January 31, 1955
Address by Zhou Enlai at the Plenary Session of the Fourth Meeting of the State Council (Excerpt)

Citation:

Summary:
Zhou Enlai addresses the State Council citing a need for China to “master atomic energy.” The Chinese program is far behind in this area, but plans to catch up with the help of Soviet technical assistance.

Credits:
This document was made possible with support from the Leon Levy Foundation and Carnegie Corporation.

Original Language:
Chinese

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- English Translation
- Chinese Transcription
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You all have seen the statement released by the Soviet Council of Ministers on the issue of Soviet assistance concerning Chinese peaceful use of atomic energy published in the press on January 18. This issue has previously been discussed internally many times, and now just recently the Soviet government has issued a statement making this public. Until now, we had not reported to the State Council plenary, since we had wanted to firm up this issue.

This is a very good thing. In the past we had no foundation in this area. The Academy of Sciences had some understanding, but we had none. We invited Minister Li Siguang and Institute Director Qian Sanqiang to discuss this with us several times, only being able to recognize terms in documents. Now, we have a fair understanding from the Soviet Council of Ministers' statement and academician [D. K.] Skobel'styn's replies to reporters. This is a new issue for China. We are now in the atomic age. We have to understand atomic energy whether used for peace or war. We have to master atomic energy. We are far behind in this area, but, with Soviet help, we have the confidence and determination that we can catch up. Minister Li Siguang and Institute Director Qian Sanqiang tell us that it is possible to catch up, especially with the enthusiastic support of the Soviet Union. The Soviet Council of Ministers has already made its statement public and this kind of publicity is essential. Atomic energy now is already general knowledge and is being discussed all over the world. Imperialism is clamoring about atomic war; we have to expose this. We have to make the world's people understand that if atomic energy is used to serve peaceful construction, it can benefit mankind, but, if used to serve of war, it will destroy mankind. The Soviet Council of Ministers' statement includes its decision to provide scientific, technical and industrial help to other countries and [notes] that it is now considering the scope of the countries to which it can provide assistance. This focuses the attention of all the people of world on the issue of atomic energy and forces them to pay the same level of attention as they once did to the steam engine. If even knowledge about atomic energy is lacking, how will there be the will and the courage to prevent atomic war and spur the peaceful use of atomic energy? What after all is the power of atomic weapons? Many people are not clear. As a consequence, this has given rise to two types of attitudes in the world: one is ignorance and the other is terror. Our Chinese people believe there is nothing special about the atomic bomb and ignore it, looking down at it with derision. [But] It is incorrect to ignore it, and most of the world's people are terrified by it. The United States produces atomic weapons and hydrogen weapons, but itself is extremely terrified [of them]. American imperialism clamors about atomic war, but the first to be scared was not us, but they themselves. When Secretary of Defense Forrestal, who was in charge of this issue, heard in 1949 that the Soviets had mastered atomic weapons, he was distraught, committing suicide by leaping from a building. In Western countries, most are terrified of atomic weapons. Last Friday, when Chairman Mao received a foreign ambassador, that ambassador said that atomic weapons were very fearsome, and that if several hydrogen bombs were dropped on China, China would be almost completely wiped out. I said, just think about it, the very greatest harm would come to countries with concentrated industry and populations. Mao said that the very greatest harm would merely be that a hole would be blown clean through the earth, and, if there was a hole blown through the earth, and one entered from China, the other side would be none other than the United States. In all, fewer than 100 million people were killed and wounded during the Second World War. If there were another war, and, let us say that China suffered casualties equivalent to the number of people killed and wounded in the Second World War, we would still have 500 million people. America is trying to use terror to scare us, but it cannot scare us. On the Taiwan issue, it is trying to employ the threat of war to scare us, but it hasn’t scared us.

Speaking positively, we have to make the broad masses of the people understand atomic energy, and [to that end] carry out extensive education and serious work. Last year a friend said to me: Why don't we announce that we have also mastered atomic weapons? I said: Why should we do this? We have to be practical and realistic, if we haven't mastered [them], then we haven't
mastered [them]. It is not very hard to master atomic weapons. We have Soviet help, and if only we apply ourselves seriously, we will be able to master atomic weapons.

[...]

Speaking positively, we have to openly carry out education, seriously engage in work, and actively pursue the peaceful use of atomic energy. From the negative point of view, we have to appeal to the [world’s] people to oppose the use of atomic weapons and oppose the carrying out of atomic warfare. Combining these positive and negative aspects, now we need to implement work on the following several fronts.

