Yanguen. Gao's background remains unclear but it appears he has some administrative experience in scientific organizations.

YEAR	PRODUCTION*	
1978	600	official report
1978	525-535	ERAC estimates
1979	618	revised official report
1979	620	official report
1979	551-562	ERAC estimates
1980	620	official goal

*in Million Metric Tons

Gao in various addresses and publications indicated that coal is China's primary source of energy and greater efforts must be made to increase production so that the four modernizations may proceed. Specifically, Gao stated that China will seek to develop coal gasification and liquification processes in areas with large coal reserves but poor transportation. A research institute in this field will be set up, he stated.

Gao also stated that China will continue to use foreign technology to exploit coal resources; train "a large number" of competent coal technicians and research workers, and speed up the modernization and mechanization of the coal industry.²

In February a large coal field with a proven reserve of 14.6 billion tons was discovered in Jungar Banner County in Inner Mongolia. Initial estimated reserve deposits exceed 36 billion tons.³

The Ministry of Coal Industry released statistics stating China has discovered more than 600 billion tons of coal since 1949, with prospecting continuing. Sixty-five percent of the proven deposits are in Shanxi Province and in Inner Mongolia, while sixteen percent of the deposits are in Anhui, Shandong, Henan and Gansu.⁴

1. SHANGHAI CITY SERVICE IN MANDARIN, March 30, 1980

2. XINHUA, March 3, 1980; BEIJING IN MANDARIN TO SOUTHEAST ASIA, April 9, 1980

3. DOMESTIC SERVICE IN CHINESE, February 21, 1980

4. XINHUA, February 25, 1980

Problems continue in the coal industry with mine safety a prominent one, unserviceable coal freight cars hindering coal transportation (some 70–80,000 cars have been damaged annually since 1972) and inefficient managers still hinder the industry.

天然气和水力发电

NATURAL GAS & HYDROELECTRIC POWER

ERAC estimated natural gas production for 1979 at 95.5–96.8 BCM (see *CEN 4–79* for details.) ERAC estimated an eight to ten percent production increase for 1979. This is in contrast with an official, but tentative production increase of 1.7% released late last year.¹

In March the American Government signed an agreement with China under which it will provide technical assistance for several Chinese hydroelectric power projects and help with research on the flow of the Yangtse River. Chinese Deputy Power Minister Li Rui and David Freeman, Chairman of the Tennessee Valley Authority signed an annex to a Sino-American protocol on hydro development concluded last August.

In the first quarter of 1980 the Chinese continued to stress the need to build small hydroelectric power stations throughout the country.

核能开发

NUCLEAR DEVELOPMENTS

According to one report, but confirmed by several other observers, the Chinese have recently completed the design for a pressurized water type atomic power plant of 300,000 Kw. This plant, construction to be soon started, would be located in the vicinity of Shanghai and be completed in three to five years. Reportedly the Chinese have a second design team working on a design for a heavy water type power reactor with a capacity of 100,000 to 200,000 Kw.²

The first Congress of the Chinese Nuclear Society was held in early 1980. It emphasized the continual need for research, particularly in the building of nuclear power stations and the development of nuclear technology and isotope research.³ At the Congress it was again mentioned China planned to build three giant accelerators during the 1980s, reportedly: a 50 GeV* proton synchrotron accelerator, a heavy ion accelerator and an electron synchrotron radiation accelerator.

In March the Sichuan University Nuclear Science and Technology Research Center was officially established. It is expected that this research center will become a major research unit in southwest China.⁴

观察和结论

OBSERVATIONS AND CONCLUSIONS

In March an international meeting on petroleum geology was held in Beijing (Peking) under the sponsorship of the United Nations' Department of Technical Cooperation for Development (UNTCI) and the China National Oil and Gas Exploration and Development Corporation. Geologists from twenty-five countries attended the meeting.

The State Council has transferred some 350 persons from various ministries to local enterprises to help these organizations in carrying out the 1980 "energy saving" plans. The work team forms will assist enterprises in conducting a general survey of energy utilization, in finding out the differences in the energy consumption rates of major enterprises as compared with other enterprises both at home and abroad, in analyzing the reasons for such differences and in working out solutions to this problem.¹

Increasingly, the Chinese Government is concerned with pollution and the environment. For example, the Hangzhou (Hangchow) Oil Refinery since the 1950s has discharged its waste directly into the Grand Canal. In early 1980 these discharge pipes were disconnected and the waste products either reused or treated.²

During the first quarter of 1980 the Sino-American Trade Agreement giving *most favored nation* tariff benefit to China was formally approved by the US Congress. This will probably result in a substantial increase in US exports to China in 1980.

A coal gasification plant, the first in China is now under construction in the northeast city of Shenyang. A lignite pressurized gasification plant, to be completed in 1985, it reportedly will produce coal gas and recover benzene, naphthalene, tar and acids from the lignite. This coal will in turn be used by families to heat their homes. Completion of this facility will be projected for 1985 when it will produce 540,000 m³ of gas.³

1. XINHUA, December 31, 1979

2. ASAHI, March 15, 1980, pp 1 & 4

3. XINHUA, February 28, 1980. See also XINHUA, February 22, 1980

4. WEN WEI PO, (Hong Kong) March 10, 1980, p 1

* GeV stands for giga electron volt

1. BEIJING XINHUA DOMESTIC SERVICE IN CHINESE, March 14, 1980

2. XINHUA, March 21, 1980

3. XINHUA, March 4, 1980

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汇总

SUMMARY

During the second quarter of 1980 there was continued discussion about the modernization path or paths China was following and should follow in the future. Yu Qiuli (Yu Chiu-li), Vice Premier, on a visit to Japan in early April stated that China would not deviate from the central task of modernization in the 1980s. He also stated that China was drawing up a ten year (1981–1990) plan to ensure economic construction will continue during the decade. Yu, added that this plan would give priority to agriculture, energy, communications and transport as well as cultural, educational and scientific undertakings.

The ERAC estimate for total petroleum production during 1980 is 124.8 MMT. This is an eight per cent increase over 1979. The view of ERAC analysts is that China has generally underreported its oil production for the last several years because of strategic stockpiling.

The capacity of Chinese refineries has not kept up with the steep rise in crude oil production and changing consumption patterns over the last decade. By 1979 Chinese refining capacity, according to ERAC estimates reached 60–65% of total petroleum production. The nature of the mix of refinery output has led to shortages of light oil products.

In May the Chinese government signed exploration agreements in the Bohai Sea area with France and Japan.

The Chinese are continuing to build pit-head power coal plants which are more economical than those built close to the cities. The additional advantages of such facilities are reduced coal haulage transportation problems and urban pollution.

The People's Liberation Army (PLA) continues to play the dominant role in the

development of atomic energy in China. It is usually the PLA which engages in uranium exploration and smelting and construction of nuclear facilities.

Chairman Hua Guofeng presided over the meeting and Vice Chairman of the Party Deng Shaoping delivered the memorial address. Deng emphasized the negative aspects of the cultural revolution. At the same time, Deng portrayed Liu as a forerunner of his modernization plan. Deng told of Liu at the Eighth Party Congress in 1958 when Liu proposed shifting the focus of Party work to economic construction.

简介

**INTRODUCTION:
PETROLEUM AND THE
GENERAL ECONOMY**

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Yu's comments were part of a three year debate on "*correct*" approaches to modernization. In February, 1978 a draft economic plan was revealed which it was said would bring about the "*four modernizations*" (agriculture, industry, national defense, and science and technology). By the end of 1978, the Chinese leadership came to a new and sobering appraisal of the scope and nature of the modernization scheme. The Third Plenum in December, 1978 no longer referred to the long term draft economic plan but referred to shorter one year national economic plans and proclaimed a three year (1979-1981) readjustment program. In 1979 and 1980 various economic experiments were carried on or continued to be carried on in factories and communes.

It was rumored in Hong Kong and China that the third session of the Fifth National Peoples Congress would take place in August. Further, it was rumored that a new Ten Year Economic Plan would be adopted, important personnel changes would be effected, and constitutional changes initiated.¹

In May a memorial service for Liu Shaoqi (Liu Shao-chi) was held. Liu had died of illness and abuse in 1969 and was rehabilitated at the Fifth Plenum (February, 1980).

1. TUNG HSIANG, No. 22, July 16, 1980, pp 4-6

油田

OIL FIELDS

Continued exploration at the Daqing (Taching) oil field, China's largest, has resulted in the location of several new fields. Lying to the north and northwest of Daqing are Xingxi, Longhupao, and Honggang; to the east and southeast are Shengping and Chaoyangou and to the south are Fuyu, Xinmu and Xinbei.¹ Reportedly the new discoveries have increased the known oil reserves at Daqing by 13.3 per cent.

Putachua, another new oil field which is part of Daqing, went into operation on June 16. Construction of this field was begun in April, 1979 and was completed thirteen months earlier than scheduled. The new field, with an area of 157 square kilometers reportedly has a projected annual capacity for the next few years of approximately 1.3 million tons of crude oil.²

China's first reported underground gas storage, a hollow rock chamber 800 meters below Daqing is now in full operation. This reservoir can hold an estimated 40 million cubic meters of gas and reportedly ensures a good flow even in extremely cold weather. A gas injection station directs the gas into the storage chamber and five gas wells top the stored gas. The wells can pump a total of 10 million cubic meters a year.³

Shengli oil field, China's second largest producing field after Taching, has overfulfilled its well drilling footage plan for the first six months of 1980. Drilling footage reportedly increased 31% over the corresponding period of 1979.⁴

It was reported that another high output well was dug in the eastern Qaidam Basin (Tsaidam) in Qinghai Province (Chinghai). This is the third high yielding oil well discovered in the area this year. Reportedly on May 25 trial production was begun with a daily output of more than 300 tons.⁵

1. TA KUNG PAO, May 7, 1980, p 1. A Xinhua (Hsinhua) news release mentioned only six new fields as opposed to eight. A possible explanation for the difference may be that two of the fields may lie in Jilin Province rather than Heilongjiang Province where Daqing is located

2. HEILONGJIANG PROVINCIAL SERVICE IN MANDARIN, June 17, 1980

3. XINHUA, May 1, 1980

4. JINAN SHANDONG PROVINCIAL SERVICE IN MANDARIN, June 12, 1980

5. XINING QINGHAI PROVINCIAL SERVICE IN MANDARIN, May 29, 1980

生产和中国日本石油关系

PRODUCTION & SINO-JAPANESE PETROLEUM RELATIONS

ERAC estimate for total petroleum production during 1980 is 124.8 MMT. This is an eight per cent increase over 1979. The view of ERAC analysts is that China has generally underreported its oil production for the least several years because of strategic stockpiling.

