

[Article]

The Coverage of the Nuclear Energy Issue in Japanese Mainstream Newspapers

Eddy Van Drom

INTRODUCTION

This year (2006), the 26th of April marked the 20th anniversary of the Chernobyl's nuclear power plant disaster. This event had a considerable impact on the public's perception of nuclear energy and its risks. Japan was no exception since, from that time on, its inhabitants have become more aware of the hazards related to the nuclear industry.

The Japanese public was, and still is, provided with information by the media, and more than anywhere else in the world, by newspapers. For example, the circulation of Japan's largest newspaper, *Yomiuri Shimbun*, is currently the highest in the world with more than 14 millions units (morning and evening editions combined), while the *Daily Mail* in the U.K. sells about 2.5 million. *Yomiuri's* main rival, *Asahi Shimbun*, with 12 million daily newspapers is followed in descending order by the *Mainichi Shimbun*, the *Nihon Keizai - Nikkei - Shimbun* and the *Sankei Shimbun*. (Miyawaki 2006: 249). They are all national and referred to as mainstream newspapers. With such circulations, it can be easily inferred that the way they cover a social issue can greatly influence the public's perception of it. This is the reason why the printed press has been chosen for my analysis as the best representative of the media.

Among the subjects covered by the press, the energy issue is well-known to be a prominent issue in any industrial country - Japan included. Hence, in order to examine if Japanese newspapers are similar in terms of contents, or not, I will concentrate my study on a controversial subject related to energy - the nuclear power plants issue. More precisely, I will focus my attention on four major nuclear accidents (from 1986 to 2004), as well as the way they were reported in newspapers.

My approach will then be threefold. First, the nuclear situation will be briefly described. Secondly, on the basis of articles and counts of articles, I will look for leanings or bias in major dailies. Finally, other sources of pressure inherent in the press coverage of the subject will be considered.

THE NUCLEAR ENERGY ISSUE IN JAPAN

To be able to analyze newspapers' contents, it is first essential to understand what is at stake, and secondly to understand the connections with the Japanese government and the industry.

The total production of electricity in Japan reached 1,137 billion kWh in 2004, 24.8 % of it being provided by nuclear power. With a total of 52 nuclear reactors, the country is also third in terms of plants, after the United States (103) and France (59) (Statistical Handbook of Japan 2006: 88).

The project to boost that percentage to around 40% in the next 25 years (CNIC 2005: 253, 307) reflects clearly that the shortage of energy resources has always been a cause for concern in contemporary Japan. It should be noted that the American oil embargo in 1941 probably triggered the Pacific War (e.g.

Wikipedia 2006). The nuclear option was actually embraced as early as 1954, under Nakasone Yasuhiro's instigation (Low *et al.* 1999: 72), precisely because it was seen as a cheap and stable energy supply allowing a reduced dependence on foreign oil.

Eleven years had passed before commercial nuclear-powered electricity was produced for the first time in November 1965. During this time, a dualistic structure had progressively emerged with, on one hand, a government-industry complex (i.e. the Ministry of International Trade and Industry and electric power companies) and, on the other hand, a group composed of the newly created *Science and Technology Agency* (STA) and public corporations for research. Whereas both conglomerates' goals were similar – energy self-sufficiency for Japan, their policies were opposite. The MITI complex advocated the introduction of foreign technology while the STA group appealed for domestic R&D. That is why the country is today mainly equipped with Light-Water Reactors (LWR) and Boiling Water Reactors (BWR) constructed under the licence of American corporations (General Electric Company and Westinghouse) and, at the same time, is developing big domestic projects such as the Fast Breeder Reactor (FBR) supported by STA (Low *et al.* 1999: 72–78). And yet, both alternatives have led to huge problems: plutonium production, hard-to-complete recycling, and plants growing dangerously old.