(1) Open a campaign. The Standing Committee of the World Peace Council, meeting in Vienna on the 19th [of January 1955], approved a letter to the people of the world calling on them to rise up to prevent the use of atomic weapons, and to prevent the production of atomic weapons. At the time, [Irene] Joliot-Currie, Guo Moruo and others signed [the letter], deciding to initiate a signature drive throughout the world. Our country must support this signature campaign. In two previous signature campaigns, there was a very good response from the people of our country, and in this signature campaign there will be an even greater response. The people demand peace and oppose atomic war. The people of the West are still oppressed, [but] in the Soviet Union and among the already liberated people in the people’s democracies, this campaign will be pushed forward. We have a lot of people in our country, and there is always a large number of signees. They all hope that we will promote this campaign. Preparations are underway to hold the World Peace Conference this May in Helsinki. We plan to start a signature campaign from this February. Signatures can be gathered collectively. In villages, we can employ the procedure of voting by a show of hands at mass meetings, on the one hand supporting Soviet assistance to China’s peaceful use of atomic energy and, on the other hand, opposing the production and use of atomic weapons. This signature campaign can be carried out together with other work. Now the Taiwan question is under fierce discussion on the agenda of the United Nations. We must liberate Taiwan and oppose U.S. armed intervention. We need to mobilize the people throughout the country on this. Furthermore, the work of recruiting new soldiers in the villages starts in February, and there needs to be a mobilization. This work can be combined and carried out together. The signature drive should be led by the China Peace Assembly.

(2) Carry out atomic energy education. We have not done this in the past, and many of our leadership cadres don’t understand [this issue]. We have asked the Academy of Sciences to take charge of this work. First, the Academy of Sciences is meeting to unify its own understanding. It has already held small group meetings, and it will be holding a large meeting. Second, we are organizing a course of lectures on the peaceful use of atomic energy. Starting with [the lectures] organized for high-level cadres, in the distributed documents, we don’t understand some of the terminology and how can we peacefully use atomic energy. We will invite Qian Sanqiang, Zhou Peiyuan, Qian Weichang, and Zhao Zhongrao to speak, record what they say and carry out this kind of education all over the country. Third, compile some pamphlets for popular consumption. Some Soviet books have been translated, but we may not be able to use them all, since [the Russian] cultural level is high. A comrade just asked me whether at the time of compilation we should divide them into high-level and elementary-level [material]. I think we should not make this distinction. With the present state of knowledge of atomic energy, there can be no distinction made between high-level and elementary-level [material]. Fourth, write some articles for publication in newspapers welcoming Soviet assistance for our country’s peaceful use of atomic energy and opposing American clamoring about the use of nuclear weapons. There is a lot of material to make a comparison. The Soviet Union uses atomic piles to generate electricity, and the United States does not do this, because American capitalists do not agree. They have a lot of electric power stations. If they use atomic energy to generate electricity, the profits of the capitalists will be severely affected. So they use [atomic power] on the military side and, in this way, military-industrial capitalists can reap great profits. Recently, in a report to Congress, [President] Eisenhower said that he wanted to use atomic power for small-scale submersible aircraft carriers. Is this not a good comparison? Fifth, we need to put together a group of students and direct them
towards the study of physics. By international standards, the level of our experts cannot be considered as high. But, with even a few, things are not easy. There are just too few people to do this kind of research in China. In the past not enough attention has been paid to this in assigning students. Now we are paying attention and will undertake reforms. Yang Xiufeng and Gong Zirong should assign some good students in the future. In the past students assigned to study physics were of neither good scientific nor good political quality. Although we will openly publicize the peaceful use of atomic energy, work [on nuclear energy] will remain secret, so both scientific and political quality must both be good. When the students sent abroad for study by various ministries return to China, if the Academy of Sciences wants them, it has priority. We must assign good ones to university physics, chemistry and mathematics departments. We didn't promote this in the past, but now we must promote this; it just won't do not to have enough [talented] people. The Soviet statement says that it will help in our development and broadly assist us. For this, we will need at least 300 to 500 specialized personnel; the present number is insufficient, and we must train [more]. Though it will take four or five years from the time they start school, this will be alright. We also need to increase [the number of] college engineering departments. The Ministry of Higher Education should approve the establishment of an applied physics department at Tsinghua University. Minister Yang Xiufeng, do you understand atomic energy (Minister Yang Xiufeng replied: I don't). If you don't, you should go and audit courses. Without understanding atomic energy, you won't enjoy [your work]. Sixth, we must gradually extract the current experts in atomic physics from administrative work. Only then can we strengthen the organization of physics experts. Qian Sanqiang is Secretary General at the Academy of Sciences and also Vice Chairman of the Youth Federation; Qian Weichang is Dean of Studies at Tsinghua University; Zhou Peiyuan is Dean of Studies at Peking University; at Zhejiang University there is a specialist in physics named Hu Qiming who is serving as Deputy Dean of Studies, and who we have tried to transfer [to Beijing] for a long time without success; now we must issue an order to transfer him; we must “liberate” them from administrative units. If no one suitable can be found to be dean of students, just let there be an honorary dean of students. In sum, we need to call experts back to the ranks. If any of you know of specialists, recommend them, don't hide them.

