Comparison and Consideration of Electricity Policy at the State Government Level in the U.S.

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This paper presents comparison and consideration of electricity policy etc. mainly at state government level in the U.S. In this paper, 4 representative states (California / New York / Texas / Ohio) were comprehensively and systematically organized from the view point of their electricity policies and other policies such as energy, industry and environment. In addition to differences in efforts to policy of each state, their effects were analyzed and compared based on various data reflecting recent situations.

As a result of analysis and comparison considering situation in Japan, efforts to promote the utilization of zero emissions power source such as nuclear power, in New York state, were considered to be helpful from the view point for reduction of greenhouse gas emissions and control of soaring electricity rates while emphasizing environmental policy. Also, efforts to maintain the low electricity rates by coal-fired power plants with low generation costs and the stable electric power supply for industries and employment, in Ohio state, were considered to be helpful from the viewpoint of realistically thinking about the balance of each policy and comprehensively examining future directions.

1. Introduction

On January 20, 2017, President Trump, who assumed office as the 45th president of the U.S., announced "An America First Energy Plan" after the inauguration of the new administration. He declared to lower the cost for diligent workers, make the most of domestic energy resources, and fully committed to energy policy to release resources from dependence on foreign countries.

On March 28, he issued "Presidential Executive Order on Promoting Energy Independence and Economic Growth"[1] and promoted the development of domestic fossil fuels including coal, nuclear power and renewable energy. He placed affordable and reliable supply of electricity as a top priority and declared the withdrawal from the "Clean Power Plan (CPP)"[2] introduced by the Obama administration to reduce greenhouse gas emissions in the field of power generation.

On June 1, he announced the suspension of the Nationally Determined Contribution (NDC)[3] submitted on September in 2016 to the secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) and withdrawal from the Paris Agreement.

On August 21, 2018, he announced a new standard "Affordable Clean Energy Rule (ACE)"[4] to replace the CPP. “ACE” clearly states that emission reduction targets in the power generation field are reduced by 33% to 34% compared with 2005. Meanwhile, the deadline of achievement is not included, and the “ACE” plans to change to the standard that each state government can independently carry out emission control.

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1 It aims not only to promote clean and safe energy development but also to establish an energy self-sufficiency structure and to promote economic growth and employment.

2 In the CPP, the federal government of the U.S. (Environmental Protection Agency) showed emission reduction targets in the power generation field (greenhouse gases reduced by 32% compared with 2005 by 2030) to each state. Each state government was obliged to formulate concrete plans for achievement based on the state of power supply within the state.

3 The federal government of the U.S. had submitted its emission reduction targets, "Reducing greenhouse gas emissions by 26% to 28% compared to 2005 by 2025."

4 In the ACE, while the federal government sets guidelines, all the strengths and abolition of regulation will be left to the judgment of each state government. For example, based on the abolishment years of coal-fired power plants and the cost of renewal of facilities, it is also possible to establish criteria that are looser than ever.

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In this way, while the Trump Administration advances industrial policies that emphasize domestic employment and economic growth rather than environmental policies, California state and New York state, etc., which have high greenhouse gas emission reduction targets, continue to focus on measures to address climate change as the center of energy policy[5].

In this paper, I pick up the following 4 states, which are California state, New York state, Texas state, and Ohio state, among the representative states with the highest level of population and GDP in the U.S., and comprehensively and systematically organize their policies of energy, industry, environment and their electricity policy that are being carried out at each state level. Based on various data reflecting the situation in recent years, I compare and analyze the influences and effects of those efforts and grasp the differences, etc. Finally, as a result of consideration, I will summarize the viewpoint necessary for discussing electricity policy in Japan.

2. Recent Trends in the U.S.

The U.S economy had been uncertain since the Lehman shock for years, but since around 2011, the economic growth pace has been gradually recovering. In recent years, signs of moderate acceleration have begun to appear in the U.S. economy due to economic policies such as tax cuts and deregulation measures by the Trump Administration. The U.S. which is the second largest producer of oil, the first largest natural gas producer, and the third largest coal producer in the world, has abundant fossil fuels. The actual energy self-sufficiency rate in 2017 exceeds 90%. In addition, the amount of generated electric power in the U.S. accounts for about 20% of the total electricity generation in the world. Among them, the hydroelectric power generation is the 4th and the nuclear power generation is the 1st largest in the world. A diverse and solid energy base is steadily supporting the economy of the whole country.