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1978	105.1 ERAC estimates
1978	101.6 officially derived PRC estimates
1978	104 officially revised PRC estimates
1979	115.6 ERAC estimates
1979	106.1 released PCR estimates
1980	124.8 ERAC estimates

*in Million Metric Tons

1. SINO-JAPANESE PRESS COMMUNIQUE, May 29, 1980

2. For a partial list of refineries see Appendix A of China Energy Newsletter *CEN 1-77*, April, 1977

精炼预留油油端口和罐车

REFINING, RESERVES, OIL PIPELINES, OIL PORTS AND TANKERS

During the second quarter China's Premier (and Chairman of the Party) Hua Guofeng visited Japan, eight years after the normalization of diplomatic relations. The tempo of friendship and economic relations has picked up over the last two years. China is now well on the way to becoming a major Japanese trading partner. The Chinese, in turn, quite likely will heavily rely on Japanese capital and technical expertise to aid in their modernization process. During Premier Hua's visit to Japan the two countries signed an agreement on scientific and technological cooperation and a long term contract on joint prospecting and exploitation of coal and oil.¹

The capacity of Chinese refineries has not kept up with the steep rise in crude oil production and changing consumption patterns over the last decade. This pattern was first pointed out in China Energy Newsletter in early 1977 (see *CEN 1-77 April, 1977*).²

The history of Chinese petroleum refining was directly affected by the Sino-Soviet dispute. China's first modern petroleum refinery, constructed in the mid 1950s, was built with Soviet equipment and expertise. With the worsening of the dispute in 1960 Chinese refining technology stagnated, despite limited technical assistance from the West.

By 1979 Chinese refining capacity, according to ERAC estimates reached 60–65% of total petroleum production. Also in 1979 the Chinese had apparently bought three hydrocrackers from Japanese, West German and American firms. The Chinese have subsequently indicated they are seeking eight to ten additional refining complexes.

Refining problems have become more acute during the late 1970s and 1980s. One cluster of problems lies in the mixed nature of refinery output and a changing consumption pattern. An important study, recently released by the US Government entitled “*Chinese Oil: Product Output and Consumption*” stated¹

High growth in oil output and limited processing capabilities of Chinese refineries dictated the pattern of oil consumption during the seventies. In the early seventies oil was relatively cheap and oil output growth in China was high. China avoided some of the capital costs of secondary refining by relying on high oil output growth and primary distillation to yield light products. In view of the low oil price, burning the excess unprocessed heavy oils in boilers probably appeared economical.

Adjustments were not made when the price of oil went up, and the growth in secondary refining capacity did not keep pace with growth in oil output. As a result the share of relatively unprocessed heavy oils grew from 38 percent to 50 percent of refinery output between 1968 and 1977. The most desirable lighter products, gasoline and diesel fuel, dropped from 42 to 32 per cent over the same period. The remaining products – gases, naptha, and kerosene – fell from 20 to 18 percent of the total.²

The above situation, according to the US Government study has led to shortages in light oil products. The shift from using heavy oil in boilers to coal has compounded the problem. The question remains whether China can expand its refining industry within a short to medium time period to meet its changing internal consumption needs. ERAC analysts are not optimistic this problem will be significantly modified before 1986.

1. NATIONAL FOREIGN ASSESSMENT CENTER,
ER M 80-10235, May 7, 1980
2. *ibid*, p 9

探险索赔海上钻井设备和计算机

EXPLORATION, CLAIMS, OFFSHORE DRILLING EQUIPMENT AND COMPUTERS

Exploration for energy resources and minerals in general continues to be a Chinese priority. Chinese will now receive a reward from ten yuan up to 5,000 yuan for information they supply to the Geological Department.¹

In May a national committee for the dissemination of geological information was set up in Peking. The Committee aims at carrying out popular geological activities and helping the local geological societies spread knowledge in their field. It will commend advanced units and spread knowledge of geology.²

In May the Chinese government signed exploration agreements with France and Japan. Two French companies, Societe Nationale Elf Aquitaine (SNEA) and Total. SNEA's contract covers an area of 9,000 square kilometers from Shijutuo in the Central Bohai Sea area to the eastern part of the Bohai Sea. The contract with Total covers an area of 10,000 square kilometers in the northeast part of the Bohai Sea.

The two corporation contracts stipulate that the Chinese, side will pay 51 per cent of the total investment and the French firms the remaining 49 per cent. The cost of the operation China has conducted so far in the designated area will be counted as the Chinese share in the exploration investment. According to the contracts, the term of exploration is four years and the term of production is 15 years. If no commercial oil discoveries are made, the French firms have no claim on China. If commercial oil discoveries are made the French firms will get a proportion of oil annually for 15 years. The contracts stipulate that in the 15 years of commercial production, part of the oil will be used to cover operational costs, part will be retained by China and part will go to cover payment for risks of exploration as well as investment in the exploration and development undertaken by both sides, with the French side having the right to buy the remainder of the third part of the oil. Within 45 days of the contracts becoming effective, the two sides are to set up joint committees on management as well as a joint administration body in charge of purchases and sub-contracts. No further specifics were initially released.³

The Japanese were negotiating during the second quarter a long term agreement for exploration and exploitation. Reportedly the Japanese will prospect for oil in the western and southern parts of the Bohai Sea.⁴ In addition, there were reports that the Japanese will also aid in exploration of the interior of China.

Claims again were exchanged over the island groups in the South China Sea. On April 24, a spokesman for the Republic of China reaffirmed its sovereignty over the Spratly Islands (also called the Nansha Islands).⁵ In *Peoples Daily* of the People's Republic of China an article in early April claimed sovereignty over Paracels (Hsisha Islands) and Nansha Islands.⁶ In June the People's Republic of China installed two permanent solar energized lighthouses in the Hsisha (Xisha) Islands group.⁷

1. XINHUA, May 21, 1980

2. XINHUA, May 9, 1980

3. XINHUA, May 29, 1980

4. TA KUNG PAO, May 24, 1980, p 1

5. PRESS RELEASE-COORDINATION COUNCIL FOR
NORTH AMERICAN AFFAIRS,
No. 80-051, April 28, 1980

6. RENMIN RIBAO, April 7, 1980. p 4

7. XINHUA, June 1, 1980

采煤

COAL

YEAR	PRODUCTION*	
1978	600	official report
1978	525–535	ERAC estimates
1979	618	revised official report
1979	620	official report
1979	551–562	ERAC estimates
1980	620	official goal

*in Million Metric Tons

In April the new Minister of the Coal Industry, Gao Yangwen, was interviewed. He stipulated five important goals for 1980 that his Ministry was following. They are as follows:

1. We are planning to adopt new technologies and new equipment to change the technological status of the coal industry and to speed up the development and modernization of the industry in order to meet state needs for coal.
2. We are planning to change the structure of the coal industry, to utilize coal comprehensively and to make efforts toward coal gasification and liquefaction and in coal chemistry in order to put coal to full use as energy and a raw material for the chemical industry.
3. On the basis of self-reliance, we are planning to make full use of foreign capital and to import technology from abroad in order to expand the scale of our coal industrial construction. At the same time, we are planning to increase our coal exports.
4. We are planning to basically improve mine safety and to gradually improve the material and cultural lives of our workers and staff members.
5. We are planning to train large numbers of competent technicians for the coal industry and to develop scientific research in the coal industry.¹

1. BEIJING IN MANDARIN, April 9, 1980

China is reportedly speeding up the construction of the eight major coal bases, each

天然气和水利发电

NATURAL GAS & HYDROELECTRIC POWER

with a designed capacity of ten million tons a year, discussed in past China Energy Newsletters (CEN.)

As reported earlier in CEN the Chinese in order to ease power shortages, are building thermal power stations near coal fields. These pit-head power plants are more economical than those built close to the cities, reduce transportation problems and urban pollution. According to one report twenty large pit-head power plants with a capacity of more than 250,000 kilowatts each have been built in various parts of the country by the end of 1979. With a combined capacity of over eight million kilowatts they account for twenty percent of the total installed capacity of thermal power plants in China.¹ At the present time more pit-head power plants are under construction in the coal fields at Datong in Shanxi Province, Tangshan in Hebei Province, Huainan and Huaibei in Anhui Province, Xuzhou in Jiangsu Province and Pingdingshan in Henan Province.²

During the second quarter it was also reported that a large coal field was discovered in the Donglong area of Heilongjiang Province in the Northeast. It has an estimated reserve of 1.53 billion tons or 13.3% of the proven coal reserves of the entire province.³ It was also reported that the Province of Shanxi's coal output is one sixth of the national total.⁴

China's conservation program continued unabated during the second quarter. In Sichuan (Szechwan) a mixture of methane gas and diesel oil is increasingly used to run engines and generators. The mixture, reportedly one third cheaper than other fuels, significantly reduces (approximately 70 percent) the use of diesel oil.⁵ Also as part of their conservation program the Chinese are encouraging the use of liquid gas in large and medium size cities. The later saves petroleum and improves the air quality.

China is building 11 large hydroelectric power stations and when completed they will generate 490 million kilowatt / hours of electricity annually and help relieve power shortages in Hubei, Sichuan, Guizhou, Yunnan, Guangxi, Hunan and Qinghai.⁶

During the second quarter the Chinese again emphasized the development of small hydroelectric stations. Guangdong (Kwangtung) Province was touted as an example of such development. It was reported that in 1979, 500 small hydro power stations were built in that province with an installed capacity of 117,300 kilowatts. At present, according to the report 40 per cent of the total hydroelectric power generated – some 1.8 billion kilowatt hours annually – is by small units.⁷ Moreover China National Machinery and Equipment Import and Export Corporation and the National Electrification Administration of the Philippines recently signed an agreement to transfer

1. BEIJING REVIEW, No. 27, July 7, 1980

2. *ibid*

3. HARBIN HEILONGJIANG PROVINCIAL SERVICE, April 28, 1980

4. XINHUA, May 20, 1980

5. XINHUA, April 18, 1980

6. BEIJING DOMESTIC SERVICE IN MANDARIN, April 7, 1980

7. GUANGZHOU GUANGDONG PROVINCIAL SERVICE IN MANDARIN, April 7, 1980

technology on mini-hydro electric power equipment and also to jointly produce selected power equipment.¹

核能开发

NUCLEAR DEVELOPMENTS

During the second quarter of this year the Chinese reported the discovery of additional uranium mines in the Nanling Mountains area of Guangdong (Kwangtung) Province.²

The People's Liberation Army (PLA) plays the dominant role in the development of atomic energy in China. For example it is often the PLA which engages in uranium exploration and smelting,³ and construction of nuclear facilities.⁴

1. XINHUA, March 31, 1980

2. TAKUNG PAO, April 17, 1980, p 2

3. BEIJING XINHUA DOMESTIC SERVICE, March 29, 1980

4. BEIJING DOMESTIC SERVICE IN MANDARIN, April 24, 1980

观察和结论

OBSERVATIONS AND CONCLUSIONS

In May China was admitted as a member of the World Bank and is thus expanding her opportunities for international borrowing. Taiwan, which had occupied the China chair since 1949 was expelled. In April World Bank President Robert McNamara was in China and reportedly remarked "*Universally, the discussions were from our point of view extremely constructive and very successful.*"

Reportedly an Energy Commission has been created in China with as yet not publicly explicit powers. Yu Qiuli was made chairman of this new commission.¹

During the last days of the second quarter reports reaching Hong Kong indicate a major oil rig collapse. These reports were confirmed in early July by the official Chinese news service Xinhua (Hsinhua). The Bohai No. 2 Oil Drilling Rig "*flipped over and capsized*" during towing while being relocated in the Bohai Bay area on November 25, 1979. As a result, according to one report 72 people died and direct economic losses reached 37 million yuan.² This accident is one of scores in the energy industry, particularly the coal sector. Incompetence, antiquated equipment, and bureaucratic haggling are prime factors.