(3) Carry out work conscientiously. In promoting the peaceful use of atomic energy, we must work seriously and conscientiously, and must protect secrecy, as the country is presently doing. If we do not carry out broad-based education, we will not be able to achieve results. Uranium mines must remain secret, but, what exactly a uranium mine is something that everyone needs to know, and must gradually learn. It just won’t do if miners see a uranium mine and don’t know it. The Ministry of Geology has more than 20,000 people working on drilling teams; the Ministry of Fuel Industry has 40,000; and the Ministry of Heavy Industry has 20,000. They all must know when they see uranium-bearing rock. This is common knowledge. We must promote education among the people. We must enlarge and enlighten everyone’s vision, [but] after discovery [of uranium], of course, secrecy must be protected, and we must distinguish between general [knowledge] and secrets. The job of serious research is the work of a small number of people, but opposition to the use of atomic weapons is something for hundreds of millions, and the expansion of education in atomic energy is something for millions.
于 助中 和平利用原子能，一月十八日 上刊登的 部 表 的 明，大家已 看到了。我 先前已在部磋商多次了，不久 前 政府 表 明，公布了 件事。 去因 想把 弄得更成熟些，所以 有向 院全体 告。

是一件很好的事情，去 我 在 方面 有基，科 院 懂得一些，我 就不懂。曾 李四光部、三强所 我 几次，也只能看懂文件上的名，在于 部 的 明和斯科 尔琴院士答 者，比 能看懂了。中，是 新。在是原子 代，原子能 不用于和平或者用于，都必 懂得才行。我 必要掌握原子能。在 方面，我 很落后，但是有 的 助，我 有信心、有 心能 赶上去。李四光部、三强所 他，赶上去的可能性是存在的，尤其是有心的 助。部 已 表 明，和平所需的第一步原子能 在已 成 常，世界到在。帝 主 叫 原子，我要把它欢，使全世界的人民知道，原子能如果 和平建 服，就可以造福人，如果 服，就是 毁人。部 明中 定 予 其他 家 以科、技 和工 上的 助，而且正在考 它所能 捧助 家的范。使全世界人民看清楚了原子能，使全世界人民好容 气象机 那 地重。如果 原子能的 都不，哪里有心和勇气 制止原子、促 原子能的和平利用呢？原子武器的力量到底怎么？有 人不清楚。因此，在世界上就生了 种 度：一种是漠，一种是恐怖。我 中 人民，得原子 有什么了不起，是 漠 的。漠 不，而世界上更多的人 是恐怖，美 是 生原子武器 和 原子 的 家，但在美 就非常恐怖。美 帝 主 叫 原子，首先被倒的不是我，而是他 自己。美 管 事情的 防部 霍 斯特，一九四九，听到 掌握了原子武器，就精神失常，跳自 己了。在西方 家中，原子武器多是恐怖的。上星期五，毛主席接 一位外 大使 候，那位大使把原子 得非常凶，有 几 投在中，差不多就完了。我：人是活的，不是死的。原于 危害 最害 的是 工集 中、人口集中的 家。毛泽东：原子 幼 不是把地球打破，如果能把地球打破，中 打 去，地球那边冒出，那面正好是美。第二次世界大 全部死 不到一 人，如果再一次，就算中 — 亡到第二次世界大 的 全部死 人，那 我 有 多 人。美 想用恐怖倒我，但是 不倒我。在台 上，他就想用 威 倒我，但我 没有 把我 倒。

极方面，我 要 使 人民了解原子能，要 行 泛的教育和 真的工作。去年有 朋友 我：我 是不 可以 宣布一下我 也 掌握了原子武器：我 那部 比呢？我 要事求，有 掌握就是 有掌握。掌握原子能是 不正常 困的。我 有 的 助，只要我 真工作，我 是能 掌握原子能的。

