

## 国際活動委員会セッション「フランス原子力学会との合同セッション」

## Contribution of Nuclear Power Toward COP21 Paris 2016

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## 1. Introduction

COP21 Paris—Nuclear for Climate, a global initiative supported by more than 140 regional and national nuclear associations and technical societies, said in a new position paper that a significant expansion of nuclear energy is necessary for the world to achieve an 80 percent reduction in greenhouse gas emissions by 2050.

## 2. France/Japan Joint Session of AESJ 2016 Fall Meeting, Chair: Dr. Tadashi Narabayashi (Hokkaido Univ.)

1) Opening and welcoming address: Mitsuru Uesaka (President of AESJ)

2) Joint collaboration address and Report of COP21 Paris

Valerie Faoudon (Director-general President of SFEN)

The position paper urges negotiators at the United Nations Framework Convention on Climate Change Conference of the Parties (COP21) to develop an achievable agreement for the reduction of greenhouse gases that ensures the right of countries to choose nuclear energy in order to reduce greenhouse gas emissions while meeting their energy and development objectives. This choice should not be prejudiced against in any way by the new UNFCCC protocols, specifically with regards to access to climate funding mechanisms such as Green Climate Funds. “We strongly believe the world must use all available low-carbon energy sources, including nuclear energy, if it is to mitigate the effects of climate change and reduce greenhouse gas emissions while meeting development goals and not impeding on economic growth.”<sup>(1)</sup>

The Nuclear for Climate panel hosted by Valerie Faoudon, who spearheaded the Nuclear for Climate campaign, in what we believe was the first ever COP discussion panel on nuclear and climate. The discussion was held inside the Generation Climate public arena, and attended by more than 200 people. It was a lively and constructive session with contributions from the Sierra Club and other environmentalists in the audience.

Fig.1 Nuclear for Climate panel hosted by Valerie Faoudon<sup>(2)</sup>

3) Global warming in progress and Increase of CO<sub>2</sub> emission in Japan under delay of NPP restart process, Tadashi Narabayashi (Hokkaido Univ.)

As shown in Fig 2, Considering the global warming, rapid increase of population and energy consumption, depletion and ballooning of fossil fuel consumption, “Nuclear Renaissance” should be continued by enhance the nuclear safety. Global warming is in progress and increase of CO<sub>2</sub> emission in Japan under delay of NPP restart process. In Germany, green paradox and renewable poverty are the new problem, as the solar and wind power are growing. It is appellant that the greenhouse gases are increasing very rapidly at present.

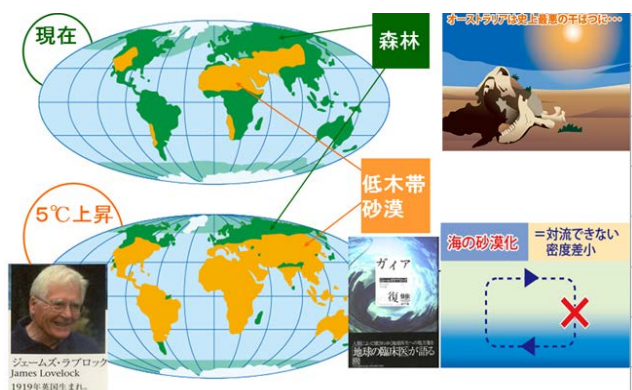


Fig. 2 “Gaea's Revenge” by James Lovelock.

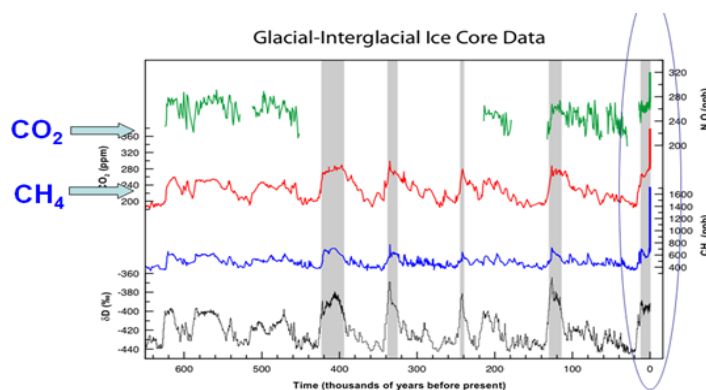


Fig.3 Ice core data show rapid increase of Greenhouse gases

#### 4) Nuclear NPPs Situation and COP21 in France, Sunil Felix (The French Embassy)

France relies on nuclear power for around 75 percent of its electricity needs. So why is nobody talking about nuclear at the big environmental summit hosted by Paris? The huge French pavilion that was built for the COP 21 climate conference includes over a dozen spacious stands showcasing France's leadership in various fields of science, technology, education and ecology. But nowhere does the pavilion mention nuclear energy, completely dismissing this key French sector from the country's energy landscape. Conference participants curious about nuclear power will also find it difficult to find any information on the subject, from either groups who oppose atomic energy or those who defend it. The International Atomic Energy Agency (IAEA) has a booth in the Exhibits Area of the convention center, but denies it is here to advocate the use of nuclear power. Greenpeace, a strong critic of nuclear energy, prepared a briefing for its campaigners in view of the COP 21, but the group is not addressing the issue directly in Paris.



Fig. 4 Chooz NPP, EDF France

#### 5) The role of thermal power plant toward COP21 for load follow in European Power Grid,

Takashi Kuroishi (MHPS)

The role thermal power is to be able to play that complies with the COP21 Paris agreement. What can thermal power plants contribute in order to supply stable Power? Power grid capability is an indicator for stable power supply. The structure of Power Grid is similar to pooling water in a swimming pool. Fig. 5 shows target of greenhouse gas emission in Japan for the Paris Agreement.

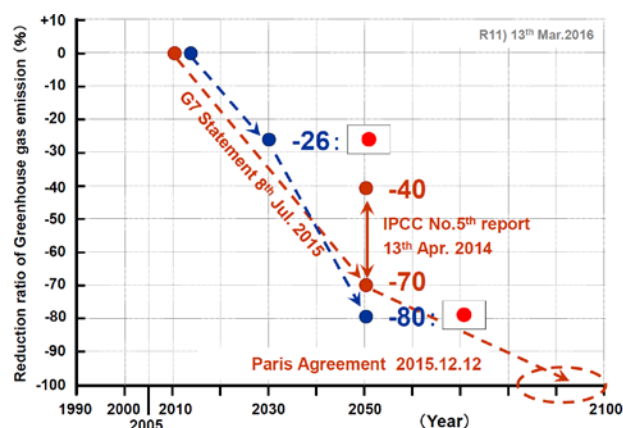


Fig. 5 Target of greenhouse gas emission in Japan

Fast Cut Back(FCB)-function continue operating even when the power grid is disconnected. After the power grid is restored, the power plants will swiftly raise its power load to the original rate. Thermal Power can stabilize power supply and nuclear power should supply large load of electricity

#### Reference

- (1)<http://www.nei.org/News-Media/Media-Room/News-Releases/Nuclear-Energy-Should-Be-Part-of-COP21-Agreement>
- (2)<http://www.france24.com/en/20151208-cop21-france-nuclear-energy-struggles>