Following the decline in domestic natural gas prices due to increased shale gas production, since around 2008, conversion of coal to gas of power generation fuel in the U.S. thermal power plant has accelerated, and as a result, in 2016, the amount of generated electric power by natural gas for the first time exceeded that of coal throughout the year. It also shows that nuclear power continuously occupies about 20% of the total and is responsible for stable supply together with hydraulic power as base load power supply.

[5] The ACE is scheduled to be introduced at the beginning of 2019 as soon as it receives public opinion, but the timing of realization is uncertain because some states that emphasize environmental policy are likely to sue against the proposed regulation. [Status at the time of 2018.9.26]

3. Population and Economic Situation

Table 1 Population and GDP Rate in 4 States (2011-2017)

		U.S. Total	① California state	Rank in 50 states	② New York state	Rank in 50 states	③ Texas state	Rank in 50 states	④ Ohio state	Rank in 50 states	[Refrence] Japan Total
Population	2017	325 million	40 million	1	20 million	4	28 million	2	12 million	7	127 million
	Increase rate 2011⇒2017	4.5%	4.9%	19	1.7%	37	10.4%	2	1.0%	41	▲0.9%
GDP	2017	19.5 trillion	2.7 trillion	1	1.5 trillion	3	1.7 trillion	2	0.6 trillion	7	4.5 trillion
	Increase rate 2011⇒2017	3.6%	5.0%	2	3.7%	14	3.7%	14	3.0%	23	1.1%
Major industries			Advanced technology IT-related industry Aerospace industry Military-related industry Tourism/entertainment Agriculture		Finance/ Insurance Real estate business Communication Advanced technology Fashion/Media Tourism Medical/Pharmaceutical		Oil and Gas chemistry Advanced technology IT-related industry Aerospace industry Military-related industry Tourism/Entertainment Automobile industry		Automobile industry Coal / Steel industry Advanced technology Material industry Agriculture		

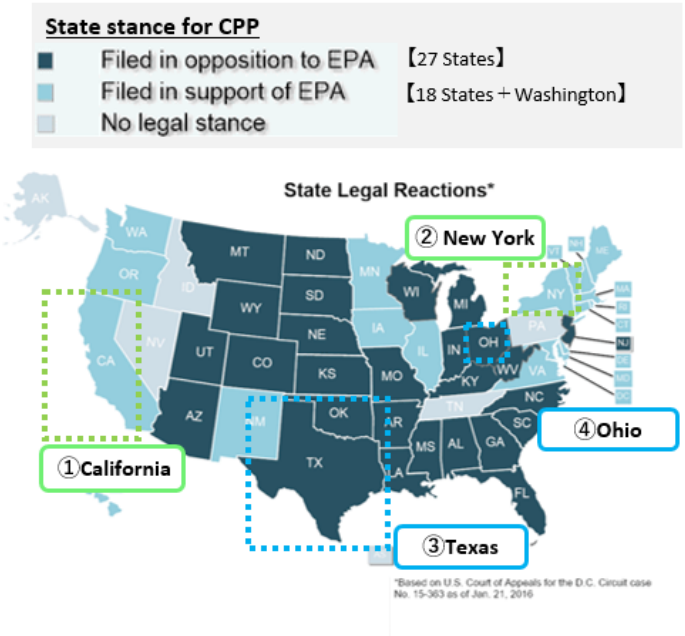
From this chapter, I would like to confirm the situation in recent years at the state level.

Table 1 shows the population, GDP and increase rate of them since 2011 in the 4 major states (① California state, ② New York state, ③ Texas state, and ④ Ohio state) leading the strong U.S. economy among 50 states.