The plutonium issue

Unlike conventional reactors, the new type FBR produces more fissile fuel than it consumes. It therefore would seem to be the best option to solve the Japanese energy issue. That is why the FBR experimental reactor MONJU was built in 1985 in Fukui prefecture. Nevertheless, it did not produce its first nuclear heat until April 1994.

Today, three obstacles hamper the progress towards its commercialization. First, an economic issue: the construction and maintenance costs are higher than for a conventional nuclear plant, meaning higher generated electricity prices. Secondly, a technological challenge: the coolant to be used is liquid sodium which burns spontaneously in contact with air and explodes with water, making the process a very hazardous one. As a matter of fact, on 8 December 1995, the MONJU reactor suffered a sodium leak of 700 kilos, causing a fire. The semi-governmental organization Power Reactor and Nuclear Fuel Development Corp (PNC, also called Dōnen in Japanese) even tried to conceal the extent of the damages from the press and the government. The plant is still off-line to this day (10 October 2006) (Kitamura and Mishima 2001: 200). The last obstacle is a political contention: the fuel feeding the reactor is indeed plutonium, generating therefore more plutonium. There are fears that in this case plutonium could become a commercial commodity. Besides its high toxicity and the related problems of transportation, plutonium could also be used to build atomic weapons, in breach of the nuclear Non Proliferation Treaty (Morris-Suzuki 1996: 233). Despite all these setbacks, the STA promoted and protected the FBR project continuously, in part because it was its only large policy domain, along with the slow-to-start space program (Low *et al.* 1999: 80).

The nuclear fuel cycle issue

The second nuclear energy issue is related to the recycling of used fuel. The nuclear waste coming out of conventional reactors still contains high concentrations of usable uranium. But because of its high toxicity, the common procedure is to bury it definitively. In an attempt to avoid that waste of raw material, the Japanese project was to recycle it in fast breeder reactors. Nevertheless, high costs and the MONJU accident finally forced the industry to seek an alternative in mixed oxide plutonium-uranium (MOX) fuels which would allow the use of the spent nuclear fuel once again in commercial reactors (this program is

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called “pluthermal” in Japan). The nuclear industry was beginning to implement a plan to use MOX from Europe when the Japan’s worst-ever nuclear accident occurred, at the TŌKAIMURA uranium processing plant (Ibaraki prefecture), operated by JCO Co. Ltd, a subsidiary of Sumitomo Metal Mining Co.

On 30 September 1999, three workers, in violation of the rules, poured enriched uranium into a water tank, setting off an uncontrolled nuclear chain reaction which emitted gamma rays and neutron radiation. Hundreds of people were irradiated at low level doses, two workers died and about 300,000 residents were ordered to stay indoors (Beder 2006). The measures to deal with the accident were poor and slow. Firefighters came on site without protective suits and were contaminated because they were not informed about the emission of radiation. No hospitals in the vicinity had the expertise to handle irradiated victims, and no neutron detectors were to be found in the nearby town (Kerr 2001: 118).

The nuclear plant ageing issue

The third nuclear energy issue is the ageing of the commercial reactors. On 9 August 2004, the accident at the Kansai Electric Power Co.’s MIHAMA-3 (BWR in production from December 1976 - Fukui prefecture) revealed the state of deterioration of the old stations. It was the worst-ever accident in Japan in terms of the number of victims in a nuclear station. No radiation leak was reported but five people were scalded to death by steam coming out of a burst pipe in the secondary system. It turned out that the pipe had not been checked even once since the opening of the plant (Johnston 2005).

Other accidents and incidents have been reported in Japan (see Appendix) but I will limit my study essentially to these three representative accidents, along with the Chernobyl disaster.

