

Nuclear Energy Policy and the National Deliberative Poll

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Summary

The National Deliberative Poll on Energy and Environmental Policy was conducted in August 4-5, 2012. James Fishkin described it as “the first Deliberative Poll[®] (DP) anywhere in the world that was commissioned by a government to get input on a subject of national importance before a national decision.”

This paper focuses on three aspects of Deliberative Polling in the policy making process. 1) Why the government adopted it as a tool of public consultation in the formal decision making process, 2) what were the poll results, and 3) how the government used it for their policy decisions.

Interestingly, the poll shows us that the 285 randomly selected participants became more informed and changed their views on certain policy options. The public finally supported the zero nuclear option and concern for safety as a first criterion. It also shows that the public could not find any reliable authority to judge important key respects. It seems to be an “anomie” situation where there is no trust at all even in the nuclear specialists.

After an ad hoc committee of specialists examined public consultation results such as from deliberative polls, public comments, town-meetings, and public opinion polls by media, Energy and Environment Council decided ‘the Innovative Strategy for Energy and the Environment’ that recommended the policy proposal “zero nuclear power by 2030s along with strong commitments to energy conservation and renewable energy.” The Cabinet finally made a decision according to the recommendation.

1. Introduction

Since the Great East Japan Earthquake and consequential Fukushima Daiichi (F1) Nuclear Disaster on March 11 2011, the Japanese public has become more interested in Japanese energy and clean power policies. Complex public opinions, which cannot be divided into clear support or opposition of these policies, have been created.

The Deliberative Poll on Energy and Environmental Policy Options conducted from August 4 to 5, 2012 (An initial survey was conducted from July 7 to 22, 2012) was widely reported by media. The media attention resulted in heightened public interest in the event. The Deliberative Poll (DP) was officially adopted by the Japanese government as a medium through which Japanese public could discuss and voice opinions on energy and environmental issues so that the *Energy and Environment Council*, a governing council established to create an *Innovative Energy and Environment Strategy*, officially adopted the Deliberative Poll (DP) method as a source of public discourse and input, in order to better understand attitudes towards the issues. The official DP was conducted five times in Japan by that time and more than seventy times all over the world. James S. Fishkin claimed that this was the first DP anywhere in the world that was commissioned by a government to get input on a subject of national importance before a national decision¹. Additionally, this was one of the most covered events in the history of DP, in terms of the amount of media attention.

Some questions arise here. Why was this DP adopted as a part of the official policy-making process? What was the role of DP in terms of actual energy and environmental policy decisions? More precisely, where can we locate this DP in an official policy decision process? What is the difference between a DP and other public hearings, such as town meetings? What is the difference from a general public opinion poll?

In this paper, I will answer the following questions with regard to DPs: (1) why was a DP officially adopted? (2) What do the results of a DP show? (3) How were the results used? This paper's basic stance is same as my stance at the follow up meeting for examining the public consultations. In other words, I had played dual roles at that point – as a chairman of the executive committee operating the DP and an analytical expert. Throughout this paper I will provide an accurate account of my experience as an operating director of the DP as well as social science expert insight.

When mediating situations with significant political conflicts, operating directors must arbitrate issues in a different manner than that which we would employ in academic research and public relations. For example, there is a difference regarding the meaning of time between researchers and policy makers. Policy makers have a better sense of real world immediacy akin to that experience by those working in the media. In other words, if an outcome cannot be achieved by a required deadline, commitment in these types of research might be altogether rejected. This type of responsibility was significant for me.

My responsibility was very different from that of ordinary research (such as recruiting participating subjects.) For example, We had to install a metal detector for entrance as a part of the government guideline. We needed to cooperate with a security company as well as the police. The most difficult task was to prevent the media from reporting the location of the deliberative forum in advance, so as to avoid intervention to the event.

An ordinary process of disclosing information to the public was not applied in this case. We asked media not to release information such as briefing materials and questionnaires, which are usually disclosed to the public, until the forum started. Technically, we imposed an information embargo. We assumed that some media might analyze the briefing materials and questionnaires,

and so we tried to avoid any influence from media coverage to the participants before the event started.²

When we consider the disclosure of information, we need to think about a fundamental issue in academic research. That is, one of the most important criteria in academic research is “Replicability,” meaning that other researchers will be able to reach a similar result. To do so, we disclose not only the briefing material, questionnaires, procedure, and outcomes of the study, but also individual data, withholding confidential information to protect privacy.³

We also need to accept criticism of our work, which would be directed toward the government as a result of our research being funded directly by the government. This differs from research funded by government grants such as the Grant-in-Aid for Scientific Research (KAKENHI). It is important to implement the same methods and procedures whenever we do research, regardless of financial resources such as KAKENHI, the government, the Federation of Electric Power Companies of Japan, or SOFTBANK, a telecommunications corporation with interests in renewable energy business. This standardization of methods is part of the criteria to maintain independence and therefore limit bias in research.

2. Reasons for the Adoption of DP

It is hard to pinpoint a particular reason why the DP was adopted by the government⁴, because it was decided during the long process of regular policy making. There were some turning points for the implementation of *Deliberative Poll on Energy and Environmental Policy Options*.⁵ As aforementioned, the events of the Great East Japan Earthquake and the Fukushima Daiichi Nuclear Disaster on March 11, 2011 became a catalyst for increased momentum in changing in government policy.

The administration of the Democratic Party of Japan (DPJ) fundamentally overhauled the mid-to-long term energy and environmental policies and decided to create the *Innovative Energy and Environment Strategy*. The administration established the Energy and Environment Council, whose chair was the Minister of State for National Policy in June 2011, for reviewing energy and environment policy choices without exceptions.

There were three major turning points leading up to the adoption of the *Innovative Energy and Environment Strategy* by the Cabinet in September 2012 in order to build consensus amongst public.