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极方面，我 要 公 地 行教育， 真地 行工作，极促 原子能的和平利用。极方面，我 要 召人民起，反 使用原子武器、反 行原子。极方面和极方面 合起，要在行以下几方面的工作：

（一）展一。十九日在也 行的世界和平理事 常委 通 了告全世界人民，召人民起 禁止使用原子武器，禁止 制造原子武器，里·居里、郭沫若等都 名， 一 定在全世界展 名。我 要支持 名。去次名，我 人民都有的反，次 名有 更大的反。人民是要求和平、反 原子 的。西方人民，在 被迫 着，和各人民民主 家 已解放了的人民，要推。我 人多，每次 名都是很大的目，他 都希望我 起推 作用。今年五月准 在赫尔辛基召 世界和平代表大，我 准 在二月 行 名。名是集体的，在村可以采取群 大 手表 的 方式，一方面 助中 和平利用原子能，另一方面，反 制造和使用原子武器。名，可以 同其他工作合起 行。在台 在合的 程上 得很凶，我 一定要解放台，反 美 武 干涉，要 全 人民 行。另外，二月份 始 在村 行征集新兵的工作，是 志愿兵制。兵役制的 始，也需要 。可以把 些工作合在一起。行 名，由 中 和平大。

（二）行原子能教育。是 去有的，我 多 干部 都不懂，科 院主持 工作。首先是科 院 —— 一自己的，在已了 小，要 大。第二，原子能和平利用 座，先 高 干部 起，表的文件中，我 有些名 都不懂，又怎能和平利用原子能。三强、周培源、仲，把它 下音，在行 方面的教育。第三，些通俗的小 子，有些 翻也不一定都能用，人家水平高，才有同志 的， 的 候要 不高和初，我看可以不学，我 在 原子能的知 有什么高和初之分。第四，些文章登在 上，表示 迎 我 和平利用原子能的 助，反 以 叫 使用原子武器。照起 是大有材料，把原子堆用于，而美 就 不美，美 本家就不同意。他 站很多，如果用原子能，本家的利 就要受到很大的影，所以他 用 事方面，火 本家就可以得到很大的利。最近亚历山威尔的 冒名，要把原子能用于小型 航舰上。不是很好的照 第五，要集中一批生，到 物理方面。我的 家，在水平世界上不算高，但有几位也不容易，中 是 方面研究的人少极了。去 分配 生 注意不，今天注意了就要改。秀峰，生 都 在里，以后 些好生。去的 生不 懂科量 不好，政 治 量也不好。和平利用原子能 然公地 行宜。工作是秘密的，所以科量和政治量都要好。各部派到 外 去的留 生，回 后，科 院如果要，有充分。分配到大物理系、化系、系也要 好的去，去 求提倡，今
提倡，有足够的人是不成的。表的明中，助我建并提供泛的助，至少需要三百到五百的人才，有的是不的，必培。今年这校然四年五年才能用，也好。在大工科方面也要增加方面的科系。秀峰部，你不懂原子能（秀峰部答：不懂，）不懂也要去听听，不懂原子能就不很。至少需要三百到五百人，只有的是不的，必培。今年送校然四年五年才能用，也好。在大工科方面也要增加科系。高等教育部批准增大学用物理系。秀峰部，你不懂原子能（秀峰部答：不懂，）不懂也得去听听，不懂原子能就不很。第六，要把在的原子物理家逐行政工作中抽出。物理家的才能都很强，三强是科院的秘，又是青的副主席，是清大的教，周培源是北京大教，在浙江大有物理家，叫胡明，任教数，了好久不，次要下命令，行政部把他“解放”出。如果找不到适的人做教，名教也可以。之要召家，各位如果知道有的人可以推荐，不要起。

（三）真地行工作，要促和平利用原子能，就要，真地工作，是要保密的，在家已行中，如果不行泛的教育，就不可能取得成。是要保密的，但什么的才是，是需要大家知道的，要慢慢起，不然采的到了，不懂，那是不行的。探，地部有万多人，燃料部有四万人，重工部有万人，他遇到的石都知道。是常，不在人民中行教育是不的，要使大家的眼光都亮一些，以后，然就要保密，要一般和保密的界限。真研究，是少人的工作，但要反使用原子武器那是几万万人的事情，要大原子能的教育也是几百万人的事情。