1. CHEN MING, No. 3, July 1, 1980, p 8

2. AGENCE FRANCE PRESS, July 7, 1980. See also XINHUA, July 21, 1980

CHINA ENERGY NEWSLETTER

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汇总

SUMMARY

During the third quarter of 1980 political and economic policies centered on two developments – one, the so-called “*Bohai Two Incident*” and two, the National People’s Congress in late August. In November, 1979 an oil exploring rig capsized in the North China Sea with substantial loss of life and property. Subsequent investigation led to the conclusion that negligence was an important factor in the accident. This incident led to a renewed campaign particularly in the energy industries, for increased safety consciousness. Some newspaper editorials stated that safety must be of prime concern with production a secondary concern.

The National People’s Congress (NPC) ratified several personnel changes and passed several new laws (i.e. Income Tax Law on Joint Ventures). The personnel changes resulted from the Politburo’s apparent desire to inject younger blood into the administrative apparatus. The thrust of the economic discussions which occurred at the NPC was a continued emphasis on economic pragmatism.

Yao Yilin, Vice Premier of the State Council and concurrently Chairman of the State Planning Commission delivered an important economic message to the NPC and stated that additional economic experiments would be carried out which combine state planning and market forces.

Official Chinese reports stated that planned petroleum production for 1980 was 106 MMT. Coal production, according to official reports was to reach 620 MMT.

During the third quarter, Chinese officials admitted that China could not meet its petroleum export agreement with the Japanese for 1981 and later. Negotiations were being conducted to revise the long term trade agreement.

Six new experimental energy research centers were being built across China. These

include a gas turbine center at Xian, a high voltage transmission center at Wuhan, and automation systems for the power industry center at Nanjing.

In September, the Carter Administration approved more than 400 export licenses for the sale of advanced American electronic equipment to China. These export licenses included permission to purchase a sophisticated geological data computer.

简介

INTRODUCTION: PETROLEUM AND THE GENERAL ECONOMY

During the third quarter of 1980 political and economic events centered on two developments – first, the so-called “*Bohai Two Incident*” and second the National People’s Congress.

In August, a serious coverup was revealed by the Chinese Government, subsequently called the “*Bohai Two Incident*.” In November, 1979, during a storm, the No. 2 oil exploring rig capsized in the North China Sea. Seventy two men lost their lives and the State lost a piece of equipment valued at 57 million yuan. Two days after the collapse of the rig, and again in January, 1980, Song Zhenming, Minister of Petroleum reported to the State Council and suggested that the storm was the primary cause for the destruction of the oil rig. Subsequent investigation indicated mismanagement and this led to the dismissal of the Minister of Petroleum, admonishment and demerit for Vice Premier Kang Shien (Kang Shien, who handles petroleum affairs in the State Council, was cited for his failure to handle the matter promptly and conscientiously) and the transfer of Yu Qiuli as Chairman of the State Planning Commission to Chairman of the less important and newly established State Energy Resources Commission.¹

Those government officials criticized and demoted were clearly negligent in their duties, but growing economic problems and political infighting also played a role in their criticism. Beyond the alleged “*breakup*” of the “*Petroleum Kingdom*” or “*Petroleum Gang*,” the apparent aim was a clear one. The State Council text read as follows:

The Bohai No. 2 accident is a grave warning not only to the petroleum department but also to other departments, enterprises and undertakings throughout the country. Safety in production

1. The above account was based on personal interviews conducted by the editor in Hong Kong in August 1980, and CHEN MING, No 34, August 1, 1980, pp 5-8; SOUTH CHINA MORNING POST, August 26, 1980, p 1; HONG KONG STANDARD, August 25, 1980, p 4; XINHUA DOMESTIC SERVICE IN CHINESE, August 29, 1980

is of prime importance for all economic departments and production enterprises all over the country.¹

Each of the provincial presses has discussed the accident and generally drawn the conclusions stated in the following Jiangsu statement:

The Bohai No. 2 oil rig accident is a profound lesson. It is not only a serious warning to the petroleum industry departments but also a profound lesson for us. The provincial People's Government calls for all departments in all localities and all enterprises to conscientiously study and implement the State Council's decision, draw a lesson from the Bohai No. 2 oil rig accident and seriously improve leadership and work. In view of this, the circular calls for doing the following work well:

1. It is necessary to organize cadres at all levels and staff members and workers to conscientiously study the State Council's decision, editorials and commentaries concerning the Bohai No. 2 oil rig accident and related directives issued by the CCP Central Committee and the State Council; further deepen the understanding of the safety policy in production and labor protection and strengthen the concept of the legal system and the sense of responsibility of the masses.
2. All enterprises in all localities must assign personnel and set specific times for examining safety situations in production by relying on the masses.
3. It is imperative to investigate the causes of any major accident which has caused deaths or injuries and seriously handle it.
4. It is necessary to strengthen leadership over the work of safety in production and labor protection. Governments and leading economic organizations at all levels, departments in charge of enterprises and labor departments and trade unions at all levels must include the work of safety in production and labor protection on their respective meeting agendas, heighten the awareness, improve the work style, strengthen organizations and assign personnel to promote the work.²

The second important development during the third quarter was the convening of the National People's Congress (NPC) between August 29, and September 10. This Congress, generally a "rubber stamp" for decisions made elsewhere, clearly emphasizes

new political and economic trends. At this Congress Hua Guofeng resigned as Premier and Zhao Ziyang succeeded him. In addition, the NPC accepted the resignations of seven Vice Premiers (Deng Xiaoping, Li Xiannian, Chen Yun, Xu Xiangqian, Wang Zhen, Wang Renzhong and Chen Yonggui), passed several new laws (Marriage Law, Nationality Law, Income tax law on Joint Ventures with Chinese and Foreign Investment, and Individual Income Tax Law), and established a committee to review the country's constitution. The NPC also confirmed three new Vice Premiers, Zyang Jingren (Chairman of the Nationalities Commission), Zhang Aiping (Chairman of the Military Science and Technology Commission) and Huang Hua (Minister of Foreign Affairs).

The personnel changes resulted from the Politburo's apparent desire to inject younger blood into the administrative organs and to place more pragmatically oriented types in key positions. The shift from Hua to Zhao, from Yu Qiuli to Yao Yilin and others as well, means a deepened and continued policy of economic pragmatism. Premier Hua Guofeng acknowledged in a speech before the NPC that "for a fairly long period in the past, a left-deviationist tendency prevailed in many aspects of our economic work. [...] We divorced ourselves from reality and flouted objective laws, recklessly setting and blindly chasing high targets."¹ The NPC sought to reverse such policy.

Yao Yilin, Vice Premier of the State Council and concurrently Chairman of the State Planning Commission, delivered an important economic report to the NPC on August 30. Yao stated that regulation of the economy will be carried out within the guidance of the state plan but added that additional economic experiments would be carried out which combine state planning and market forces.²

The need for economic reforms was highlighted by Finance Minister Wang Bingqian's announcement that government expenditures exceeded income by over eleven billion US dollars in 1979 and that 1980 would probably show a deficit of approximately five billion US dollars. He also speculated that 1981 would be a deficit year (possibly of 3.2 billion US dollars).³

Zhao Ziyang, the new Chinese Premier, at the conclusion of the NPC outlined a new economic program in which he pledged to give workers a greater role in management of factories and other enterprises. His remarks echoed those of Yao Yilin.

1. XINHUA, August 25, 1980

2. NANJING JIANGSU PROVINCIAL SERVICE IN MANDARIN, August 27, 1980

1. HUO GUOFENG, speech at the NPC session of September 7, 1980

2. YAO YILIN, Economic report at the NPC session of August 30, 1980

3. WANG BINGQUAN, Report on Financial Affairs at the NPC session of August 30, 1980

油田

OIL FIELDS

Intensified exploration persisted in China's Far West (Qinghai [Tsinghai], Xinjiang [Sinkiang] and Gansu [Kansu]) during the third quarter of 1980. The Qinghai Petrochemical Bureau and the Qinghai Geological Research Institute were at the forefront of this endeavor. In July, the first extra-deep oil well of the Yumen field in Gansu was drilled. The test drilling operation concluded on June 18 following a 17 month effort. The well reached a depth of 7,700 meters.¹

Daqing (Taching) production for the third quarter continues to fulfill its quota. Roughly one half of all Chinese petroleum comes from the Daqing complex. Daqing has now gone into an investment program. For example, Daqing has entered a compensation trade agreement with a Dalian glass manufacturing plant for \$2.72 million US. Daqing expects to be repaid within four years.

In several instances, oil fields are in locations which have large numbers of minority people. Frequently, these people are not employed at the field, and if employed, they are given the least desirable positions. Better positions are given to the Han Chinese. On some occasions this has led to worker unrest.

The latest example of discrimination was at Huabei oil field in North China. Some people of the Hui nationality passed the examination for employment at the field and were then assigned to a distant portion of the field where Hui meals were not available. The Hui workers complained and eventually the Hebei Provincial Chinese Communist Party intervened and rectified the situation.²

1. LANZHOU GANSU PROVINCIAL SERVICE IN MANDARIN, July 8, 1980

2. XINHUA DOMESTIC SERVICE IN CHINESE, July 19, 1980

生产和中国日本石油关系

PRODUCTION & SINO-JAPANESE PETROLEUM RELATIONS

In early September, Japanese officials and Chinese officials (including Vice Premier Yao Yilin, Chairman of the State Planning Commission, Vice Premier Kang Shien and State Planning Commission Deputy Chairman Fang Weizhong) met in Beijing. According to reports, the Chinese again stressed that oil production will "hardly increase" in 1981 and that China will have great difficulty in meeting its oil exports to Japan of 9.5 million tons in 1981 and 15 million tons in 1982. The Chinese also indicated that this leveling of production would continue until the later half of the 1980s. Vice Premier Yao indicated that China's 10 Year Economic Plan which is to begin in 1981 envisages the same level of petroleum growth.¹

It was also reported that Daqing (Taching), during the first half of 1980, surpassed the corresponding period of 1979 by producing 470,000 more tons of crude oil.² Crude oil production continued to rise in July and August, according to one official account.³

ERAC analysts argue that the Chinese are underreporting their production for several reasons. Strategic stockpiling goes on unabated. The Chinese are using the alleged shortage of oil to sell the Japanese other products, including coal.