At the *Interim Compilation toward Formulation of Innovative Energy and Environment Strategy* on July 29, 2011, the government claimed three principles for public consensus:

Principle 1: To develop a public debate advanced beyond dichotomous division, such as “anti-nuclear plant” and “pro-nuclear plant.”

Principle 2: To consider strategies based on objective data analysis

Principle 3: To establish the *Innovative Energy and Environment Strategy* by continuous dialogue with all levels of Japanese society.

That is, the *Interim Compilation toward Formulation of Innovative Energy and Environment Strategy* created principles regarding the development of public debate and a sustainable dialogue with all levels of Japanese society.

Public debate became a theme at the meeting of the *Basic Guideline toward Presentation of Alternatives Regarding the Innovative Energy and Environment Strategy* on December 21, 2011. The meeting decided that the government would promote a public debate thorough presentation of alternatives by summer in 2012.

The principles were crystallized in June 2012. The contents of *The Alternative Regarding the Energy and Environment Strategy* on June 29, 2012 are as follows:

The government decided to ‘provide objective and practical information in order to provide opportunities to discuss and exchange opinions as well as understand public opinions in detail as itemized below. Additionally, the government helps a public meeting hosted by local governments and private organizations. The government understands public opinions regarding the issue comprehensively by analyzing survey by media.’

- 1) To provide information and create a database of alternatives to status quo regarding energy and environment policy
- 2) To conduct public hearings for alternatives regarding energy and environment policy
- 3) To collect public comments regarding energy and environmental strategy
- 4) To conduct a Deliberative Poll on alternatives regarding energy and environment strategy

At this point, the terms of the *Deliberative Poll* officially appeared.

It took for a while that the number of government’s proposed alternatives became three partly because the government had to negotiate with three councils (Nuclear Energy Council, Advisory Committee for Natural Resources and Energy, Central Environment Council). The actual alternatives were released on June 29, 2012. The government decided to create practical energy and environment strategy based three alternatives by the middle of August 2012. “Zero-scenario,” “15-senario,” and “20-25-senario” were developed with an aim at reducing the dependency on nuclear power and fossil fuel and thereby reduce the amount of carbon dioxide emissions.

A Deliberative Poll was introduced several times at government meetings as one of the methods for public discourse and input from December 21, 2011 to June 29, 2012. Committee Member Junko Edahiro of the Advisory Committee for Natural Resources and Energy introduced a DP with other methods such as the Consensus Meeting in her document, “For National Debate” at the 18th meeting on April 11, 2012⁶. Professor Masahiro Yagishita of Sophia University introduced a DP as one of the potential methods for national debate for the creation of the Innovative Energy and Environment Strategy and recommended a DP be conducted as a process of the meeting with stakeholders at the 10th meeting of the Nuclear Energy Council on March 21, 2012⁷. A Committee Member Yuko Sakita also proposed a DP as a method of political participation with deliberation at the meeting of the Advisory Committee for Natural Resources and Energy on April 26, 2012⁸.

After these proposals, the Executive Officials of the National Policy Unit began to consider each method. There were many methods in their consideration to be implemented on national and local levels. Indeed, the preference of a DP was quite high compared to other methods.

A Bureaucrat of the National Policy Unit requested for me to provide a lecture regarding a DP on May 29, 2012, and I provided my presentation on June 1, 2012. What I presented was solely the method of DP and members did not discuss actual alternatives regarding energy and environment policies.

In fact, I had already provided my lecture at the meeting of the National Policy Unit on February 9, 2011. Because it was just before the schedule of other DP on the Public Pension System in May, I introduced a method of DP as well as the process of DP on the pension system. Although I provided my presentation at the National Policy Unit twice, members were totally different in both meetings. Therefore, I assume that there was no any connection between two presentations. I

believe that this presentation was the first moment that government's activities and my preparation of DP were connected.

The most important question I was asked was whether it was possible to conduct a DP with a short preparation period, and our answer was that it was possible to do if we would use a random digit dialing (RDD). In the past five times of DP in Japan, we used mail for conducting three thousands of random sampling. However, RDD is the most common method to use in DP overseas and regular mail had almost never used. In fact, Japanese media use RDD when they conduct a survey⁹. Fortunately, when I attended and presented our research with the Center for Deliberative Democracy, Stanford University during the conference of the World Association for Public Opinion Research in Hong Kong (from June 14 to 16, 2012), I had a lot of time to discuss the use of RDD in Japan with James Fishkin.

The government released a public bidding regarding an implementation of DP on June 22. Hakuodo, the second largest Advertising company in Japan, the seventh in the world, that is our consortium partner was selected on July 3. Since other media has already reported a process after the public bidding, I omit that here.

The reason for delay of the release of public bidding was that it took some time to deal with financial issues regarding the DP, this being the first time the government had any experience with its implementation¹⁰. Since the government now has experience of DP today, the government would not able to reject a future implementation of DP because of the lack of precedent case.

After reading this process, it is obvious that the government had no intentions of conducting a DP at first. Also, you understand that the government compared DP with other methods for public

participation in detail. We can infer that the government thought that a DP was a better option than others.

I will now describe the preparation of DP. In general, it takes six months to a year to prepare for a DP. In some cases, briefing material is prepared before the start of other preparations. Of course, the preparation of a new DP with a specific focus begins after an offer is accepted. When we conducted a DP regarding the public pension system in May, 2011, an overseas observer familiar with DP suggested that we conduct a DP on nuclear policies at that period. However, I initially rejected that advice. Because the earthquake and the incident had just occurred, the issue was still highly emotional. I thought it better to wait at least six months or, if possible, more than a year. I took into account the situation in August 2011, when another Japanese nuclear plant would not be restarted if Oi Nuclear Plant located at Fukui Prefecture would not be started again and I assumed that we would have a chance to conduct a DP focused on the restarting of nuclear power plants sooner or later. We started writing a proposal and by the end of September 2011, we were creating briefing material.