Both population and GDP in California state are the highest in the U.S. because it is supported by cutting-edge technologies and IT-related industries that continue to boom. Although it's not a country but a state, as of 2017, it is the 5th largest economic scale in the world following the U.S., China, Japan and Germany. Similar to Texas state with the second largest population in the U.S., California state has a high immigration rate and increase rate. The population growth rate in Texas state is over 10% and remarkably high, which is more than double the average 4.5% in the whole U.S. Texas state is a major source of crude oil production, and in recent years, shale oil and gas production is also increasing. In addition to the strong performance of energy-related industries such as petrochemicals, manufacturing industries such as the automobile industry are also growing steeply. Meanwhile, the growth rate of the 4th largest population in New York state and the 7th in Ohio State is low at 1%, compared to the average of 4.5% in the whole U.S.

Regarding the GDP increase rate in Ohio state, although it is supported by the favorable automobile industry, it is only 3%, which is slightly lower than the average of 3.6% in the whole U.S. due to the impact of the coal industry, etc., which faces difficulties due to environmental regulations.

Fig. 1　4 States: Stance for CPP



In the U.S., the basic political stance between the states that emphasize energy and industry policy and the states that emphasize environmental policy is divided clearly. As we can see from Fig. -1, since the era of the former Obama administration, the CPP is mainly supported in West Coast regions such as California state and the Northeast regions such as New York state. Meanwhile, there are 27 states in the Middle Eastern region such as Texas state and Ohio state, which support the abolition of the CPP. Ohio state, in particular, is based on the coal industry that mines in the Appalachian coal field, and the iron and steel industry that handles iron ore mining to steel production, with many coal-fired power plants and steel works. From the standpoint of halting these industry declines and maintaining employment, they also strongly requested the abolition of CPP.

In this way, I will arrange the policies of the 4 states with different directions of emphasis from the relationship with the electricity policies after the next chapter. In addition, I will analyze and compare the impacts/effects, etc. of each initiative using each actual data.

4. Energy/Industry Policy and Electricity Policy

4-1 Energy Prices and Electricity Prices

Fig. 2 4 States: Coal and Gas Price Trends［power plant side received base］ (2006-2016)

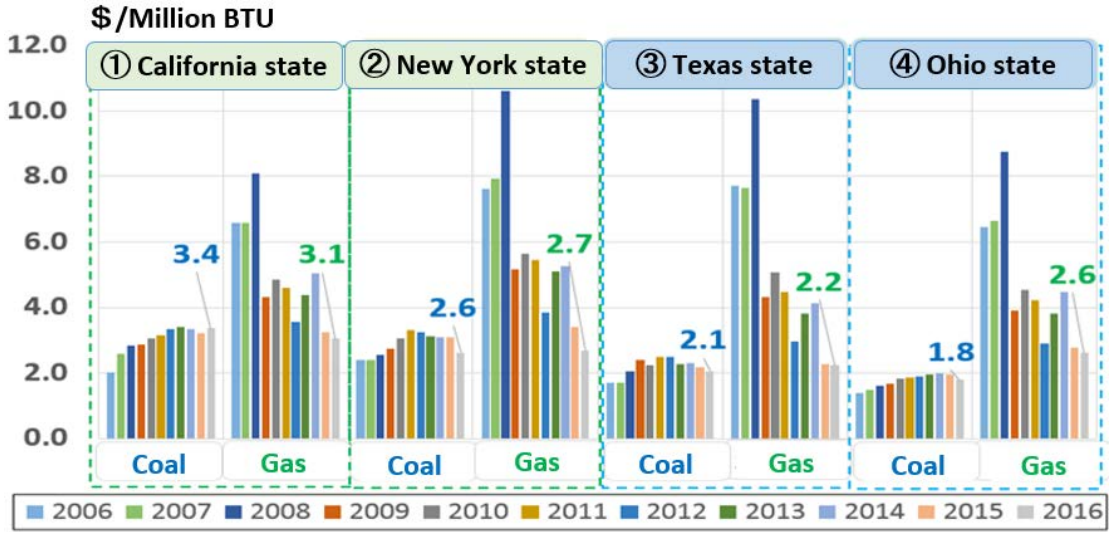


Fig. 2 is a graph showing the average trend of coal and gas prices procured at power plants located in each state. In 2016, gas is cheaper than coal in California state. Meanwhile, regarding the results in Texas and Ohio states, we can see that coal is slightly cheaper than gas. Especially in Ohio state with many coal mines, it is extremely inexpensive, 1.8 dollars/million BTU, which is about half that in California state. In this way, depending on conditions such as the distance from the coal mines and the gas fields, the gas pipeline network, and transportation cost, we can see that there is a difference in the competitiveness of coal and gas fire power plants.