In late July, two Japanese companies – the Japan China Oil Development Corporation and Chengbei Oil Development Corporation – set up field offices in Tianjin (Tientsin). These companies signed a contract with the Chinese National Petroleum Corporation in May, 1980 for joint oil exploration and development of the southern and western sections of the Bohai Sea. Nippon Steel Corporation and Japan Oil Engineering Company have agreed to provide engineering services for this project. This agreement calls for preparation of a "master plan" for the development of these sections of Bohai by April, 1981. The two Japanese consulting firms will look into offshore platforms already in use for test production, check on their technical vulnerability to damage by floating ice, as well as other factors, before writing the basic engineering plan.⁴ Test drilling will start in mid October in the southern part of Bohai Bay.⁵

1. ASAHI, September 4, 1980, p 1. See also NIHON KEIZAI, September 7, 1980, p 1

2. HARBIN HEILONGJIANG PROVINCIAL SERVICE IN MANDARIN, July 11, 1980. See also XINHUA, July 12, 1980

3. XINHUA, September 6, 1980

4. KYODO NEWS SERVICE, August 7, 1980

5. KYODO NEWS SERVICE, September 3, 1980

精炼预留油油端口和罐车

REFINING, RESERVES, OIL PIPELINES, OIL PORTS AND TANKERS

In October more details concerning the oil port at Dalian, located at the southern tip of the Liaodong (Liaotung) Peninsula became available. Dalian oil port is China's biggest and deepest, using relatively advanced technology. The oil port was opened in July, 1976, and now has an oil terminal, oil pipelines and facilities for treating waste water. There are thirteen oil tanks with a total capacity of 300,000 tons, an arch jetty more than 900 meters long, four oil pipelines with a diameter of 720 mm each and the 420 meter long oil wharf with five loading arms. On either side of the wharf are two berths, one for a 100,000 ton tanker and the other for a 50,000 ton tanker. Oil delivery

rate via the pipelines is 10,000 tons per hour. The facilities for treating waste water include two ponds of 15,000 cubic meters each and over 1,500 cubic meters of waste can be treated per hour.¹

A Nanfang Ribao report of September 1 revealed that the Zhangjiang-Maoming oil pipeline in South China was basically completed in July, 1978 but has never operated properly because of jurisdictional disputes between the Maoming Petroleum Industry Company and Zhangjiang Harbor Bureau. Reportedly, the crucial problem is who owns the oil pumping station, a key installation on the pipeline. This dispute was apparently settled in October, when the Zhangjiang Harbor Bureau took control. Reportedly, over 10,000 tons of crude oil are now being pumped to the Maoming Petroleum Industry Company through the pipeline every day.²

探险索赔海上钻井设备和计算机

**EXPLORATION, CLAIMS,
OFFSHORE DRILLING EQUIPMENT
AND COMPUTERS**

Exploration for energy resources continued to be a priority during the third quarter of 1980. For instance, active exploration progressed in Inner Mongolia (near the Daqing field in Heilongjiang Province) and in Xinjiang's western end of the Tarim Basin.

An interesting and key article on energy exploitation policy appeared in Renmin Ribao (People's Daily) on July 8, 1980. The article, entitled "An Assessment of Our Energy Resources and an Inquiry into Our Exploitation Policy." by Xu Junchang and others argued:

In the exploitation and utilization of energy resources, we must not take just one road. On the contrary, we must follow the principles of 'adopting the strong points and abandoning the weak ones' and become adjusted to the prevailing conditions and circumstances, taking a road of many changes.³

In short, what the article stated was a need for pragmatism and flexibility in the exploitation of energy resources.

The signing, in July, 1980, of an agreement between the Soviet Union and Vietnam for the joint exploration and production of oil and natural gas in the sea⁴ apparently triggered a series of articles in Guangming Ribao, a major south Chinese daily newspaper. These articles claimed that the Vietnamese historical position on the Xisha and Namsha Islands was weak to non-existent.⁵ Reportedly, intensified Chinese exploration and buildup of logistical areas continued around the above mentioned islands.

Oil firms submitted the results of their offshore seismic surveys to China in June.⁶ As a

result, the Chinese Government will begin the next step toward offshore oil exploration and exploitation. Ji Chongwei, a Chinese official in Hong Kong, in October stated that China will start to accept exploration bids from foreign companies from the end of 1980 through the first half of 1981.¹

During the third quarter, China signed an agreement with Statoil of Norway for Norwegian expertise in dealing with multinational oil corporations. Talks continued between China and Norway on more direct Norwegian participation in petroleum development.²

The number of computers in operation continued to rise, reaching between 1,500 and 2,000 units³ (not including mini computers) during the third quarter. A Cooperative Society for Chinese Users of the DJS-100 series computers was established in July. DJS (Dianzi Jisuanji Suzi/electronic computer digital) 100 series is one of the most commonly used. The society aims at strengthening the contacts between users, manufacturers and design units.⁴

Shanghai remains the center of the Chinese electronic industry. Reportedly the best computers are made in this city. Shanghai, according to one report will invest approximately 700 million US dollars in the next decade to further develop its electronic industry. There are some 200 factories in Shanghai, employing 150,000 people in computer related operations.⁵

Throughout 1980 the Chinese have sought to improve the quality of their computers⁶ and in July, the Chinese started a computer service operation. The company provides customers with various kinds of technical service, which include maintenance, computer programming and training of technical personnel. The company is under the State Electronic Computer Industry Bureau in Beijing. It seems probable that other provinces will shortly develop this type of company.⁷

1. AGENCE FRANCE PRESS, October 10, 1980

2. AFTENPOSTEN, (Oslo) June 30, 1980, p 4

3. CHINA NEWSLETTER, No. 20, October, 1980, p 25. Other Chinese sources refer to a total number of 2400 computers. XINHUA, July 2, 1980

4. XINHUA, July 2, 1980

5. SOUTH CHINA MORNING POST, (Business news supplement) August 26, 1980, p 1 and XINHUA, July 12, 1980

6. DOMESTIC SERVICE IN CHINESE, July 25, 1980

7. XINHUA DOMESTIC SERVICE IN CHINESE, July 29, 1980

采煤

COAL

In July, Yu Qiuli, Vice Premier of the State Council, spoke at a national coal conference on the guiding principles of China's energy program. Yu stated that Government policy calls for "*laying equal stress on energy exploitation and energy conservation, giving priority to energy conservation for the immediate future, and vigorously promoting technical innovation and structural reformation centered on energy conservation.*" Yu added:

In view of the industrial structure of energy resources in our country, it is necessary to give priority to developing coal industry and hydropower generation for a long time. It takes heavy investment and a long time to complete hydropower

1. CHINA FOREIGN TRADE, No. 5, September-October, 1980, p 7

2. GUANGZHOU GUANGDING PROVINCIAL SERVICE IN MANDARIN, October 4, 1980

3. RENMIN RIBAO, July 8, 1980, p 5. See Appendix for a translation of this article

4. TO KUNG PAO, (Hong Kong) July 22, 1980, p 2

5. GUANGMING RIBAO, July 25, 1980, p 3 and RENMIN RIBAO, August 1, 1980, p 7

6. SOUTH CHINA MORNING POST (Business news supplement), August 4, 1980, p 1

generation projects. These projects may not soon supply enormous amounts of energy. Therefore, the energy needed for developing the national economy will mainly rest on the coal industry for some time. The development speed of the coal industry will directly bear on the progress of modernization. The millions of workers and staff members of the coal industry front must deeply understand this and must have a strong sense of responsibility and be totally dedicated to their work.¹

During a telephone conference on August 30, 1980, the Minister of Coal Industry, Gao Yangwen, criticized himself for responsibility for several mining accidents. Gao stated *“continued accidents of this kind reveals over and again a serious problem with our guiding ideology and work principles.”*² The conference also pointed out that *“it is necessary, first of all, to raise the ideological awareness of coal mining cadres at all levels, inculcate in their minds the thought of ‘safety first’ and unwaveringly implement a ‘safety first’ policy in production.”*

The conference decided to carry out a checkup of safety measures at all coal mines from mid September to mid October. Matters which were to be reviewed were:

1. Whether or not a ‘safety first’ policy has been implemented;
2. Whether or not a safety supervision organ and an operational safety protection system have been established and perfected and, if so, whether or not they have played their due role;
3. The status of conducting education in safety techniques and the status of formulating enforcement rules for implementing ‘regulations for the safety of coal mines’;
4. Whether or not projects concerning safety facilities have been completed as scheduled, and if completed, whether or not they have produced the desired result;
5. Whether or not necessary measures have been taken against hidden dangers that may lead to serious accidents and whether or not such dangers have been listed under the readjustment plan;
6. Whether or not all the accidents that occurred this year have been handled in accordance with the ‘three no pardons’ principle.³

1. XINHUA DOMESTIC SERVICE IN CHINESE, July 27, 1980

2. XINHUA DOMESTIC SERVICE IN CHINESE, August 30, 1980

5. SHENYANG LIAONING PROVINCIAL SERVICE IN MANDARIN, August 27, 1980. See also AGENCE FRANCE PRESS, August 14, 1980

Throughout the third period of 1980, ERAC analysts continued to receive reports of coal mine accidents. In the Fuxin Mining Administrative Bureau in Liaoning

Province, a serious gas explosion occurred in which over thirty people were killed.¹ Reports indicated that the basic reason for the accident was that the colliery’s leadership stressed production and ignored general safety regulations. This emphasis on production first and safety second characterizes the coal industry. Yin Jichang, former chief engineer of the Kailuan Coal Mining Bureau, in an interview with Gongren Ribao (Worker’s Daily) stated:

In the past, we only thought about how to achieve the goal [of production], but we failed to notice that these high targets had a serious effect on production, because such targets ran counter to objective laws.

Yin further pointed out:

For many years, whoever had doubts about the five-year plan for doubling the annual output would be labeled as a ‘conservative,’ ‘lazybones’ or ‘coward’, or as one who ‘smears Kailuan’s good name’ or ‘tries to chop off the red banner.’ No one dared to come up with any idea running counter to this plan.

