

非核亞洲論壇菲律賓落幕，明年台灣接棒 台灣擁核公投成焦點

始於 1993 年的非核亞洲論壇（NNAF），今年邁入第 25 屆，於菲律賓首府馬尼拉舉行。台灣有環保聯盟會長劉志堅與學術委員郭金泉教授等人與會，除了將台灣正如火如荼進行擁核公投的訊息帶到會場，引發各國反核團體熱議，爲了引入亞洲各國的反核能量，因應 2020 年可能的「重啓核四」公投，環保聯盟也成功爭取下一屆主辦權（第五度），預計 2019 年底在台灣召開第 26 屆非核亞洲論壇。

本屆論壇上週（11/11-15）於菲律賓大學登場，並安排前往巴丹省實地參觀巴丹核電廠（BNPP）與火力發電廠，以及與當地（Limay、Morong）居民座談。論壇主題設定爲「**強化人民的團結，朝向非核的未來**」（**STRENGTHENING PEOPLE TO PEOPLE SOLIDARITY TOWARDS A NUCLEAR FREE FUTURE**），突顯反核運動最關鍵的力量在於人民的團結；同時也討論了如下主題：1.核能，這骯髒的產業，2.菲律賓的能源發展，3.再生能源的轉型及替代方案的做法。台灣、日本、韓國、菲律賓、越南、印度、土耳其等國均有反核團體與會。

菲律賓人民曾於 1980 年代成功阻止巴丹核電廠的使用，但至今仍面臨能源轉型及廢核的挑戰；其火力發電廠同樣發生土地徵收的爭議以及汙染等問題，造成居民極大的痛苦。台灣環境保護聯盟則於會中分享台灣能源轉型的經驗，以及自 2014 年來的社會力量如何停止核四廠的興建，如今卻又遭遇擁核勢力利用公民投票的手段企圖復辟。

環盟劉志堅會長表示，曾經獨步亞洲的台灣「非核家園」政策／運動其實還沒有成功。近日隨著地方選舉將進行的全國性公投，其中的第 16 案就是擁核方提出來的。其以「以核養綠」僞善包裝，實際上是要刪除《電業法》中核能發電的落日條款、撤除障礙，以方便他們下一步提出「重啓核四」的公投。與會的各國代表均表達高度關切，並紛紛簽下「Say “No” to Nuclear Power Plant, Vote "Disagree" on #16 Referendum (Nov 24, 2018)」（反對核電，公投第 16 案請投「不同意」票）的認同卡，呼籲台灣民眾團結起來、堅定反核。

而各國的報告也顯示，全球各地的擁核／反核仍在激烈角力。包括中國、法國、日本、韓國、俄羅斯等，都仍繼續輸出核能設備或試圖新建核電廠。但反核成功的例子也不在少數，例如越南就在 2016 年 11 月取消了南部寧順省的核電廠興建計畫。結論是世界各國興建核電廠的緣起、過程都很類似——在國家壟斷、財團當道的背景下興建核電廠，然後增加用電、產生更大的電力需求，然後再對核電產生更大的倚賴，惡性循環，甚至債台高築，並陷入世代背負無盡的核廢料處理／處置壓力的泥沼。（照片：如附）

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The anti-nuclear movement and energy transformation in Taiwan

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A. Nuclear power and renewable energy power

There are three nuclear power plants (NPPs) in operation in Taiwan (operating since 1978, 1981, and 1984, respectively, with 636 MWx2, 985 MWx2, 951 MWx2, i.e. two reactors at each location), which are aged 30-40 years already. The three NPPs have a total capacity of 5,155 MW, which is 11% of total installed capacity in Taiwan in 2017. But because of operation troubles and fuel storage factors, some units have stopped functioning early, so NPP power generation has actually achieved only 8.4 % of total power generation. And the 4th NPP project, which had been under construction for 25 years (since 1992), has been suspended at present. It was opposed by civil society forces and the anti-nuclear movement, and is not completely finished yet, though its projected cost has long been spent and overrun. In the past, the authoritarian government and its electricity monopoly Taipower argued that nuclear and fossil fuel power plants were necessary for industrial development, and intentionally neglected conservation and renewable energy. But on this medium-sized island, potential sites for NPPs are very limited, and the problem of nuclear waste disposal is unresolved.

The “low level” radioactive-waste is stored in-situ at the three NPPs and on Lan-Yu Island; the amount of waste is 105,000 and 100,000 barrels (55 gallon barrels), respectively. The spent fuel pools in the 1st and 2nd NPPs are full or going to be full soon. And some dry storage containers had been constructed and prepared to store the high level radioactive depleted-fuel waste. This large amount of (low and high intensity) radioactive-waste, has incurred very high expenses, even before considerations of the final disposal problem (or liability), and justice for following generations.

Renewable energy in Taiwan includes conventional hydropower, wind power, solar photovoltaic (PV), biomass, geothermal, sea-wave, and energy production from waste. The total installed capacity of renewable energy was 4,700 MW in Taiwan in 2017. This power generation was approximately 4.5 % of the total power generation. Due to promotion by the government after change of regimes, it has been growing rapidly. Installation capacity of renewable energy, including solar PV and offshore sea wind power, is expected and planned to reach as high as 20 GW. But little has been done in energy conservation. Electric power consumption has been growing by 2% annually in recent years. And the price rate set by the government monopoly, Taipower, is comparably low, which is not good for encouraging energy saving and investment in alternatives.

B. The anti-nuclear movement and the halting of Nuclear Power Plant No. 4

Taiwanese scholars started to oppose nuclear power in 1985, focusing on the NPP4 project in progress; at that time martial law, declared in 1949, was still in force. “The Republic of China” on Taiwan under the KMT regime originally planned to buy twelve nuclear power plants from Westinghouse; this was a situation in which it expended high sums on U.S. products, in effect to lobby for continued diplomatic recognition and military support in its Cold War standoff with communist China.