LEANINGS IN THE NUCLEAR ISSUE COVERAGE

The first thing which catches the eye when comparing the headlines of *Yomiuri*, *Asahi*, *Nikkei* and *Mainichi* newspapers reporting on the aforementioned nuclear accidents is a striking similarity. Sometimes, main headlines may even have the same wording (e.g. first pages of *Yomiuri*, *Asahi* and *Mainichi*, 10 August 2004). Pictures also are often very similar if not identical, as well as the subjects dealt with (e.g. the ban on selling milk in Poland after Chernobyl’s accident - *Yomiuri*, *Nikkei* and *Mainichi*, 30 April 1986). It would be hard to believe that it is due to pure chance. The so-called *kisha kurabu* (Japanese reporters’ clubs) are more probably the reason behind it. Indeed, these clubs are associated with the governmental institutions, which provide journalists with space and material. Thus they create a close relationship between official bodies and the reporters who tend to just wait for their press releases. But either in order not to upset their easy source of information or for fear of being thrown out of the club, press journalists have a tendency to publish the governmental institutions’ press releases more or less as they are, with no major corrections or without carrying out further investigations. In this way, self-censorship has become common practice (e.g. van Wolferen 1990: 94-97).

Newspapers’ leanings in headlines

It is however well known that, for example, *Asahi* is generally tagged as a progressive newspaper, which is often anti-US and which disapproves of the Japan’s right-wing groups, much like *Mainichi*. In contrast to this, *Yomiuri* is more anti-left and conservative (van Wolferen 1990: 128). The *Nikkei* is considered as mainly specializing in economy and business issues. Is then the government’s agenda, through the *kisha kurabu*, capable of stifling these leanings as far as nuclear energy is concerned? Indeed, differences can be noticed between newspapers, first subtly in the headlines and more clearly in editorials or opinion articles

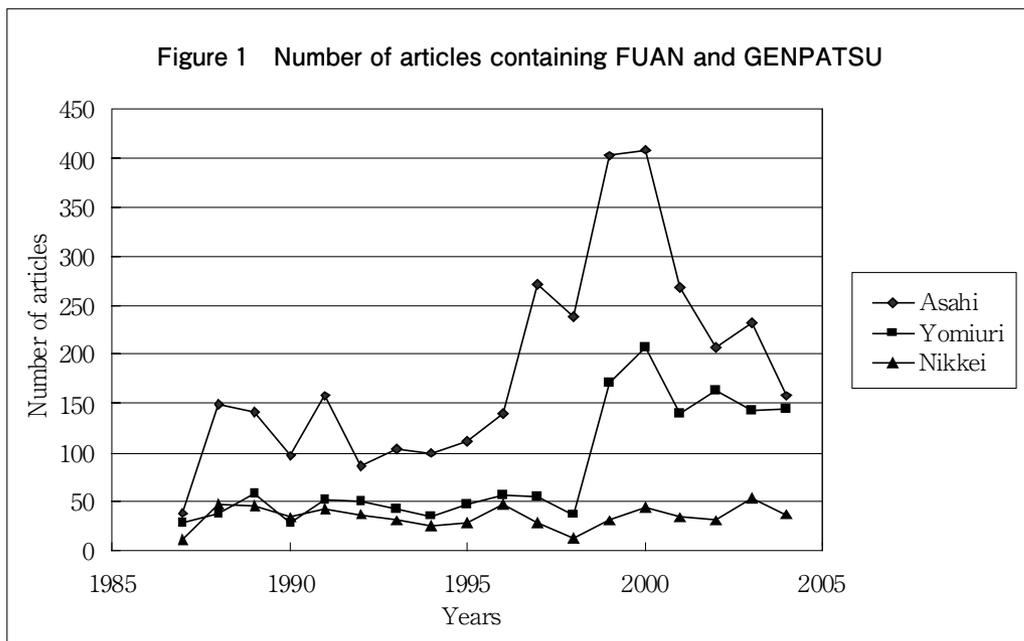
published afterwards. Here are some illustrations. Even if the content of the *Asahi's* headlines about the Chernobyl's accident is globally the same as those of other dailies, it is not the case for the disposition and the size of it. Their biggest headline "Worst Accident Ever - Meltdown" has more impact and it is even more frightening because the place where the accident occurred (a nuclear plant in the Soviet Union) is mentioned only far below and in small letters. All the other dailies had added that information as a subhead of their main title. The Monju accident too revealed contrasts e.g. between *Nikkei*, on the one hand, proposing factual explanations and describing objectively the consequences on the nuclear fuel cycle program and, on the other hand, *Asahi* or *Mainichi* completing their first pages with articles about "*The way to abolish nuclear power (the Voice of Hiroshima)*" or the danger of nuclear terrorism. On the occasion of the Tōkaimura disaster, again *Nikkei* kept its wording at a technical level and once more predicted repercussions on the nuclear fuel cycle promotion, whereas *Asahi* and *Mainichi* dwelled on the very long delay before authorities were informed of the situation. Finally, the press splits again over the Mihama-3 accident: *Yomiuri* warned against overreaction and against the manipulation of people's fear about nuclear power plants; *Asahi* chose the "worst-ever accident" angle (in terms of the death toll) as well as the prediction of a great impact on the nuclear power development; *Nikkei* preferred to give a clear description of the circumstances, completed with explanations of the LWR and BWR technologies.