Other developments in the coal sector include:

The Huolinke Mining area in Inner Mongolia will be China’s largest opencut coal mine. It is being developed by a Peoples Liberation Army engineering unit. This coal mine has an estimated reserve of 12.9 billion tons of coal.²

The Chinese have expressed a desire to conclude a long-term agreement with Japan, ensuring a stable supply of coal to Japan until the end of the century. The Chinese proposal was advanced by Vice Premier Gu Mu in his talks in Beijing with the Japanese delegation from the Japan-China Association on Economy and Trade, led by Toshiwo Doko. Gu offered a pledge to provide Japan with ten million tons of coal in 1985. Gu also hoped China would undertake more coal development projects with Japan.⁵

Preparations have begun for building three more coal mines in the Hanxing coalfield in Hebei Province. The new mines will bring the total number of mines to eight, and these mines are near trunk railroad and road connections. Reportedly, the proven reserves of the Hanxing coal complex is 7,400 million tons.⁴

China is currently building or expanding more than ten large power stations in coal mining areas. These stations are: Dou He (Hebei Province), Matou (Hebei Province), Datong (Shanxi Province), Shengkou (Shanxi Province), Liangziguan (Shanxi Province), Yaomeng (Henan Province), Shiliquan (Shandong Province), Huaibei (Anhui Province), Huainan (Anhui Province) and Yuanbaoshan (Nei Monggol Province).

1. BEIJING DOMESTIC SERVICE IN MANDARIN, September 19, 1980

2. HOHHOT NEI MONGGOL REGIONAL SERVICE IN MANDARIN, August 4, 1980

3. KYODO NEWS SERVICE, September 12, 1980

4. BEIJING XINHUA, September 14, 1980

The total designed capacity of the above stations reportedly exceeds seven million kilowatts.¹

The Chinese coal industry has been chronically characterized as inefficient, safety deficient, and in general, problem prone. In July, as a partial response to coal worker discontent a 4 shift, 6 hour work schedule for underground miners, whose products are distributed under the unified state plan, was initiated. A majority of the miners are still not covered by this experiment, but if it works out, it is clear an attempt will be made to include all miners in it. In addition, a free, on shift meal will also be introduced at the above mines. Again, this is a harbinger of what may come in the smaller mines in the future.²

天然气和水力发电

NATURAL GAS & HYDROELECTRIC POWER

The secrecy that surrounds the natural gas industry in China continued into the third quarter of 1980. The natural gas industry, centered in Sichuan province, according to ERAC analysts has experienced over the last five years an average ten per cent annual increase in production. There are now signs of a slowing down of growth. For example in Sichuan the number of boilers fueled by natural gas has been reduced to save gas for the chemical industry. One report stated that one fourth of all Sichuan's industrial boilers are now fueled by coal.³

ERAC analysts still expect a significant increase in natural gas production in 1980, and predict an eight to ten percent increase, with production reaching 100.9 to 106.4 billion cubic meters.

By July, the Chinese had completed 62 per cent of the annual quota for major hydroelectric construction. Reportedly, eleven large hydroelectric stations, with a total generating capacity of 10.4 million kilowatts, were under construction during the third quarter of 1980.⁴

- 1. BEIJING DOMESTIC SERVICE IN MANDARIN, August 1, 1980
- 2. BEIJING XINHUA DOMESTIC SERVICE IN CHINESE, July 14, 1980
- 3. XINHUA, September 11, 1980
- 4. XINHUA, July 16, 1980
- 5. WEN WEI PO, August 3, 1980

核能开发

NUCLEAR DEVELOPMENTS

In August, there were continued reports of uranium being discovered in northern Guangdong Province.⁵

Throughout the third quarter of 1980, there were persistent rumors in Hong Kong of discussions between Hong Kong and China concerning a nuclear power plant in Guangdong Province.

观察和结论

OBSERVATIONS AND CONCLUSIONS

The Chinese have encouraged governmental workers at all levels to understand the country's energy needs and problems. This has been especially true at the higher levels of Government. In the summer and early fall over two thousand State Council cadres at the department, commission and bureau levels attended a series of lectures on energy.

It was reported in July that China is building six experimental centers across the country to study new techniques needed in developing China's power industry. At the Xian (Sian) center, gas turbine technology and thermal power boiler technology will be studied. At the Wuhan, center high voltage (above 500,000 volts) transmission technology will be investigated. The Nanjing (Nanking) center will study automation of the power industry – particularly the computerization of large power grids and hydropower stations. In Qinghe (Chingho), on Beijing's (Peking) northwestern outskirts, a center will study how to transmit power safely and economically. At Liangziang (Lianghsiang), southwest of Beijing, a center will study the properties of concrete poles and pylons, and how to introduce high-quality welding in installations. The Suzhou (Suchou) center will undertake the study of construction, operation and inspection of atomic power stations (the Suzhou center will not study nuclear reactors).¹

In September, the Carter Administration approved more than 400 export licenses for the sale of advanced American electronic equipment and military support equipment for China. US Under Secretary of Defense William Perry stated that he told Chinese officials that the US Government "would look favorably" on the purchase of a sophisticated geophysical data computer. A new Carter administration policy allows American

1. XINHUA, July 26, 1980

companies to sell China “*dual use*” technologies – that is technology which has civilian and military uses. However purchases of “*lethal weapons*” are still banned.¹

A State Energy Commission was set up in August, and Vice Premier Yu Qiuli was appointed chairman. Yu cited the Commission’s tasks as follows:

1. To study and formulate principles, policies, laws and regulations for energy in China;
2. To work out long-range programs and annual plans for energy and put them into effect;
3. To organize construction of large-scale comprehensive energy bases in the country;
4. To engage in scientific research, experiment and development of new sources of energy and study and disseminate new technologies for exploiting and saving energy in cooperation with other departments concerned.²

1. WASHINGTON POST, September 11, 1980, p 1

2. XINHUA, August 26, 1980

APPENDIX “An Assessment of Our Energy Resources and an Inquiry Into our Exploitation Policy”
by Xu Junchang, Chang Zhengmin, Yang Zhirong and Zhu Bin, RENMIN RIBAO, July 8, 1980, p 5.

To formulate a scientific energy policy and a long term plan for the national economy, it is absolutely necessary to have a correct assessment of our energy resources, proceeding from reality, stressing the strong points and abandoning the weak ones. Are our energy resources rich or poor? What special features characterize their composition? What should be the guiding principles in their exploitation and development? All these questions must be clearly answered.

RICH DEPOSITS. Energy represents the material foundation for the realization of our country's four modernizations. To accomplish China's modernization within this century, principal reliance in the energy sector is placed on such conventional sources as coal, crude oil, natural gas and hydropower. Our country has plentiful coal resources. The gross ascertained deposits amount to 600 billion tons, surpassing the gross deposits of all the European countries (except the Soviet Union) and also surpassing by several times the gross deposits of all the countries on the American continents (except the United States). According to a general survey made in the past 2 years, the hydropower resources of our country are extremely plentiful, the theoretical potential capacity amounting to 680 million kilowatts, occupying first place in the world. Of them, the capacity which can be developed and utilized is estimated at 370 million kilowatts, capable of generating 1,900 billion Kwh of electricity a year (roughly equivalent to 7 times our electricity output last year), comparable to the production of over a billion tons of coal a year. Moreover, hydropower resources are different from coal and crude oil in that they are nonperishable and can be continuously reutilized year after year. Up to the present, only a small portion of hydro power resources have been exploited and the hidden potentials that can be tapped are still enormous. Besides, we still have plentiful deposits of crude oil and natural gas. Judging from the gross deposits of energy resources in our country, undoubtedly we are one of the countries possessing the most plentiful resources in the world.

However, due to our enormous population, the per capita distribution of our energy resources is not only much smaller than that of the Soviet Union or the United States but also below the world's average level. This is a problem worthy of note. It reminds us that we should not be blindly optimistic in regard to energy resources, although it would also be a one-sided view to say that on a per capita basis we are a country poor in energy resources. It should also be noted that compared with the developed nations the possibility of our being able to add to our known, or confirmed, estimates of

deposits of energy resources is much greater. Actually, we are still in the preliminary stage of the exploitation and development of our petroleum resources. It has now been confirmed that the total area of our country's sedimentary basin capable of holding crude oil deposits extends over several million square kilometers and that so far our geological surveys have covered only a very small portion of this area. Besides, the survey work has not been done intensively enough. Presently, roughly one-fourth of the world's confirmed crude oil deposits lie under the sea bed. Our coastline is a long one. The area of our continental shelf is enormous. Judging from the geological work done in these areas over the last few years, our country's crude oil resources have a very promising future.

There is every possibility of our building up a modernized China relying on our country's relatively plentiful conventional energy resources. Unfortunately, because our geological survey work has fallen behind for a considerably long period, and also because of other causes, at present the reserve deposits of energy resources available for extraction are insufficient. In the coal sector, extraction and deposits are out of proportion; this is also true in the case of crude oil. For this reason, in the near future there cannot be any large increase in energy output. To change this situation, it will be necessary to tightly grasp geological survey work on energy resources, and simultaneously carry out, in accordance with predetermined plans, an intensive campaign to economize on energy consumption. In addition, economically speaking the recoverable deposits of energy resources depend to a large extent on the technical level of the extraction work. At present, the recovery rate in coal extraction in our country is only around 60 percent and that of crude oil only 30 percent. If that of crude oil can be doubled, then it will mean that the crude oil resources available for utilization will be increased by 100 percent. Hence, it is necessary to strengthen scientific research work on this score and strive hard to raise the recovery rate in extracting energy resources.

UNEVEN GEOGRAPHICAL DISTRIBUTION AND POOR QUALITY. The uneven geographical distribution of energy resources is a common phenomenon. This is true the world over. It exists in many countries. Take the Soviet Union for example. Over 90 percent of its coal deposits, two-thirds of its crude oil deposits, 70 percent of its natural gas deposits and over 80 percent of its hydropower resources are located in its Asian area east of the Ural Mountains. In its European area which is thickly populated and where its industries are concentrated there are scant deposits of energy resources. More or less the same situation is found in the United States. Our country has the same unevenness in the location of our energy resources. Coal is concentrated mainly in northern China, where Shanxi Province alone accounts for one-third of the national coal deposits, while scant deposits are found in the nine provinces and municipalities south of the Changjiang. Over one-half of the crude oil resources are concentrated in the Northeast. Over 70 percent of the hydropower resources are scattered in the South-

west. Generally speaking, the special feature of the geographical distribution of our country's energy resources is: In the North, coal is abundant but hydropower is scarce; in the South, coal is scarce but hydropower is plentiful.