Fig. 3 4 States: Percentage of Power Generation Amount by Power Supply (2016)

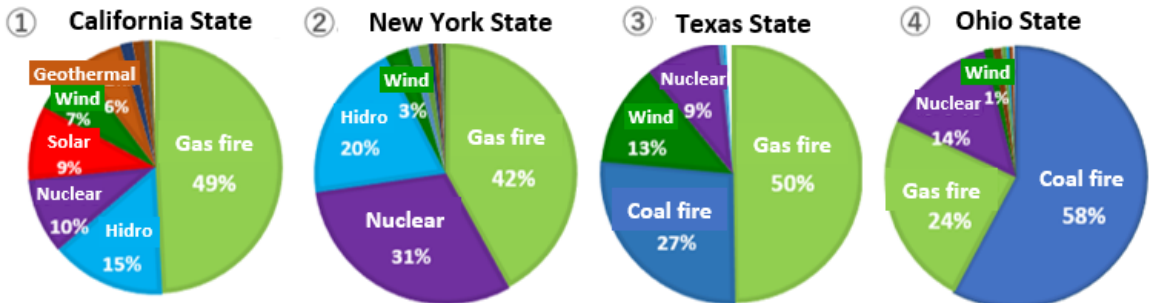


Fig. 3 is a graph showing the percentage of power generation by power supply in 4 states in 2016. In California and New York states, which are promoting coal exit policy, there are few coal-fired results. Meanwhile, it's 27% in Texas state and 58% in Ohio state. In Texas state, gas and coal fired power are high, and the percentage of wind power is also high at 13%.

In California state, gas fired power is about half, followed by hydropower and nuclear power. Renewable energy such as wind and solar power accounted for 26%, and it is higher than other states. In New York state, the percentage of zero-emission power of nuclear and hydro power accounts for more than half.

Fig. 4　4 States: Average Retail Electricity Charge Trends（2006-2016)

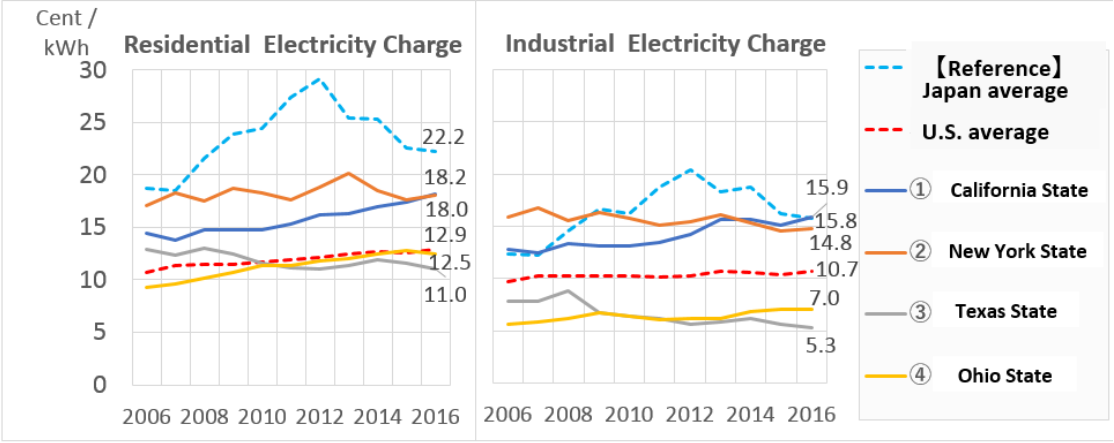


Fig. 4 is a graph showing the trends of average retail electricity charges in the 4 states since 2006. Compared with the national average in the U.S., California and New York states are at high levels, while Texas and Ohio states are at low levels.