Editorials' leanings in nuclear issues

The comparison of editorials and opinion articles confirms these deviations between newspapers. *Yomiuri* seems inclined to minimize problems (9 December 1995-10, 16 August 2004), at least compared to *Asahi's* coverage (see below). As they aim to avoid making the public too anxious, they voice the importance of better informing the citizens and of regaining their confidence (10 December 1995-5 October 1999). Surprisingly, the nuclear program itself seems most of the time above suspicion, just like the government which has however obviously failed in its duty to double-check the safety of the nuclear installations.

Conversely, the *Asahi* tends to point an accusing finger at certain governmental institutions and private companies (Dōnen, KEPCO). Furthermore, on top of their marked opposition to the FBR development, they often take the opportunity of an accident to cast doubt on the safety in all the nuclear facilities throughout the country (10, 14, 23 December 1995-2, 5, 21 October 1999-10 August 2004). If such opposing standpoints are without any doubt salutary, it can also incline the population to what may seem unnecessary anxiety. That is how some journalists from the *Yomiuri Shimbun* (Nakamura 2004: 84-88) - and even from the *Asahi Shimbun* itself (Inagaki 2001) - have come to accuse *Asahi* of sensationalism, i.e. exaggerating issues in order to boost readership and to attract sponsors. In the same vein, *Asahi* urge the complete abandonment of nuclear production of electricity, following notably Germany's example. By doing this, it has been accused of lumping together socio-economical situations which are different for each country and also of keeping silent about contrasting policies. They also seem to ignore that nuclear energy is generally cheaper and the fact that it does not produce CO₂ (Nakamura 2004: 50-56).

To confirm or deny the accusation of alarmism described above, I counted the number of articles - by year - containing, at least once, the pair of words "fuan" (anxiety) and "genpatsu" (nuclear plant). For that purpose, I worked with the three existing databases accessible by computers from important libraries: KIKUZŌ II Visual Asahi DNA for libraries (*Asahi Shimbun*, data from August 1984), YOMIDASU Bunshokan (*Yomiuri Shimbun*, data from September 1986) and NIKKEI TEREKON 21 (*Nihon Keizai Shimbun*, data from April 1975), approach which is based on the Mitsuishi's methodology (Mitsuishi 2000:



116-117).

Asahi's and *Yomiuri's* curves in Figure 1 exhibit similar peaks around the dates of nuclear power plant accidents or nuclear incidents (see Appendix). But *Asahi* exceeds by far other newspapers, even between disasters. In 17 years, the total is more than twice the *Yomiuri* figure and more than five times compared to the globally stable *Nikkei's* count, confirming an alarmist tendency. Interestingly enough, counts over a shorter period of time around the three Japanese accidents' dates reveal a drop close to zero for the three papers. This may be another fact pointing in the *kisha kurabu's* direction. Indeed, one can think that the authorities do ask the reporters to keep calm and factual in their coverage so that panic can be avoided.