The location of energy resources in one locality, far away from the consumption center, necessarily brings about two problems. One of them is the need for long-distance transport; the other is an increase in the investment in energy resources. Transporting coal from the north to the south is the result of the uneven distribution of energy resources in our country. Pending a fundamental change in energy resources and in the consumption structure, the situation in which we have to transport coal to the south from the north will have to continue. On the basis of the objective law of doing things, we cannot completely change the need to transport coal to the south but instead we must organize well and scientifically this job of coal transport. If we are to follow the principle of "promoting the strong points and abandoning the weak ones," then it will not do to strive to exploit coal in the south. Instead, we must intensively develop the hydropower resources of the south and also bring about a geographical distribution of industries so that coal transport can be shortened or minimized and we can economize on energy investments.

Another weak point in our country's energy resources is found in the relatively poor quality of the composition of the energy resources. Among the world's current energy resources, crude oil occupies a special position. From the standpoint of the recoverable reserves of energy resources, the proportion between coal and crude in the world is roughly 4 to 1. In our country the proportion between coal and crude differs greatly from that in the world. Hence, although certain developed nations can afford to maintain a high rate of consumption of crude oil and natural gas for a long time, our country should not follow suit. As to coal, its calorific value in industrially developed countries reaches over 6,000 great calories per Kg. Coal of a relatively inferior quality usually goes through a wash first before being marketed. In our country, the calorific value of coal is only around 5,000 great calories per kg and only a little over 10 percent of the coal output can go through the coal wash. So far this state of affairs in energy consumption has not received our adequate attention. As a matter of fact, quality also includes quantity. Energy resources of good-quality composition bring with them vastly beneficial economic effects concerning all such factors as extraction, transport, storage and utilization. Quantitative increases without, or with only scant, actual economic benefits are extremely extravagant. Much can be derived from this lesson.

PRIORITY EXPLOITATION OF SUPERIOR-QUALITY ENERGY RESOURCES EXPERIENCES in both this country and abroad show that along with intensively exploiting and developing hydropower resources, giving priority to the exploitation of crude oil, natural gas and coal of superior quality is an important condition for the speedy development of the economy. In the last 20 years or more, one of the important factors contributing

to the high speed development of the world's economy was the large-scale utilization of crude oil. At present, it is no longer possible for us to make use of cheap crude oil from abroad in our modernization program. We should therefore go our own way. Our country is still rather poor at present. The limited financial resources available must be used to produce the greatest economic results. In terms of calorific value, investments in crude oil exploitation amount to only one-half or one-third of those required for coal exploitation, not to mention the greater conveniences in both transportation and utilization. Although our coal resources are much more plentiful than our crude oil resources, we must continue to tightly grasp the exploitation of crude oil resources. At the same time, in coal exploitation, a comparison between exploiting coal of high calorific value of over 6,000 great calories and exploiting coal of low calorific value of below 4,000 great calories shows that for the same amount of investments the former produces 100 percent more and better results than the latter in terms of output, transportation, utilization and environmental protection. For this reason, priority should be given to the exploitation of good-quality coal. Naturally, in energy exploitation, consideration must be given to the welfare of future generations. But science must be the guideline in this regard and the continual development in scientific technology will raise the future capability of exploiting energy resources. What is considered now as a difficult task may in the future be easily accomplished. The value of energy resources is bound to undergo notable changes with the progress of time. Hence, it is erroneous to entertain such thoughts that exploiting good-quality energy resources fails to give due regard to the welfare of posterity. Accomplishing China's modernization within this century is not only of the greatest benefit for the present generation but also in the fundamental interests of posterity. The priority exploitation of good-quality energy resources insures the achievement of this objective.

Naturally, giving priority to exploiting good-quality energy resources does not mean completely banning the exploitation and use of poor-quality energy resources. The southern provinces of our country have a certain amount of stone coal deposits. These are poor-quality energy resources. Certain communes and brigades in Zhejiang and Hunan Provinces have exploited stone coal deposits locally and used them. This not only helped local enterprises to prosper and satisfied local needs but also contributed to the accumulation of funds for rural modernization. It has many good points. However, the exploitation and utilization of stone coal amounted to less than 1 percent of the energy composition of the entire country. Hence, we should not overexaggerate the use of poor-quality energy resources. In the future, it should be considered as a supplementary expedient and of a strictly local nature.

TAKE A ROAD OF MANY CHANGES. In the exploitation and utilization of energy resources, we must not take just one road. On the contrary, we must follow the principle of "adopting the strong points and abandoning the weak ones" and become adjusted to

the prevailing conditions and circumstances, taking a road of many changes. Nature has various kinds of energy resources in store. Coal, crude oil and natural gas are energy resources that cannot be regenerated, while those energy resources that can be regenerated are hydropower, solar energy, energy of living beings, maritime energy and wind power. Social production and consumption require different energy resources.

For example, airplanes, warships, tractors and motor vehicles generally use petroleum. These mechanical items use only one type of energy resources. Other items use several kinds of energy resources, although in comparison sticking to one or two energy resources is economically more worthwhile. A fuel-burning power plant may use coal, crude oil or natural gas while the use of coal is more justified economically speaking. This is because using crude oil or natural gas to generate power can increase the fuel utilization rate by 2 to 3 percent over the use of coal, whereas the use of crude oil or natural gas for other purposes can significantly raise the rate of thermal efficiency. In addition, the concurrent development of different types of energy resources produces the beneficial effects of mutual adjustment and raises the gross utilization rate of energy resources. Take for example fuel-burning power generation and hydropower generation. Developing hydropower generation has the notable effect of economy in coal consumption, while developing fuel-burning power generation helps to make up for insufficient power supplies in times of seasonal changes in the availability and supply of water power. For a rather long time in the future, we must build according to pre-laid plans large fueled power generating plants in localities adjacent to large coal producing areas. We must also take advantage of the condition of the rather rich hydropower resources in the country and their scant utilization to build, according to plans, a number of large hydroelectric power stations. In this way, our electric power generating capacity will achieve a big development.

Energy scarcity is a common phenomenon confronting all the countries in the world. Many countries believe that developing many energy resources is an effective way to solve the problem of insufficient energy supplies. In the 1980s or even for a longer period the world output of crude oil and natural gas will continue to increase. However, depending entirely on crude oil and natural gas can only add to the tense situation in the supply of these resources. The trend of development in the coming years is to increase the importance of coal. It will be used principally for power generation and for transformation to the gaseous or liquid state so as to gradually replace crude oil and natural gas. At the same time, many countries are turning their attention to the development of nuclear power, taking it as an important measure to solve the problem of a shortage of energy. The large-scale utilization of coal, crude oil and natural gas at present will gradually deplete their supplies and the time will come when they will be entirely exhausted. As a long term policy we must proceed with the development

and utilization of solar energy and other new sources of energy. Energy exploitation in various forms is the coming trend in the development of the world's energy.

Within the vast domain of our country, energy resources abound in various forms and varieties. This constitutes an advantageous condition for achieving our four modernizations. We should make full use of this advantageous condition in a planned manner.

CHINA ENERGY NEWSLETTER

October - December 1980

CEN 4-80 July 1980

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汇总

SUMMARY

The fourth quarter of 1980 saw political developments center on the trial of the so-called Gang of Four and economic difficulties proliferate. The trial had broad political significance, first as a verdict on the bloody and economically disastrous Cultural Revolution period, and secondly as a way for the pragmatically oriented leaders who now run China to further criticize the radicalism of the Cultural Revolution.

Economic difficulties became increasingly apparent during the fourth quarter of 1980 and indeed were visible throughout 1980. The rate of growth of the Gross National Product (GNP – by value) dropped in 1980 to an estimated 5.5% compared with a 7% increase in 1979 and a 12% increase in 1978.

The Chinese in the fourth quarter cancelled or reduced additional construction projects. During this period the Chinese officially told the Japanese that China would cut crude oil exports to Japan, despite the Long Term Trade Agreement. China stated that it would reduce supplies to Japan in 1981 to 8.5 million tons from the 9.5 million ton target, and that in 1982 it would supply 8.5 million tons from the 15 million ton target.

According to an official governmental release China produced 105.8 million metric tons (MMT) of petroleum in 1980. ERAC analysts believe the Chinese have underreported their production and that production has reached 124.8 MMT. Official Chinese reports state total coal production reached 600 million tons in 1980. ERAC estimates that Chinese natural gas production reached 100.9 to 106.4 billion cubic meters.

Negotiations continued between France and China on the sale of nuclear power equipment. Moreover, intensified negotiations between China and Hong Kong were conducted concerning the building of a nuclear power plant near Hong Kong.

Energy conservation in Chinese industry according to one source saved the equivalent

of 27.5 million tons of standard coal.

简介

INTRODUCTION: PETROLEUM AND THE GENERAL ECONOMY

The fourth quarter of 1980 saw political developments center on the trial of the so called Gang of Four, and economic difficulties persisted.

The long awaited trials of the “*gang of four*” and the Lin Biao (Lin Piao) clique was opened on November 20. Sixteen people were charged with crimes by the Special Procuratorate; these were Jiang Qing, Zhang Chunqiao, Yao Wenyuan, Wang Hungwen, Chen Boda, Huang Yongsheng, Wu Faxian, Li Zuopeng, Qui Huizuo and Jiang Tengjiao. Six of the accused (Lin Biao, Kang Sheng, Xie Fuzhi, Ye Qun, Lin Liguang and Zhou Yuchi) were dead and hence no criminal liability was pursued. A lengthy criminal indictment was offered and four main crimes were stated:

1. persecuting Party and Government leaders and plotting the overthrow of the dictatorship of the proletariat;
2. persecuting large numbers of cadres and ordinary people;
3. plotting the assassination of Chairman Mao Tsetung and staging a counter-revolutionary coup; and
4. plotting an armed rebellion using the Shanghai militia.

It was clear the court would find the defendants guilty but what was unclear was the penalties each would receive. In mid January, 1981, the court rendered its judgment, finding all defendants guilty, and sentenced Jiang Qing and Zhang Chunqiao to death with a two year reprieve and permanent deprivation of political rights. This means that if Jiang and Zhang show a correct political attitude, the death sentence will be

suspended and a life imprisonment sentence imposed. The other defendants received sentences ranging from life imprisonment to 16–20 years imprisonment.

The trial had broad political significance, first as a verdict on this bloody and economically disastrous Cultural Revolution period, and secondly as a way for the pragmatically oriented leaders who now run China to further criticize the radicalism of the Cultural Revolution. The trial revealed, in part, the human costs of the Cultural Revolution. An official report asserted more than 54,000 innocent people were killed, and half a million persecuted in incidents inspired by the Gang of Four and Lin Biao clique.¹ Rumors continued about the political future of Hua Guofeng, Communist Party Chairman, and most sources felt he would be demoted early in 1981.