The former is states that set high targets for efforts to reduce greenhouse gas emissions, such as the introduction of renewable energy, and the latter is states that maintain coal fired power plants by taking advantage of the low cost and procurement benefits of coal. The level of retail electricity charges in California state is continuously rising for both domestic and industrial use under the influence of the RPS system described later. It is about 1.4 times higher than the national average in 2016. In Texas state, on the other hand, the level of retail electricity charges for industrial use is particularly low at 5.3 cents/kWh, which is less than half of the national average of 10.7 cents / kWh.

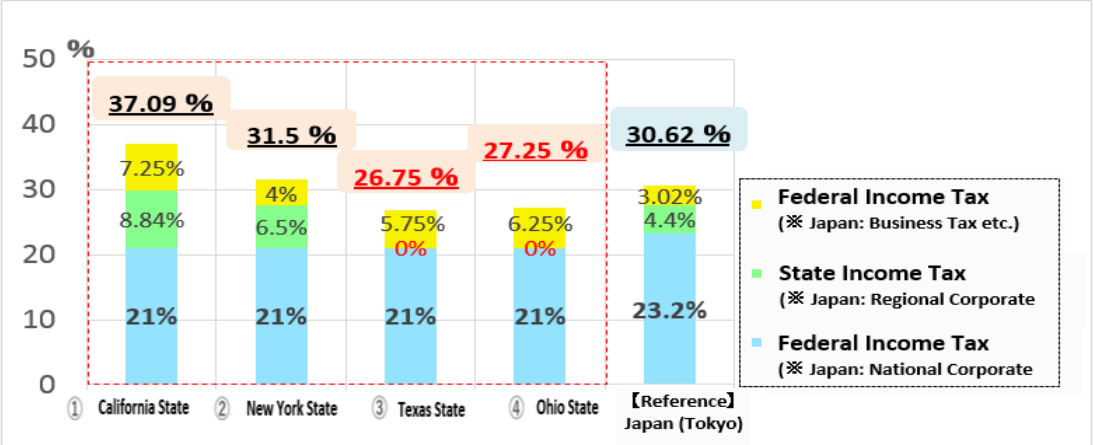
The level of energy price of low coal and gas produced within these states and retail electricity charges is a favorable wind for strengthening the competitiveness of the power and energy-intensive industries located in these states.

4-2　Corporate Tax Rate

In addition to the level of energy prices and retail electricity charges, the burden of tax payment is one of the manufacturing costs for companies. In the U.S., corporate income tax is imposed not only at the federal level but also at the state government level, which greatly affects the decisions of the manufacturing base. The federal corporate tax rate used to be at the highest level among advanced countries, at 35%. However, since January 2018, President Trump has signed a tax reform bill to lower it to 21% on December 22, 2017, and the tax rate dropped sharply[6].

[6] Some municipalities have corporate tax such as city tax. In addition to this large tax cut for the first time in about 30 years, a reduction to 20% is planned in October 2018. [Status at the time of 2018.9.26]

Fig. 5　4 states: Corporate Tax Rate Comparison (2018.1～)



Therefore, when we look at the overall effective tax rate from the graph in Fig. 5, we can see that Texas and Ohio state are lower than Japan (Tokyo). Texas and Ohio state are about 10% lower than the highest California state because the state's corporate income tax rate is zero. Such state government policies promote cost competitiveness of corporations, increase the number of corporations and the number of employees, and create a desirable virtuous cycle leading to economic growth in these states. In fact, Toyota Motor Corporation, which had its headquarters functions dispersed in California and other states, moved to Texas state for centralization in July 2017. Mitsubishi Heavy Industries, which had its North American headquarters in New York state, moved to Texas state in May 2016. Likewise, Honda Automobile, which had three factories in Ohio state to use much energy and electricity during the production process such as assembly and processing of steel-related materials such as automobile parts and steel plates, relocated headquarters functions except for sales-related departments from California state to Ohio state in April 2013[7].

It turns out that the transfer of the location to a state where business is easy and a state that secures stable electricity and energy at low cost became a natural flow for U.S. and Japanese corporations.