EXTERNAL PRESSURE FACTORS

Newspapers companies have to fight for a niche, as any enterprise does, and then have to protect it in a saturated market. It has been shown earlier that, for example, *Asahi Shimbun* seems to prefer the "watchdog" option i.e. to be critical of the ruling elite. But the necessity to "survive" can lead to other constraints.

Sponsors and the MIAC

The national dailies are directly associated with the five national commercial television stations (see the table below) so that papers and broadcasters significantly influence each other (Gamble and Takesato 2004: 40).

In fact, media conglomerates are big business, with each of the national newspapers having a stake in a TV station. Papers supplying stations with news can hope to reach a much larger audience. But, obviously, they also want to remain in good financial health and this often requires a profitable sponsorship. As a matter of fact, the total advertising expenditure ratio in 2005 was 34.2% for television, close to twice that of

National dailies	National commercial television stations
<i>Yomiuri</i>	Nippon TV
<i>Asahi</i>	TV Asahi
<i>Mainichi</i>	Tokyo Broadcasting System (TBS)
<i>Nihon Keizai (Nikkei)</i>	TV Tokyo
<i>Sankei</i>	Fuji TV

newspapers' (Dentsu 2005).

The downside of this “symbiosis” is that broadcasters are manifestly bound to their sponsors and most probably reluctant to depict them too negatively. As an illustration, KEPCO was probably not the target of much criticism from Mainichi Broadcasting System, Asahi Broadcasting Corporation, Kansai TV (Fuji TV network), TV Osaka (Nikkei), Yomiuri TV, and Fukui TV (local), after the Mihama-3 accident since they all broadcast advertising and programs sponsored by that company (KEPCO 2006).

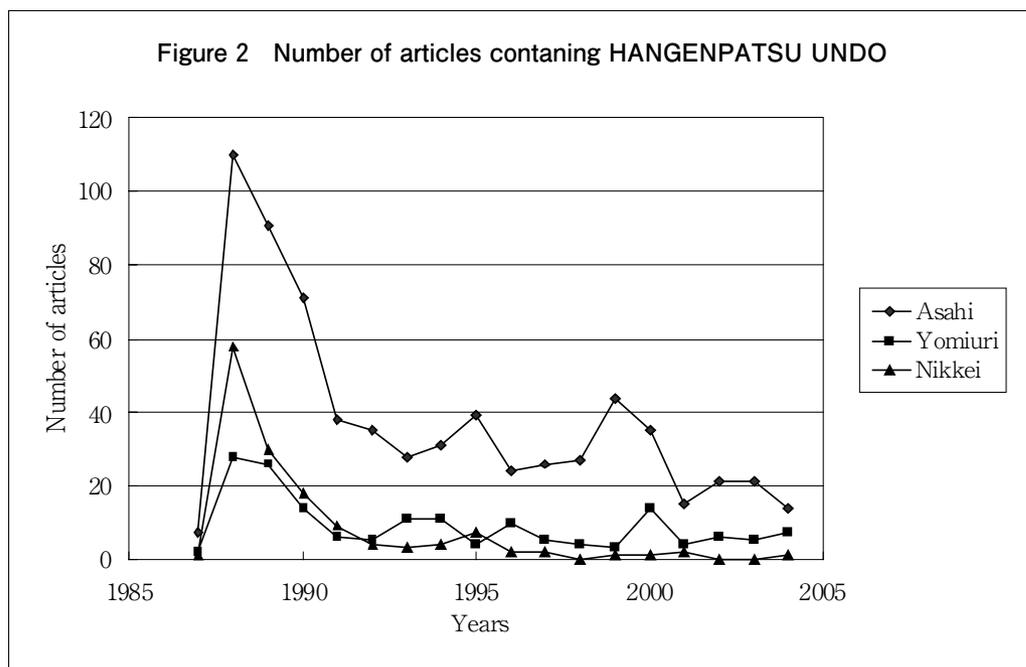
The government itself has a coercive grip on the newspapers through the broadcasters. If it is displeased with the way a media covers a sensitive subject, the Ministry of Internal Affairs and Communications (MIAC) can theoretically refuse to renew its five-year licence (Watanabe *et al.* 2006), making use of the article 3-2 of the Broadcast Law which stipulates that news shall be politically impartial and shall report controversial issues without distortion, and also from different points of view (MIAC 2005).