Even though I had started preparing, there was no guarantee that we could conduct a DP. Usually researchers have to find financial resources first. Needless to say, I am always looking for sponsors including academic research grants. Local governments, energy companies, or media could be potential financial supporters of implementing a DP regarding the restart of nuclear plants.

Regarding the adoption of a DP by the government, some people might say that it happened because the DPJ was a majority party and there were many politicians who understood the importance of *deliberation* in our democracy. The conversation between Yoshito Sengoku (Acting Chairman of Policy Research Council of DPJ) and I shows this as an example.

Moderator: By the way, results of a DP should be used in actual public policies? If the results would be used without any conditions, some people might redefine meaning of roles among politicians.

Sengoku: It is well possible that we use results from deliberations among randomly selected citizens as an important reference for policy making. However, politicians have to make a final decision somehow amid many alternatives. I believe it is impossible to create a system in which the results of DP would be used in public policies directly, as long as the Diet exists.

Sone: There are three systems to select person or option; elections, exams, and lotteries. The judges and bureaucrats are selected by exams. Politicians are selected by elections. A political system to select by lotteries has been in existence since Ancient Greece.

Those who read this article may think that this conversation might affect the decision of the adoption of a DP. However, Mr. Sengoku was not in a decision making process at that point. Certainly, many members of DPJ promoted deliberations in the Diet. For example, Prime Minister Naoto Kan claimed to have “tried to promote a Diet with *Jukugi (deliberation)* in order to discuss issues in depth” in his policy speech in the Diet on October 1, 2010.

Although I have no idea that whether PM Kan knew that the roots of *Shingi (deliberation)*, Constitutional expression in “deliberations in the Diet” and in “Deliberative Poll” are same, indeed many members of DPJ mentioned deliberations. Mr. Kan Suzuki, a House of Councillors, who promoted deliberations in the Ministry of Education, Culture, Sports, Science and Technology (MEXT), knew about deliberative democracy and DP when he was a faculty member in my

department at the university. In addition, Tatsuo Inoue, Professor of Jurisprudence, at the University of Tokyo, our fellow member of Study on Consensus Building, argued¹¹:

Inoue : Instead of ordinary survey research, a Deliberative Polling has been conducted. It is based on the idea of deliberative democracy. The goal is to remove interest groups from our democracy and create opportunities where we explore public values via rational dialogue. By the way, members of the DPJ recently often mentioned about *Jukugi* “*deliberation*” but I am the first person to create a translated term of “*Jukugi (deliberative) democracy*.”

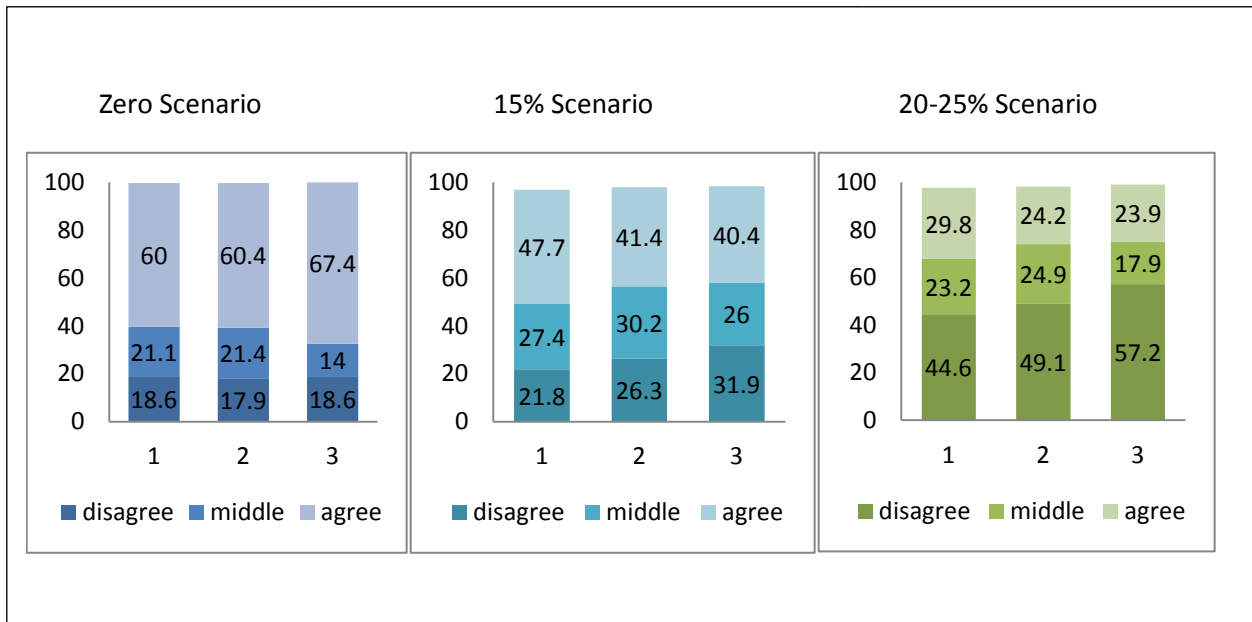
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Inoue: When Kan Suzuki of the DPJ lectured at the academic meeting as a Vice Minister of MEXT, he used the term and he also talked about me. Therefore I think he adopted the term from my work.

Although it would be easier to understand a DP since many members in the DPJ already knew about the term, I believe that it was not a significant reason of the adoption.

Nevertheless, Minister of National Policy Unit Motohisa Furukawa, Minister of Economy, Trade and Industry Yukio Edano, and Prime Minister Yoshihiko Noda at least knew the term while I am not sure whether they knew of the content of Deliberative Polls in detail¹².