The Taiwan Environmental Protection Union (TEPU) and other NGOs launched the anti-nuclear movement in 1988, following the shock of the Chernobyl accident that galvanized public concern. From April 1988, large demonstrations were held annually. The movement demanded that Taiwan should be a nuclear-free homeland for its people (非核家園) and that the NPP4 project should be subject to popular referendum. Popular votes in opposition party-administered areas such as Taipei City and Ilan County in 1996 found 54% and 64% of voters opposed to the nuclear power plants.

There was in particular determined resistance at the seaside town of Kung Liao on the northeast corner of Taiwan, where NPP4 was being constructed; fishermen there realized that fisheries and seashore aquaculture at the nearby sites of NPP1 and NPP2 had been much damaged, and so NPP4 threatened their livelihood. Several times they surrounded and halted the construction. However, an incident in October 1991 in which a protester’s small truck accidentally hit and killed a policeman during a large confrontation at the entrance to NPP4 put a chill on direct action. The truck driver was sentenced to life imprisonment, as if for homicide with intent, and he actually served 12 years.

In 2000, the opposition Democracy Progressive Party (DDP) candidate for president, Chen Shui-bian, pledged to the people of Kung Liao that if elected he would stop NPP4. Chen was narrowly elected, the first ever democratic change of regime in Taiwan, and ordered construction halted. But the old regime’s KMT-controlled legislature threatened to impeach him, and he gave in to continued construction in 2001. The legislature likewise passed a “bird-cage”-like Referendum Law in 2003 that put a high threshold on popular referendums. The KMT took back the presidency in 2008 and slated continued high expenditures for overruns on NPP4.

However, the anti-nuclear movement got a new strong momentum following the Fukushima earthquake, tsunami, and nuclear disaster

that hit Japan on March 11, 2011. Taiwan is likewise subject to strong earthquakes.

The major action in 2014 was the hunger strike (April 22-30) of Mr. Lin I-Hsiung, the former chairman of the DPP. Lin has been a figure with high public profile and sympathy in Taiwan since the political murders of his mother and two daughters on February 28, 1980 – a date thick with symbolism in Taiwan history, recalling the massacres of 1947. He demanded that the government stop construction of NPP4 immediately. This was a renewal of his 1994 anti-nuke campaign in which activists and academics walked around the whole island. Another important step was the promotion of a nationwide referendum by TEPU concerning the installation of fuel rods to test the power generation of NPP4. This proposal gained high support during the period of the Sunflower student movement (March 18 - April 10, 2014) and the hunger strike of Mr. Lin.

Facing public challenge on several fronts, the KMT government announced on April 28, 2014 that Unit 1 of NPP4 would be sealed, and the completion of Unit 2 would be suspended. It is likely also that Taipower itself had qualms about the safety of NPP4, given the rake-offs of corruption in subcontracting with substitutions of shoddy material and work. The government also said that the project is not stopped or abolished, and the future of the plant will be decided by referendum in the future. However, TEPU's referendum proposal was rejected (August 22, 2014) by the referendum review committee of the Executive Yuan. Therefore, there is a long way to go to achieve the right of popular referendum and our goal of a no-nuke Taiwan.

C. Energy policy change away from nuclear and coal power generation, and towards natural gas and renewables.

Following the 311 Fukushima nuclear disaster, the anti-nuclear movement got new momentum to persuade the people and government that any nuclear power plant could bring catastrophe-scale risk, especially in Taiwan. The newly-elected government of the DPP in 2016 changed the national energy policy to an energy-transformation framework, which shall halt operating all NPPs before 2025. The energy reform pledges to go toward a power generation fuel ratio of natural gas 50%: coal 30%: renewable 20%: nuclear 0%. That guides the power infrastructure plans towards no NPPs, and development of renewable energy, cleaner energy, lower- carbon energy, and conservation of energy. Thus a large number of solar PV plates and offshore sea wind generators have been planned island-wide, and invitations to bid were issued internationally. Those old, more polluting coal power plants will be replaced by new natural gas and more efficient facilities in a planned future stage. Recently, large demonstrations against air pollution and coal-burning have been held throughout Taiwan. We believe that the energy transformation is a good opportunity for sustainable development in Taiwan.

D. Proposed referendum by pro-nuclear forces

However, the forces of darkness have not been totally defeated. They argue that NPPs are a “green” technology because they do not use fossil fuels, and will allow more stable and cheap power generation while green alternatives are developed. Never mind that an NPP makes the site radioactive for thousands of years. Under the revised Referendum Law, many referendums have been proposed for the local elections that will be held on November 24, 2018. The pro-nuclear side has proposed a referendum to restart NPP4 and extend the operating life of the three older NPPs. We think that pro-nuclear forces with vested interests and conservative political agendas are involved. We must do our best to struggle with these forces and win public support in this continuing battle.

E. Experience in the anti-nuke struggle: What we learned

1. Energy policy is an important aspect of the national economy, and is related to big business interests. So energy transformation is a hard task -- not to mention that nuclear-related manufacturers and those they bribe shall lose their fortunes.
2. We still face the difficult problem of radioactive waste. Until now, we see no practical solution, especially in Taiwan, a densely-populated island.
3. Regarding the nuclear power issue and the climate change threat worldwide, is a hard problem to tackle. The political groups and parties are unreliable; when in power they change their standpoint according to their own interests.
4. What we believe and rely on is the strength and support from the common people. We suggest that attention be given to the youth and to media, and the struggle must be carried on continuously and enthusiastically.
5. That the Taiwan government is promoting the energy transformation reform, with the central goal of no nuclear power plants, is, we believe, a correct, no-regret policy.