Citizens and anti-nuclear movements

On the other hand, dailies cannot ignore the need of the public or NPO to make their voice heard. Indeed, people dissatisfied with particular social issues can ease their resentment especially through the writing of opinion articles in newspapers. Editors-in-chief have to take into account these appeals all the more if there are direct phone calls. Nakamura (2004: 71-73) relates an anecdote of readers calling the editor of Yomiuri to scold him because the newspaper had decided to scale down headlines concerning the supply of detergents running low in supermarkets at the beginning of the first oil shock (1973). Paradoxically, the paper's objective had been to cool off that very panic emerging from the readership-reporters interactions.

Other groups of citizens who want to pass their message through to the media are obviously the anti-nuclear movements. In order to have an idea, even a rough one, of the importance that dailies attach to these groups, I have counted the number of articles containing “hangenpatsu undō” which means *mouvement against nuclear power station* in Japanese, and reported it in Figure 2.

As expected, *Asahi* seems the most sensitive to anti-nuclear claims but surprisingly, much like the two other papers, the number dropped sharply several years after the Chernobyl shock. It may suggest that these social groups have found other means of expression, the first coming to mind being the Internet. As a matter of fact, numerous anti-nuclear sites can be found on the Web (e.g. *CNIC* or *Stop the Monju*). Groth (1996: 219) has shown that these channels, which he calls “mini-media”, allow the protesters to better control what is to be released or not to the public. This is difficult when newspapers are involved, since there is always a risk of seeing one's requests distorted by the paper to fit its own agenda. That is what Pharr (1996: 19) has called the “trickster” side of the media. In a related matter, it is interesting to notice that social movements against the plutonium cycle are directly fed with information from American institutions. The related installations (FBR, Rokkasho reprocessing plant) are indeed in breach of the Non



Proliferation Treaty. Sometimes, US organizations even contact Japanese mainstream newspapers in an attempt to make them publish anti-plutonium articles (Nakamura 2004: 141-143).

CONCLUSION

In conclusion, economical, political and social constraints do not completely hamper mainstream newspapers from having their own point of view, at least when they cover sensitive issues such as accidents in nuclear facilities or power plants. The contrary would be harder to understand since they are competing for the same market and, therefore, identical contents would mean the death of the weaker papers.

By comparing headlines and editorials from different dailies, one could highlight the anti-nuclear stand of *Asahi* compared to the *Yomiuri's* more conservative or pro-nuclear stance. Secondly, the *Yomiuri* and *Nikkei* tend to calm things down, calling for more details about the circumstances of the disaster, or reassuring the citizens. They also appear less critical of the system than the *Asahi* whose articles seem more negative or alarmist.

In order to see if such impressions were founded, and also to give more substance to my qualitative analysis, I compared the number of articles per year (between 1987 and 2004) associating the key words "anxiety" with "nuclear plant" by consulting related databases. The graph showed that *Asahi's* articles contain the strongest correlation.

But these constant warnings have brought about a beneficial consequence i.e. a stronger public awareness today toward the issue.

Accidents alone are indeed not enough to trigger citizens' reactions. For example, Chernobyl's disaster provoked little controversy in the pro-nuclear policies in France but was a major political event in Germany

because of the differences in the dominant discourse in which nuclear energy had been framed (Koopmans and Duyvendak 1995).