Figure 1: Change of supports for three scenarios



3. The Results of DP

(1) Issues

The Alternatives regarding Energy and Environment Policy established by the Energy and Environment Council were that the dependency on nuclear energy in 2030 would be zero percent, 15 percent, or 20-30 percent. However, unlike media sources, we did not ask participants question such as “Noda Administration shows three alternatives regarding the dependency of nuclear energy would be ‘0%,’ ‘15%,’ or ‘20-25%.’¹³ Which alternative will you choose?” because a DP usually does not create multiple-choice questions. Instead, we asked respondents to evaluate three alternatives with 0-10 point scales.¹⁴

Additionally, instead of choosing numbers of dependency ratio (i.e. 0%, 15%, or 20-25 %.) we needed to create questions which would take into account connections between dependency and related costs as well as changes in lifestyle. The numbers in dependency is as of 2030, that is, we

would ask respondents their current choice using the numbers in the future. Therefore, we tried to show respondents that the relationship between the current choice and the future dependency ratios would not create a linear but rather a non-linear structure. Answer choices for questions would be divided similarly:

A: Regarding the opinion that “we would abolish all nuclear power plants by as soon as by 2030.”

B: Regarding the opinion that “we would gradually abolish nuclear power plants (as a result, the degree of dependence would be about 15% by 2030)”

C: Regarding the opinion that “we would keep certain level of nuclear power plants (as a result, the degree of dependence would be about 20-25% by 2030)”

The government did not make any decisions regarding restarting old plants, opening new ones, or expanding nuclear power plants at that point, and so it was hard to make the expressions in each question clear, especially the alternative of 15%. It was unknown how we could reach 15% of the dependency – whether this meant we would restart plants after safety confirmations, we would reduce the dependency after 2030 with the aim of zero dependency in the future, or we would keep 15% of the dependency after 2030.

The choice of “20-25% of dependency” would mean a status quo. This would slightly reduce the dependency in response to the aftermath of the Fukushima Daiichi Disaster.¹⁵

The choice of alternatives here means not only we choose between dependency ratios but also we have to consider safety, stable supply of energy, any related costs, and environment issues.

Indeed, we established questions regarding these issues before asking those regarding the ratio of energy dependency. Additionally, we asked which issue is the most important factor among them.

These questions asked about risk issues indirectly and the wording was not expressed literally on the questions *per se*. I assume the idea of the best mix of energy sources is similar to the dispersion of risk or diversified investment in portfolio theory. If so, after realization of high risks in one alternative, the issue remains as whether there is no problem to keep the high-risk alternative at the same level as before. This issue occurred after the sub-prime mortgage crisis in the U.S. That is, a portfolio might be different before and after the Fukushima Daiichi Disaster. In fact, the DP asked about attitudes toward risks among Japanese public while the problem remained unresolved.

(2) Three Alternatives

In the previous DPs, participants' opinions and attitudes have changed. By the same token, although we did not ask it directly, we found that there were significant changes in participants' attitudes toward the three alternatives.¹⁶

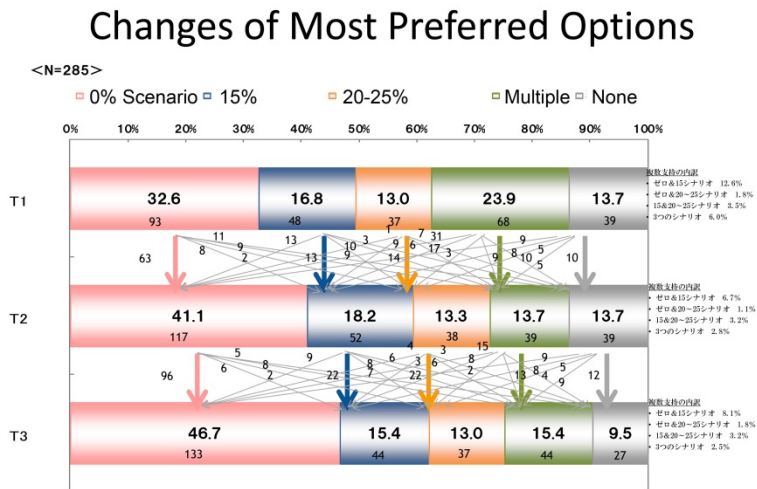
There were three time-series data points which form a distribution of opinions: (T1) before reading briefing materials, as in a regular survey, (T2) after reading briefing materials but before participation of the forum, and (T3) after the deliberation on this topic with small group discussions as well as questions and answers with specialists.

We used an 11-point scale (from 0 to 10) in the questionnaires and interpreted answers with ranking 0 to 4 as an objection, 5 as neutral, and 6 to 10 as support. The support toward the "0 scenario" increased from 60% to 60.4% then 67.4%. The support of the "15 scenario" declined from 47.7% to 41.4% then 40.4%. Similarly, the support of the "20-25 scenario" declined from 29.8% to 24.2% then 23.9% at the end of the event. I note that the increase of opposition toward "20-25%

scenario” from 44.6% to 49.1% then 57.2%. It would be impossible to understand these changes from the multiple-choice questions in an ordinary survey. Another method to analyze the change in opinions and attitudes would be to the change of mean value in each question.

The method of analysis above was used in the previous Deliberative Polls. In this Deliberative Poll, however, media were interested in which alternative – 0%, 15%, or 20-25% – participants chose. Therefore, I counted how many participants chose between 6 and 10 in the 11-point scale as the “most preferred choice.” If participants chose between 6 and 10 in several scenarios, we then assumed that the participants supported multiple scenarios. Finally, we counted those who chose 0-5 as non-supporters. Figure 2 described how participants changed their preferences.

Figure2: Changes of the most preferred scenario



As panel study about political party support, people change their choice time to time. We have to consider how many participants actually changed their choices although the total numbers in each choice seem stable over time.¹⁷

Additionally, we are not able to understand what reasons determined their choices from the results. Therefore, we set a question regarding the possible criterion for the judgment. We set four criteria – assurance of safety, stable energy supply, prevention of global warming, and energy cost – and explained that these criteria face *quadrilemma* in the briefing material. An overwhelming majority concerned about an assurance of safety and increased from 87% at T1 to 91.6% at T2 and 92.3% at T3. Support of this criterion was stable over time and this criterion was a main factor in participants' decision making. Other alternatives were relatively low, in descending order: “stable energy supply,” “global warming,” and “energy cost.” In other words, the government has no other choice but to first assure safety when addressing energy problems. Of course, issues regarding energy cost and global warming are important, but the importance is relatively lower to the public than the safety concerns.