Economic difficulties became increasingly apparent during the fourth quarter of 1980 and indeed were visible throughout 1980. The rate of growth of the Gross National Product (GNP – by value) dropped in 1980 to an estimated 5.5%, compared with 7% in 1979, and 12% in 1978. Capital construction projects came under close scrutiny. Beginning in 1981 every major and medium sized project must be approved by the central government. The favored key capital construction projects would be energy, transportation, communications, light and textile industries and urban housing estates. In addition, all large and medium projects now under construction will be critically reviewed; some may be stopped, others delayed, and still others permitted to continue at their previous pace.²

Chinese agricultural problems have led to an agreement with the US to buy 6 to 8 million tons of grain each year between 1981 and 1984.³ Chinese foreign currency reserves will be used for these purchases as opposed to purchases of industrial machinery, a situation which compounds the difficulties of Chinese economic planners.

In late December, it was rumored that a Central Committee work conference was under way in Beijing. Reportedly the central government leaders and the first secretaries of all provinces, municipalities and autonomous regions gathered in Beijing to discuss economic readjustment.⁴ Apparently the period of economic readjustment which was supposed to end in 1981 may have to be extended for several years. In addition, major personnel changes will probably occur in early 1981.

1. These revelations concerning loss of human life are far below what outside viewers have suggested

2. Press Release, Embassy of the People's Republic of China, No. 80/051, December 5, 1980

3. NEW YORK TIMES, October 25, 1980

4. TA KUNG PAO, (Hong Kong) December 28, 1980, p 1

油田

OIL FIELDS

Yumen, one of China's oldest petroleum producing areas, has continuing extraction problems. Several oil wells now require seven tons of injected water for extraction of one ton of oil. One leading cadre urged the Yumen leadership to explore for petroleum in the other basins of the Hexi Corridor near Yumen.¹

Three large undersea basins are the main development sites at present. In the Yinggehai Basin, crude oil was first obtained in a limited manner in 1965 from test wells. The quality of the oil is good - light, with a low solidifying point of -44°C. It contained only 0.31 to 0.4 percent sulphur and hardly any wax. Further off the coast, the Yinggehai depression, about 70,000 square kilometers in area, has Tertiary deposits at least 7,000 meters thick, eight secondary structural belts and two bio-reef belts. A well in one of the secondary belts has already yielded oil.

The Beibu basin, covering an area of 40,000 square kilometers, north of Hainan Island, has an oil bearing layer 700-800 meters thick belonging to the Lower Tertiary period. The basin has been tapped by six test wells. The Zhujiang River Estuary Basin, just outside the river mouth, measures some 96,000 square kilometers including 60,000 square kilometers in three secondary oil generating depressions. Its Tertiary sedimentary rocks are over 6,000 meters thick. A test well, sunk in the center of the basin, produced exploitable oil.²

1. RENMIN RIBAO, September 6, 1980, p 2

2. CHINA RECONSTRUCTS, November, 1980, pp 18-21

生产和中国日本石油关系

PRODUCTION & SINO-JAPANESE PETROLEUM RELATIONS

According to an official government release China produced 105.8 million metric tons (MMT) of petroleum in 1980.¹

ERAC analysts believe that the Chinese have underreported their production over the last few years for reasons explained in previous newsletters. ERAC analysts believe Chinese petroleum production for 1980 has increased eight percent over 1979 and reached 124.8 MMT.

Daqing (Taching) prefulfilled by 10 days its annual production plan of 50 MMT.²

In mid September, Chinese Premier Zhao Ziyang met with a delegation from the Japan-China Association on Economy and Trade, led by Toshiwo Doko. At this time, China notified Japan that China would cut crude oil exports to Japan. The Chinese official was quoted as saying that China has decided to reduce its supplies to Japan in 1981 to 8.5 million tons from the 9.5 million ton target set under the private long term trade agreement, signed in February, 1978, and those in 1982 to 8.5 million tons from the 15 million ton target.

In explaining the reduction of oil exports, Chinese Vice Minister for Foreign Trade Liu Xiwen, reasoned that crude oil production in the coming few years would probably level off at best, and production might even fall off. In addition, Liu stated domestic demand had increased. Liu proposed future consultations with the Japanese, over the supply volume in 1983 and beyond.³ According to one source, Toshiwo Doko, leader of the Japanese delegation, said the Chinese proposal would be discussed in Japan. Moreover, members of the delegation thought that the Chinese proposal must be accepted because China had no capacity to supply the initially targeted amount to Japan.⁴

In November, experts of the Chinese and Japanese Governments met in Beijing to discuss the continental shelf and again affirmed their individual positions.⁵

In early December, the first ministerial meetings were held between Japanese and Chinese ministers, and these talks focused on economic issues. A joint communique was issued on December 5, and in part stated:

Both sides welcomed the progress in cooperation between the two countries in the exploitation of oil, coal and other energy sources. The Japanese side hoped that China would be Japan's long-term and stable energy supplier. After explaining China's concrete situation in improving the exploitation of oil and coal resources, the Chinese side declared that China would do its best in this regard.⁶

In sum, the Japanese received vague Chinese promises that if the Chinese energy picture brightens, then Japan might receive more oil.

1. XINHUA, December 31, 1980

2. HEILONGJIANG PROVINCIAL SERVICE IN MANDARIN, December 25, 1980

3. KYODO NEWS SERVICE, September 11, 1980

4. KYODO, September 11, 1980

5. XINHUA, November 28, 1980

6. XINHUA, December 5, 1980

精炼预留油油端口和罐车

**REFINING, RESERVES, OIL
PIPLINES, OIL PORTS
AND TANKERS**

It was reported in the fourth quarter that China wants to build a port on the Pearl River, near Hong Kong, to service offshore oil exploration groups. Mr. Wong Chi, Deputy Manager of China's shipbuilding corporation, stated the project will need foreign cooperation, particularly capital investment. The Chinese are hoping Guangdong (Kwangtung) provincial shipyards will also benefit from this project.¹

探险索赔海上钻井设备和计算机

**EXPLORATION, CLAIMS,
OFFSHORE DRILLING EQUIPMENT
AND COMPUTERS**

In October, as part of their development of a logistical system on the Xisha Islands, the Chinese are building a harbor on one of the larger islands.

In November, a large oceanic survey vessel was completed at the Hudong Shipyard; the ship is called Kexue I.²

In November, the Chinese reported a new pollution free method for prospecting offshore oil deposits. The method entails the use of condenser produced electric sparks as an energy source, and is superior to the traditional method of firing explosive charges at sea. The new method inflicts little harm on marine organisms and is highly automated.³

China Computerworld, a new fortnightly magazine published in China beginning in late October, 1980, is published jointly by the Technology Infomation Research Institute (under the Chinese Fourth Ministry of Machine Building) and Computerworld Communications, Inc. of the United States. It will report on developments in electronic data processing communications, integrated circuits, electronic meters and instruments, as well as production and market trends. The Chinese version of China Computerworld will be issued both in China and abroad and will include an English digest of computer news originating in China.⁴

1. SOUTH CHINA MORNING POST, November 15, 1980
2. XINHUA, October 15, 1980
3. SHANGHAI CITY SERVICE, September 20, 1980
4. XINHUA, October 29, 1980
5. RENMIN RIBAO, September 6, 1980, p 2

采煤

COAL

Problems and accidents continue to plague the coal industry during the fourth quarter of 1980.

One cadre from Shanxi (Shansi) Province, the leading coal production area, stated that one of the coal producing areas (the Dalong Coal Industry Bureau) faced the problem of production brigades building some 201 small and relatively inefficient mining pits which interfered with the expansion of major mines.⁵

In Xinjiang (Sinkiang), between January and August, as many as 84 people were killed in various kinds of coal mine accidents, according to one report. The report

blamed leading cadres concern for production as opposed to safety as the leading cause of the accidents.¹ This of course, is an oversimplification and does not take into account problems of equipment and motivation.

The Chinese have assured the Japanese that they can supply Japan with the targeted amount of coal under the Long-Term Trade Agreement for 1981-82. The agreement calls for supplying 1.5 million tons of coking coal and 1 to 1.2 million tons of steam coal in 1981 and 2 million tons of coking coal and 1.5 to 1.7 million tons of steam coal in 1982.² There were additional reports which stated that the Chinese were considering increasing the amounts of coal exported to Japan in 1981-1982 and later.

One important Chinese cadre referred to the poor results from the importation of integrated coal mining equipment. He Daiwen of Henan (Honan) stated:

We have spent plenty of money on importing integrated equipment for coal production from foreign countries, but we have not achieved the expected results. Last year, we bought 100 sets of integrated equipment from foreign countries. Since the decision was made hastily without careful study and thorough discussion, the prices of the equipment were high and the models were not completely suitable and there was great waste. Some of the equipment imported could have been made in China. In the future, we should consider the situation of our own country and import more technology and less equipment.³

In other coal developments, Shanxi province, during the fourth quarter, directly contracted, and then exported coal to Japan, the Philippines, Singapore and Thailand.⁴ Previous to this time all coal exports were handled by China National Metals and Minerals Import and Export Corporation.

According to an official report, China produced 600 million tons of coal in 1980 overfulfilling its revised annual quota of 596.7 million tons. Major coal mines directly under the control of the Ministry of Coal Industry met the annual quota of 840,000 meters of tunneling 37 days ahead of time. It is expected that tunneling may reach 940,000 meters in 1980. China also built new coal dressing plants with a total annual capacity of eight million tons.⁵

ERAC analysts calculate that China's coal production in 1980 was eight percent ahead of the previous year. Thus bringing total production to between 595-607 million tons.

1. XINJIANG REGIONAL SERVICE, November 16, 1980
2. KYODO NEWS SERVICE, September 11, 1980
3. RENMIN RIBAO, September 8, 1980, p 2
4. XINHUA, December 22, 1980
5. XINHUA, December 31, 1980

天然气和水力发电

NATURAL GAS & HYDROELECTRIC POWER

According to one report, about 14 million urban household residents in 216 Chinese cities were using natural gas, coal gas and butane gas for heating and cooking in late 1980.¹ The extension of gas lines in several cities means more and more people will be served by gas and will result in an attendant improvement in clean air, efficiency and convenience.

ERAC analysts calculate natural gas production in 1980 rose eight to ten percent with production reaching 100.9 to 106.4 billion cubic meters. The Chinese official production figure is 13.7 billion cubic meters;² a statistic which obviously is only a partial estimate of production.