On the other hand, Ōnishi (1999) demonstrated a direct correlation between the quantity of anti-nuclear information in newspapers and the number of opinion polls revealing the public's wariness or even distrust.

Therefore, it could be said that *Asahi Shimbun's* coverage of the question between 1995 and 2004 (see Figure 1) has created a frame in which Japanese nuclear accidents changed how the nuclear option is viewed. As a matter of fact, the recent number of trials against nuclear power plants has risen by more than 40% from the nineties, as did the number of prefectures refusing the construction of nuclear facilities on their territory (CNIC 2005: 75, 78).

For the time being, the wider variety of newspapers you read, the better informed you will be. It will be increasingly important because democratic and informed decisions will be needed for the smooth integration into our cultures of the emerging big technologies, namely Robotics, Nanotechnology, and Biotechnology. Mainstream newspapers should be more aware of their major role in informing objectively the citizens about principles, benefits and risks attached to technologies, allowing people to participate more fully in the techno-scientific society they live in.

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(2007年10月22日受付)
(2007年12月20日掲載決定)

Appendix

Nuclear incidents and accidents in Japan
(CNIC, 2005: 219, translation)

Main nuclear accidents in Japan from the nineties

9 February 1991	Mihama Power Plant 2	Breaking of small pipes in the steam generator. Stop
29 September 1992	Fukushima I P.P. 2	Lack of water supply to the reactor. Stop
9 November 1992	Fukushima I P.P. 2	Emergency cooling system pump's motor burnt out. Stop
27 December 1993	Tōkaimura Nuclear Plant	Dispersal of radioactive matter. 4 workers contaminated
11 December 1994	Onagawa Power Plant 2	Error of procedure. Automatic stop
30 January 1995	Shimane Power Plant 2	Water level in the discharger too high. Automatic stop
24 October 1995	Tōkai Power Plant	Breaking of a control rods' cable. Stop
8 December 1995	Fast Breeder Monju	Leak of sodium in the secondary loop. Fire.
11 March 1997	Tōkaimura Nuclear Plant	Fire in low radioactivity waste. Explosion. Radiation leak
24 October 1997	Tsuruga Power Plant 1	Detection of a defective control rod. Manual stop
5 December 1997	Fukushima II P.P. 1	Detection of a defective control rod. Manual stop
12 July 1999	Tsuruga Power Plant 2	Radioactive coolant leak. Stop
30 September 1999	JCO	Fission chain reaction. Many irradiated people. 2 killed
7 November 2001	Hamaoka P.P. 1	Explosion and fissure in excess heat disposal 's pipe. Stop.
9 August 2004	Mihama Power Plant 3	Breaking of a condenser pipe. 5 killed. 6 serious burns. Stop.

Main nuclear incidents and irregularities

July 1976	Disclosure of an accident (defective rod) at Mihama P.P. 1 (occurred in April 73)
September 1982	Illegal work on damaged pipes of the steam generator at Mihama P.P. 1 (from 1973 to 1976)
November 1986	Presentation by the ANRE of a hidden accident at Tsuruga P.P.
November 1989	Use of metallic reinforcement based on falsified data for the foundation work of Noto P.P.
July 1991	Error of design in the distribution pipes of Monju
March 1992	Clog trouble in the small pipes of the steam generator of Monju (May 1995)
November 1995	Donetsu enterprise is unable to estimate the amount of plutonium it has produced
September 1997	Forgery of data for pipe welding work in power station (since 1982)
October 1998	Falsification of data for the container shield used for the nuclear waste transportation
September 1999	Forgery of the inspection data of the MOX produced by BNFL
March 2000	Error by COGEMA in the treatment of the inspection data concerning its MOX
August 2002	Report by Tokyo Denryoku on its own falsified data on maintenance checks. Ripple effect