How did the participants make decisions regarding energy cost? Some studies say that if we chose the “zero-scenario,” energy cost will be double in the future. If this is true, why did people choose the “zero-scenario” regardless of this the theory? When we compare energy cost in each household between in 2010 and in 2030, predicted costs vary. Also, energy cost would increase not only in the “zero-scenario” but also in “15-scenario” and “20-25” scenario. The differences of cost among these scenarios are relatively small. Therefore, we cannot simply say that the energy cost would be double in 2030. The numbers below are predictions of energy cost according to the analyses by four research institutes.¹⁸

Zero-Scenario: 10,000 yen in 2010 → 14,000 to 21,000 yen in 2030

15-Scenario: 10,000 yen in 2010 → 14,000 to 18,000 yen in 2030

20-25-Scenario: 10,000 yen in 2010 → 12,000 to 18,000 yen in 2030

Our next concern is what we would be able to compensate for the reduction of nuclear power plants. The answer with the most potential is renewable energy and we would need to consider whether we would pay the additional costs in accordance with this energy shift. Many participants supported the choice that we have to change our lifestyle, which we would reduce energy consumption, even though it would be less convenient than it used to be. This means even though this energy issue is about policy alternatives by the government, the public have already prepared for withstanding some challenges in the future.

(3) Issues about Trust

The results of the DP tell us not only the increases of support for zero-scenario and interests in the safety, but also another important factor: trust. The DPs in other countries asked very little about trust. On the other hand, the DPs in Japan have continuously included questions about trust since the DP of “Pension System, A Generational Choice.”

As Table 1 shows, the participants chose very low scores on each question regarding whether they can trust in information sources. It is clear by the results that they did not choose low scores in all questions (as seen in evaluations on the participation in the deliberative forum and small group discussions). The participants chose lower scores on questions regarding energy and environment than other questions in this DP¹⁹. The participants tend to trust experts even though their opinions are different²⁰. Regarding the energy and environment issues, however, there seems to be serious contention. The participants do not decisively know whose opinions they ought to listen to. In general, we use other’s opinions as references when we make decisions. However, in the case of energy and environment issues, the participants have no idea which opinions, including specialists and media, they should use as a criterion in order to make decisions. It is a serious situation because they cannot trust, or experience “anomie.”

Energy and environment issues are complicated because the situations have been changed and it is hard to say which criterion or whose opinion we should rely on. Therefore, the roles of energy and environment specialists are very important. By the same token, this issue is very serious because we have to reconstruct not only a trust in government but also information sources that people are able to rely on for their decision making process. For example, it is not persuasive enough to say for those who are skeptical against safety issues on energy that it is impossible to find absolute things in this society. Rather, it is more important to show differences from other nuclear power plants, which could survive the tsunami such as Fukushima Daini (F2) Nuclear Power Plant and Onagawa Nuclear Power Plant. It is also important to inform the public that there are two types of nuclear power plants such as BWR and PWR, show the differences between them, and reinforce the fact that the Fukushima Daiichi was one of the oldest types of nuclear plant and was over 40 years old. Although it is hard to show the scientific reason why the government will abandon nuclear power plants after 40 years old, we can communicate information regarding differences between old and new nuclear power plants.

Four accident analysis reports have been released regarding the cause of incidents at Fukushima Daiichi. However, people are not satisfied with these because none of them analyzed the inside of the reactor accurately. The reports do not include how to overcome serious disaster technologically.

Figure 3: Changes of attitudes toward Four Criteria

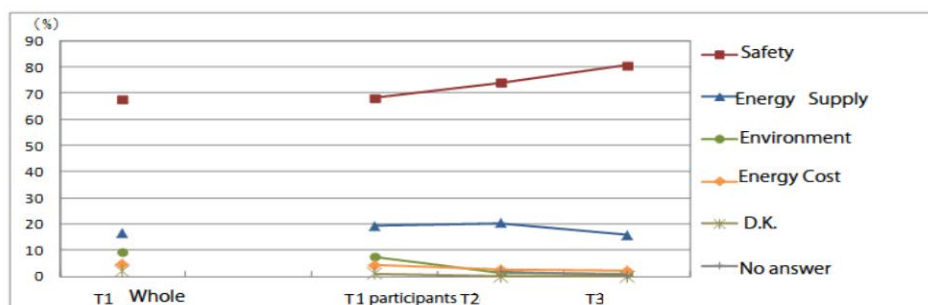


Table 1: Trust in information (11 point scale, 5 is the middle)

	Government	Nuclear Specialists	Energy Companies	Media	NPO/NGO	Internet	This Form as a Whole	My Small Group
T1 Whole	2.96	4.12	2.47	4.00				
T1 Participants	2.58	4.06	1.96	3.55				
T2 Participants	2.68	3.77	1.75	3.42	4.95	4.11		
T3 Participants	2.45	4.11	1.72	3.38	5.28	4.40	8.29	8.46

(4) Features of Deliberative Poll

One of the features of Deliberative Poll is that we are able to show the importance of deliberation among participants. At previous other meetings about nuclear power plants, participants already had strong opinions and they disagree with each other. It was reported in this DP that observers saw the process of participants forming their opinions through their small group deliberations²¹. We recorded participants' opinions not only by the questionnaires but also by audio files during the discussions, in order to conduct a content analysis. We are able to set some hypotheses by this Deliberative Poll. For example, once we realize that even specialists do not have "correct answers," we tend to think that we need to solve problems by ourselves. I think we need to observe more cases to understand at what point we changed our attitudes. Another hypothesis is that roles of those who speak less at small group discussions would be more significant among 15 participants in one small group than our expectations. It was observed that those who often expressed their opinion talked toward other participants that spoke little in their small group discussion. That is, we would not observe a "spiral of silence."²² Instead, silent speakers would activate discussions. We need to examine many hypotheses to examine these hypotheses but we may need to change the definition of silent majority.²³

As we observed, other participants' opinion is very important. People tended to listen to other people's opinion at a Deliberative Poll. In fact, the number of those who supported the statement "I respect other people's opinions even though they are different from mine" increased from 67.4 percent to 76.8 percent. This is evidence that we are able to create an opportunity to discuss multiple viewpoints without having a dichotomous relationship, disagreement, or shouting between supporting and opposing groups.