According to an official report, hydroelectric power output rose 18 percent by the end of October, 1980, over the corresponding period a year earlier.³ Another report released during October indicated that about 2,540 small hydroelectric power stations were built across rural China in the first three quarters of 1980, with a total generating capacity of 540,000 kilowatts.⁴ It was also reported that some one hundred plants throughout China are producing 85 varieties of water turbines and more than 120 kinds of generators. The turbines can accommodate waterheads from as little as two to 400 meters and the capacity of the generators range from 12 to 10,000 kilowatts. The Chinese also produce micro turbo generators which have generating capacities ranging from 0.6 to 12 kilowatts.⁵

During the fourth quarter of 1980 the Chinese were seeking to establish a major training and research center on small hydropower generating techniques. There were rumors this center would be jointly set up by the United Nations Development Program and the Chinese Government.⁶

1. XINHUA, October 23, 1980
2. XINHUA, December 31, 1980
3. XINHUA, November 5, 1980
4. XINHUA, October 22, 1980
5. XINHUA, October 30, 1980
6. In October, the second International seminar-workshop on the Development and Application of Technology of MGH (Mini Hydropower Generation) was held in China. The United Nations Industrial Development Organization was a sponsor
7. AGENCE FRANCE PRESS, October 17, 1980
8. AGENCE FRANCE PRESS, November 11, 1980

核能开发

NUCLEAR DEVELOPMENTS

In October, during the visit of the French President Giscard d'Estaing, France and China signed an "agreement in principle" on the purchase by China of two French nuclear power plants. President d'Estaing announced that the two countries had found a "solution" to a "financing problem" which had led to the suspension of the 1978 sales of two French power plants. The French Minister in Charge of Administrative Reform, Jean-Francois Deniau, indicated the two power plants comprised "two units of 800 megawatts each placed side by side." This physical arrangement means a reduction is possible from the 1978 price which was 950 million dollars. Deniau added that he thought the location of the plant would be Guangzhou or Shanghai.⁷ Several Chinese, including Vice Premier Fang Yi, stressed lastly that no firm decision has been made concerning the purchase of the French reactors.⁸

Reportedly, a Chinese research team of engineers and scientists organized by the State Scientific Commission completed a study in late September on energy needs in South China. Their analysis suggested the building of nuclear power stations in Guangdong Province and other provinces as the only economical way to increase electrical power in this area.¹

In the summer and fall there were reports that China was considering building a nuclear power plant near Hong Kong, and that China would sell part of the power to Hong Kong. Hong Kong's China Light and Power with the assistance of Great Britain's Atomic Energy Authority and an American firm, Nuclear Services International (a Quadrex Corporation subsidiary), are doing feasibility studies. In November, Wen Wei Po, a Hong Kong newspaper, reported that Chinese plans were well along and intensive investigations were being conducted for a site. Shenzhen, near Hong Kong was mentioned.² There has not been confirmation from other sources that plans are as advanced as Wen Wei Po reported. Other nuclear developments include:

The formation of a special nuclear energy group to advise the State Science and Technology Commission. This special group is headed by Jiang Shengjie, Vice Minister of the Second Ministry of Machine Building, and deputy group leaders Jin Shiqu, Bureau Chief of the Ministry of Power Industry; Zhang Minghan, Deputy Bureau Chief of the First Ministry of Machine Building, and Lian Peisheng, Deputy Bureau Chief of the Second Ministry of Machine Building, and some thirty odd additional scientists.³ The function of the new panel is to draw up or amend short term and long term development plans, ensure that major research projects make scientific and economic sense, and coordinate the various departments concerned.⁴

On October 16, the Chinese conducted a nuclear test. The United States Department of Energy indicated that the explosion was an atmospheric one held at the Lop Nor test site in Northwest China. The blast, according to the Energy Department, was between 200 kilotons and one megaton.⁵

1. XINHUA DOMESTIC SERVICE IN CHINESE, September 30, 1980
2. WEN WEI PO, November 12, 1980
3. WEN WEI PO, November 2, 1980
4. XINHUA, November 3, 1980
5. AGENCE FRANCE PRESS, October 17, 1980

观察和结论

OBSERVATIONS AND CONCLUSIONS

In October, 1980, the People's Republic of China took its place as a member of the World Bank and International Monetary Fund.¹

In October, a new journal was announced entitled Energy (Neng Yuan). This periodical will begin to appear in 1981 and is sponsored by the State Energy Commission and the Energy Research Institute of the Chinese Academy of Sciences. This journal was begun in 1977, but existed as an internal publication only among the concerned departments. The periodical will cover a variety of subjects, including state energy policies and discussion of problems within the energy field.²

The China Corporation of the Shipbuilding Industry and US Baker Marine Corporation have signed a contract to cooperatively build and maintain oil drilling platforms. The Dalian Shipyard, one of the largest in China, will manufacture two drilling platforms for Baker by the end of 1981, each capable of going down one hundred feet. The Baker Marine Corporation will provide blueprints and some main equipment; the Chinese will provide rolled steel. The Dalian Shipyard will also repair one drilling platform for the Baker Marine Corporation within the first seven months of 1981.³

Energy Conservation in China's industry, according to one official report saved the equivalent of 27.5 million tons of standard coal.⁴

1. WASHINGTON POST, October 2, 1980, p B1

2. XINHUA, October 22, 1980

3. XINHUA, November 29, 1980

4. XINHUA, January 7, 1980

APPENDIX A PRODUCTION OF PRIMARY ENERGY

YEAR	COAL*	OIL*	NATURAL GAS*	HYDRO-ELECTRIC*
1952	98	2	NA	~0
1957	96	2	1	1
1965	85	8	6	1
1970	76	14	9	1
1974 ¹	67	23	9	1
1975 ²	75	19	5	1
1976 ²	68-71	23-25	5-7	1
1977 ²	70	22	7	1
1978 ²	70	21.5	7	1.5
1979 ²	70	20	8	2
1980 ²	70	20	8	2

*Production in percent

1. CHINA ENERGY BALANCE PROJECTION, National Foreign Assessment Center, November, 1975, p 4

2. ERAC estimates

APPENDIX B PETROLEUM PRODUCTION IN CHINA

YEAR	ANNUAL PRODUCTION*	
1949	0.121	
1950	0.2	
1955	0.966	
1960	5.5	
1965	10.8	
1966	13.9	
1967	13.9	
1968	15.2	
1969	20.3	
1970	28.5	
1971	36.7	
1972	43	
1973	54.5	
1974 ¹	65.3	
1975 ²	74	
1976 ²	85	
1976	84.7	released PCR estimates
1977	93.5	revised ERAC estimates
1977	91.5	officially derived PRC estimates
1978 ²	105.1	
1978	101.6	officially derived PRC estimates
1978	104	officially revided PRC estimates
1979 ²	115.6	
1979	106.1	released PCR estimates
1980	105.8	official PRC estimate
1980 ²	124.8	

1. BOBBY WILLIAMS, "The Chinese Petroleum Industry: Growth and Prospects," *China: A Reassessment of the Economy*, Washington DC 1975, p 228

2. ERAC estimates

*Petroleum production in Million Metric Tons

APPENDIX C RAW COAL PRODUCTION IN CHINA

YEAR	PRODUCTION*	
1949	32.4	
1950	42.9	
1955	98.5	
1960	280	
1965	232.2	
1966	271.4	
1967	190	
1968	235.8	
1969	281.6	
1970	327.4	
1971	353.6	
1972	376.5	
1973	398.1	
1974	410.6	
1975	479.6	
1976	488	
1977 ¹	546.6	
1978	600	Official Report
1978 ²	525-535	
1979	618	Revised Official Report
1979	620	Official Goal
1979 ²	551-562	
1980	620	Official Goal
1980	596.7	Revised Official Goal
1980	600	Official Report
1980 ²	595-607	

1. CHINESE COAL INDUSTRY, National Foreign Assessment Center, February, 1979, p iii

2. ERAC estimates

*Coal production in Million Metric Tons

APPENDIX D NATURAL GAS PRODUCTION IN CHINA

YEAR	TOTAL*	SICHUAN*	OTHER*
1957		0.6	
1962		10.2	
1963		11.95	
1964		13.96	
1965		16.54	
1972		49.01	
1973	55.76	50.61	5.15
1974 ¹	58.15–64.07	52.28	5.87–11.79
1975 ²	65.4		
1976 ²	72.5		
1977 ²	76.4–79.2		
1978 ²	85–88		
1979 ²	86.4–89.5	semi-official Chinese statement	
1979 ²	93.5–96.8		
1980 ²	100.9–106.4		
1980	13.7	official report	

*Natural gas production in Million Cubic Meters

1. BOBBY WILLIAMS, "The Chinese Petroleum Industry: Growth and Prospects," *China: A Reassessment of the Economy*, Washington DC 1975, p 228

2. ERAC estimates

APPENDIX E STATE COUNCIL DECREE ON ENERGY CONSERVATION

BEIJING XINHUA DOMESTIC SERVICE IN CHINESE, November 2, 1980

Beijing, 2 November (XINHUA) – The State Council on 27 October issued a decree on reducing the number of oil burning boilers, industrial kilns and furnaces of various types.

The decree states: Petroleum is an important strategic material. Since the petroleum crisis occurred in the early 1970s the rational use and saving of petroleum has become a matter of universal concern. Our country now consumes large quantities of heavy oil and crude oil every year, and a considerable portion of it is not rationally used. To economize on energy, vigorous efforts must be made to reduce consumption of oil so that more petroleum can be used as a raw material for the light, textile and chemical industries and more products can be made out of petroleum in order to meet the requirements of the four modernizations.

The decree requires that oil burning industrial kilns and furnaces and boilers for civilian use and power station boilers designed for coal burning but converted to oil burning should be quickly converted again to coal burning in stages, with the easiest being converted first, before the end of May 1985 at the latest. Those power stations burning oil by design but which can be converted to coal burning should be converted to coal burning. In converting boilers from oil burning to coal burning, attention should be paid to comprehensive economic results, improving the performance of coal burning boilers and raising their heating efficiency. Overall arrangements should be made according to technical and economic conditions in order to build central heating systems wherever possible and to combine the supply of heat with that of power. Attention should also be paid to handling the "three wastes" [waste gas, waste water and industrial residue] and protecting the environment.

The decree includes specific stipulations on reduction of oil consumption by industrial kilns and furnaces, oil fields and oil refineries and on the source of funds and materials for cutting down oil consumption.

The decree requires all localities to strictly implement the plan for oil consumption and the system of examination and approval. The decree says: The State Planning, Economic and Energy Commission are responsible for formulating and issuing annual and long-term plans for economizing on energy, and all areas, departments and units must resolutely implement such plans. Oil consumption must be examined and approved by the State Planning Commission in coordination with the departments concerned. For units which are allowed to use oil, a fixed amount of oil should be

approved and a permit for burning oil should be issued, with which a person can get a fixed amount of oil. For a unit whose boilers or furnaces are to be converted to coal burning within a definite time, a temporary permit should be issued to it for oil burning. If the unit fails to convert its boilers or furnaces after the time limit, its temporary permit for oil burning shall be revoked and its oil supply shall be stopped. Without authorization and without permit or temporary permit for oil burning, no unit shall be supplied with oil.

The decree says: From now on, without examination and approval by the State Planning Commission, no locality, department or unit is allowed to design, manufacture, build or import oil burning equipment or to expand the scope and amount of oil consumption without authorization.