4. From Follow up Committee to Cabinet Decision

National debates regarding "energy and environment alternatives" including public hearings, deliberative polling, public comments, and surveys by media were conducted. The government held the panel to examine these results on August 22nd, 27th, and 28th in 2012. Minister Motohisa Furukawa participated in all three meetings. Minister of Economy, Trade, and Industry Yukio Edano and Minister of the Environment Goshi Hosono also attended the third meeting. They aimed to summarize, interpret, and overview public opinions. Committee members included scholars in public administration, political science, and public opinion research. As Masao Matsumoto, Professor of Saitama University argued "the most significant event was DP among others;"²⁴ DP was the most interested study at the meeting. The objectives at the meeting were as following:

1. Subject results and information
2. Method of summarization of the results and information
3. Method of interpretation of numbers in the results
4. Validity of debates
5. Overview based on the national debates

As I already mentioned, I both played the dual roles as an operating director of the DP as well as social science expert, and I spoke as an operating director at the first day and as an expert at the second of the meetings.

The document I submitted at the second day of the meeting (Figure 4) represented my basic opinion toward the research methods. Each method has its own features and which method we should use is dependent on the objectives. As Figure 4 shows, DP seems similar with ordinary public opinion poll and is close to Assembly as well. The significant difference between DP and Assembly is that members of Assembly are appointed by the election. Therefore, it has a foundation of legitimacy. On the other hand, DP has statistical representativeness. There is no such statistical representativeness in public comments or public hearings. The feature of DP is that deliberation occurs after participants' examinations of information. Statistical representation stems from method of participation. That is, the difference of participants is between voluntary-based and random sampling. Voluntary-based participation is open for ordinary citizens but stakeholders are able to participate as well. Meeting for stakeholders is important. However, if the meeting is labeled as a public hearing for ordinary people, the purpose of meeting per se may become controversial. I was opposed to the peculiar "Town Meeting" conducted since the first Abe administration²⁵.

The Administrative Procedure Act requires that when administrative agencies issue administrative orders, agencies need to gather public comments. However, the comments regarding energy and environment were gathered not based on the Act but as ordinary public opinions.

There are four types of data: (1) data available for analysis, (2) data, handle with care²⁶, (3) data just for references and (4) useless data. Data from ordinary public opinion polls and DP are compatible and useful for analysis. Public opinion polls include a standard for procedure because they are scientifically replicable. We are able to compare two surveys if sample sizes and response

rate are not significantly low. On the other hand, it is difficult to compile data from public comment system and public hearings even as qualitative data. Even those data gathered using random sampling would be used as references or for justification in local government policy decisions.

Regarding a DP, some people may argue that random sampling may be skewed when respondents are invited to a deliberative forum²⁷. However, we are able to compare between participants and non-participants then check the difference between groups and populations in terms of distributions of demographics and opinions. When you want to know opinions among populations based on data from participants (T2 and later at DP), you are able to use weight variable to adjust gaps between participants and populations.

Figure 4: Features in each method to collect opinion

	Representativeness	Enough Information	Accessibility	Discussion	Precaution
Public Comments	×	◆	○	×	
Public Hearings	×	◆	○	◆	
Survey	○	×	×	×	
Deliberative Poll	○	○	×	○	
Assembly/Parliament	○	○	×	○	

Note: ○: Excellent, ◆: Relatively Poor, ×: Poor

It is more important to argue than statistical issues that how much we would be able to standardize deliberative process. Avoiding just one time event, we use the standard for small group deliberations and plenary sessions, moderators in particular. For example, if moderators promote discussions based on each moderator’s decision, there would be gaps among groups. Therefore, we asked moderators to intervene discussions as rarely as possible. We also sent moderators guides, even for experienced moderators. On the day previous to the event, we explained to the moderators our purpose and the Center for Deliberative Democracy of Stanford University provided directions directly and conducted training including simulations.

Previous DPs did not establish a third-party oversight committee. Because all deliberative processes and documents were open to the public, it was not necessary to do so. However, we established an oversight committee for “the Deliberative Poll on Energy and Environmental Policy Options” as an exception, because criticism against the government was significant; we wanted to dispel concerns regarding independence of its operations. We also released the moderator trainings to the media in order to convince them that the government was not guiding discussions.

The results of follow-up committee were summarized by the Minister of State for National Policy as “Establishing Strategy: Opinions from National Debates” and submitted to the 13th Energy and Environment Council on September 4, 2012²⁸. The summary of the report is:

- In general, more than half of Japanese citizens hope to create society where they do not rely on nuclear power plants
- On the other hand, there is no consensus among the public regarding how soon they would create such society
- Ideas of supporting abolition of nuclear power plants stem from skepticism of decision making processes regarding nuclear policies as well as significant anxiety about safety of nuclear power plants
- In this national debate, we found that the public is more interested in what kind of economic structure we should create in Japanese society, rather than numerical energy ratios. We also found what kind of concerns the public express in each energy and environment strategy. Therefore, the government should face these concerns among the public and show them solutions.

- The government should show not only big pictures of policies but also proposals of strategies in accordance with preparing answers to questions from those who oppose policies.
- After proposing strategies, the government should disclose information to the public, promote dialogue with the public, examine each issue in detail, and improve strategies with the public.²⁹

At the next Energy and Environment Council: “Innovative Energy and Environment Strategy” (on September 14, 2012), they argued that:

Based on many types of national debate, we propose three things. The first proposal is “to create society without nuclear power plants as soon as possible.” The second proposal is that we will achieve a green energy revolution and make any policy efforts in order to stop all nuclear power plants by 2030s. The third proposal is stable energy supply.

The most notable point is “to stop all nuclear power plants by 2030s.” The meeting did not pay attention to the debate that “we should use safety guaranteed nuclear power plants as an important energy source.”

The cabinet agreed regarding “energy and environment policies in the future” on September 19, 2012. They concluded that the national government will promote discussions with local governments as well as international society based on the results from the meeting of the Innovative Energy and Environment Strategy on September 14, 2012, receive support from the public, and proceed with policies using flexibility and continuous examinations and revisions.

Even though the cabinet decided this, some people said that the cabinet did not make these decisions. I think that “because many media reported that the cabinet did not make such decisions, some people believed the report. However, the cabinet decided them” is the official conclusion³⁰.

Regarding cabinet decisions, we recently had controversial debates over the right to collective self-defense and its interpretation in the Japanese Constitution. The main concern toward a cabinet decision is how much its decision has legal binding power and whether or not the next cabinet has to respect decisions by previous cabinets. The current administration concludes that “there is no legal binding in cabinet decisions therefore it is not illegal to ignore them. However, the decisions will bind activities not only by ministers as cabinet members but also all administrative agencies and members of agencies have obligations to follow the decisions. If decisions are violated, each agency will implement necessary measures.”³¹ Regarding the effectiveness in the next cabinet, the current administration argues that “since the past administrations, an effectiveness of cabinet decisions is basically valid in any following cabinets but the following cabinet may make necessary changes within the Constitution and laws.”³²

The cabinet decision at the time was criticized from both supporters and opponents. Especially the economic and industrial communities argued against the statement that the government will “make any policy efforts in order to stop all nuclear power plants by 2030s.”

Local governments criticized the cabinet decision as well. Especially Oma Nuclear Power Plant in Aomori Prefecture, which is related to the Japan-US Nuclear Power

Cooperation Agreement regarding plutonium. The US government criticized and warned the Japanese government regarding issues related to the Agreement.

The cabinet decision was made in the middle of political debates. Also, some cabinet members and members of the Democratic Party of Japan argued that the decision was formally made by the cabinet but it was not substantially made. That is, the government made ambiguous decisions in order to interpret both ways. However, the timing of the decision was close to the General Election and because many people believed that the LDP would win and hold power, people's concerns moved to what to extent the next cabinet will change the policies.

5. Conclusion

This article does not include interest group politics, especially the role of TEPCO, the relationship between central and local governments, overseas negotiations such as those regarding the Japan-US Nuclear Power Cooperation Agreement, as objectives of analysis. I do not argue about the community of legislators, regulators, and manufacturers involved in the promotion of nuclear power and council-style politics in Japan, regime change and nuclear power policies, or anti-nuclear power movements by previous conservative political figures such as Junichiro Koizumi and Morihiro Hosokawa, even though these topics are very important research subjects.

Japanese energy and environment policies are in progress. It is still a very difficult issue even though the LDP and the New Komeito became new ruling parties again. Certainly, it seems Abe administration oversaw and recreated energy and environment policies from the beginning and important arguments seem to be moving towards stable

energy supply and reduction of energy costs. However, the government did not make clear decisions regarding issues with respect to reoperations of nuclear power plants. The government did not create a big picture that connects each energy resource, even though the government oversaw the role of each energy resource in the revision of the Basic Energy Plan.

This article shows the outline of how the result of DP was used in the official decision making process and its effects. That is, the results of DP are not used as political decisions as they are. Rather, the results are used in the actual political process. However, this is different from results of ordinary public opinion polls that are just used as a reference. I usually mention two warnings to organizations and local governments that want to hold a DP. The first warning is that it costs more than ordinary public opinion polls. The second warning is that they cannot ignore results from DP even though the results are different from what they wanted to receive.

Minister of the Environment Goshi Hosono mentioned that “especially it is very important that the result of DP conducted by professor Sone showed that after deliberations more participants supported abolition of nuclear power plants than before” at the third meeting of the Follow up committee. This statement implies that the results of DP are more important than results from ordinary public opinion polls. This article also finds that the results of DP were used in the cabinet decision making process.³³

It is too simplistic to say that the results during the DPJ administrations became less important after the regime change. Because data and information from the DP are still important regardless of administrations, any administrations are able to use data and information in detail. In addition, current public opinion polls regarding nuclear power

plants shows contradicting results³⁴; some results show support of nuclear power plants but other results show the oppositions of them simultaneously. We can explain the cause of this contradiction from the result of DP. First of all, we need to reconstruct discussions for nuclear power plants and energy issues. In other words, regardless of support or opposition, we need to reconstruct information sources in media and specialists that the public are able to trust and use for their decision making. Additionally, I believe that very ambiguous criteria such as assurance of safety will be redefined as causes of Fukushima Daiichi Disaster are found. I believe that Japan can show the world its technical and institutional policies that overcome the incident after finding the cause of it. It is worthwhile to conduct a DP again after finding the causes of the disaster.

notes

¹ <http://cdd.stanford.edu/2012/deliberative-polling-on-energy-and-environmental-policy-options-in-japan/>

² I told the fact of time and date (August 4, 5) and a holding place (Keio University Mita campus) to mass media, and got the report that a place was not pinpointed for there to be in it like "holding in a metropolitan area" in the form of the "hope." As a result, all the mass media followed this "hope."

³ Data and the analysis can be seen at the following two sites.
http://keiodp.sfc.keio.ac.jp/?page_id=243,
<http://www.cas.go.jp/jp/seisaku/npu/kokumingiron/dp/index.html>

⁴ Since the basic structure of deliberative poll has already been explained various occasions, detailed description is avoided in this paper. There were 6,849 replies in the prior opinion poll (RDD) and 285 participants at the deliberation forum.

⁵ Since Yanase (2013), Miyagi (2014), Yanase & Yagishita (2014) have already discussed at length about the process, description of the background information is minimized in this paper.

⁶ Junko Edahiro has said that the information about a deliberative poll was acquired from the newspaper reporter at first. "Policy Making Process of 'Innovative Energy and Environmental

Strategy", 14th Policy-Messe, November 17, 2012. Ms. Edahiro was a member of the Advisory Committee for Natural Resources and Energy.

⁷ When I met Professor Masaharu Yagishita, Sophia University on February 27, 2012, we reached a collaboration information sharing and implementation of Deliberative Poll, if possible. Our briefing document depended upon data and materials that Yagishita laboratory has accumulated as well as our past one year preparation of nuclear energy policy.

⁸ She mostly used the document presented by Professor Yagishita.

⁹ There is a big misunderstanding that "RDD cannot contact to the young generation, since the young generation does not have a fixed-line telephone." RDD does not collect replies of the person who took the receiver by the fixed-line telephone. An operator asks the family's order of age at random. If the operator cannot find the randomized person in the family, the operator will contact again by the appointed time. Taku Sugawara has pointed out that a single-person household is represented excessively as for the RDD system is right. But it is for the RDD, but not for the DP. Sugawara Taku, "Lessons of "Deliberative Poll on choice of energy and environment", using open data", and "Chuo Chosa-Ho" (NO.661), November, 2012

¹⁰ Ihara Tomohito (Cabinet Secretariat Official), 14th Policy Messe November 17, 2012

¹¹ Inoue Tatsuo, *Koken*, April, 2011(572) p. 49.

¹² Nikkei Online, August 2, 2012

¹³ Asahi Shimbun Survey, July and August 2011

¹⁴ We prefer to use 11 point scale to 7 point scale, since the case of RDD, it is easier to identify an 11-point scale, common marking system from 0 to ten-point full marks.

¹⁵ Another possible simple and clear option is that 1) No Nuclear energy: no re-start, no new and extension of power plant. 2) Re-start of some power plants, only if safety was checked, and don't build a new and extension. 2) Status quo just as before.

¹⁶ Although we did not ask threefold choice among the options, we asked each option separately.

¹⁷ I have commented same interpretation on these matters when we conducted a panel survey of voters' party identification in 1995. Sone Yasunori, "comment" on Shizuoka Prefecture Panel Survey, Asahi Shimbun June 1, 1995.

¹⁸ Following four institutions are predicting the prices

Kokuritus Kankyo Kenkyu-jo, Professor Ban, the University of Osaka, Associate Professor Nomura, Keio University, Chikyu Kankyo Sangyo Gijutsu Kenkyu Kikou (RITE)

¹⁹ We have different attitude on “trust” in the other DP. Information of Sapporo City Government 4.5, Information of Mass Media 4.1, Information from Specialists and Researchers 4.2 7 point scale at T3 data of Sapporo Snow DP.

²⁰ For instance, trust on public pension system increase finally; 61.1%(T1), 56.7(T2), 71.1(T3).

²¹ Edahiro Junko, “commnet” Policy-Messe, November 17, 2012.

²² Noelle Neumann, *The Spiral of Silence: Public Opinion- Our Social Skin*, 1984 The University of Chicago Press.

²³ Sone et al(2013), chapter 4

²⁴ Professor Matsumoto has also question some aspects of the DP.

²⁵ Sone Yasunori, “Town-meeting and the Voice of people” SEIRON, Sankei Shimbun December 16, 2006

²⁶ This is a question whether or not we have to avoid a premise in the questionnaire. For example, some survey are using the premise word such as "the nuclear power generation which provided about 26% of domestic electric power for the year just before of the East Japan great earthquake" (NHK, July, August, 2011). General principle of the deliberative polling tends to avoid the premise term even if it is the fact, since such wording of reference becomes guidance for the answer. This is the reason why we should be very careful when we compare between data.

²⁷ Although some are criticizing against RDD, they have to pay attention to the fact that almost every survey of mass media using RDD.

²⁸ ‘A government official was told by Mr. Edano, the Minister of Economy, Trade and Industry warned "Do not induce 15% option" at the beginning of the DP. It is because he thought that it would fall to 15% if who thought a natural result. However, since 15 scenarios were unpopular and many people supported zero surprisingly, this made it wake up of the politician who considered it better to change the nuclear power plant in the Democratic Party. I think that it the reason why Democratic Party members, such as Mr. Kan (the former prime minister), Mr. Edano, and Mr. Motohisa Furukawa who dislike nuclear power, tried to use the DP result into the policy choice of the Government", Keiji Takeuchi (Asahi Shimbun member of editorial board), Yagishita (2014) 320-1

²⁹ 13th Committee for Energy and Environment, September 4, 2012

³⁰ The remark of Shimizu Yasuhiro (Councillor, Cabinet Secretaria), Yagishita(2014), 328

³¹ Official Written Answer by the Cabinet to Nagatsuma Akira (DPJ) [the January 10, 2003 receipt No. 44]

³² Official Written Answer by the Cabinet to Takemasa Koichi(DPJ) [July 2, 2013 receipt No. 125]

³³ Sone Yasunori," Why people prefer to choose Zero Option after Deliberation?", Asahi, December 8, 2012.

³⁴ Although "it is required for the time being although a nuclear power reactor fadeout in the future should be aimed at was 61% in the opinion poll of Tokyo which Nikkei, just before the Tokyo Gubernatorial election, December 9, 2012. Similarly by the opinion poll on August 25, 2014 of Nikkei, the reply in which it is contradictory to at 56% "you not advance" , 32% "should advance" on the issue of re-operation of a nuclear power plant

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