5.　Environment Policy and Electricity Policy

5-1　Efforts to Reduce Greenhouse Gas Emissions in the Field of Power Generation

In the U.S., greenhouse gas emissions in the power generation field account for more than 30% of the total, which is the largest source of emissions, so the impact on the electricity business will be greatly affected. In this chapter, we will examine the status of environmental policy initiatives and the effects of these measures in recent years, focusing on the relationship with the electricity business policy.

5-1-1　California State/New York State

In 2006, California state established the state law on greenhouse gas emissions regulations as the first state of the U.S. and, in 2020, set a goal to control emissions to the same level as in 1990. After that, in August 2016, California state extended the target achievement year to 2030, and aimed at strengthening the target by reducing emissions by 40% compared to 1990. In the plan as of 2015, California state has set the percentage of renewable energy amount in the state's retail electricity amount to 25% by the end of 2016, 33% by 2020,

[7] In Texas state, the U.S. head offices of many Japanese corporations such as NEC and 7-Eleven Japan are also located. Also, in Ohio state, the U.S. head office, factories, and laboratories of Kao Corporation are located. These overseas affiliates have much employment and a large amount of local business transactions.

and 50% by 2030[8]. By promoting efforts toward these targets, the result at the end of 2016 is high at 27%.

Meanwhile, in 2014, New York state has set a high goal of reducing greenhouse gas emissions by 40% by 2030 and by 80% by 2050 compared with 1990 and has set the percentage of renewable energy amount in the state's retail electricity amount to 50% by 2030. Electric utilities in the state are obliged to purchase a certain amount of renewable energy certificates (REC) issued by renewable energy power producers according to the amount of electricity generated. In addition, in the state, which covers about one-third of the state's electricity consumption with nuclear power generation, it implements the "Zero-Emission Credit system"[9] that evaluates the environmental benefits of nuclear power that does not emit CO_2. It is a system that obliges all electric utilities to purchase a certain amount of credits (Zero-Emission Credit, hereinafter "ZEC").

Table 2　2 States: Power Generation Amount [renewable energy / zero emissions] and CO_2 Emission [reduction amount / reduction rate] (2016)

			① California State	② New York State
Power Generation Amount	**Rrenewable Energy Ratio** to total power generation 【2016】	Wind, Solar, Geothermal, Wood biomass, etc.	20.2%	4.9%
	Zero Emissions (Non-Fossil) Ratio to total power generation 【2016】	Renewable energy (above) **Hydro power** **Nuclear power**	38.7%	50.9%
	Coal thermal power Reduction rate 【2005→2016】		▲85.1%	▲91.4%
	Gas thermal power Increase rate 【2005→2016】		4.0%	78.2%
CO2 Emission	CO2 emission [Generation field] 【2005】		55 million tons	61 million tons
	CO2 emission [Generation field] 【2016】		47 million tons	31 million tons
	▲ Reduction Amount 【2005 ⇒ 2016】		▲ 8 million tons	**▲ 30 million tons**
	▲ Reduction Rate 【2005 ⇒ 2016】		▲14.5%	**▲48.7%**

Table 2 shows and compares the percentages of generation by renewable energy and the percentages of generation by zero emissions (non-fossil) power source (nuclear power and large-scale in addition to renewable energy) in California and New York states[10].

In 2016, the percentages of generation by renewable energy in California state is high at 20.2%, and the percentage of generation by zero-emission power sources with hydropower and nuclear power generation added to it is even higher at 38.7%. Compared to 2005, which is the base year of NDC, CO_2 emission is reduced by 14.5%.

Meanwhile, the percentages of generation by renewable energy in New York State is 4.9%, which is lower than 20.2% in California state. However, the percentage of generation by zero-emission power sources is high at 50.9%, which is much higher than 38.7% in California state and more than half of total generation. Also, as we can see, the reduction rate of generation by coal fired power and the increase rate of generation by gas fired power in New York state is also higher than California state. As a result, CO_2 emissions have a very high achievement of 48.7% reduction compared with 2005. Thus, in order to reduce overall emissions, New York state has been not only focusing on increasing the introduction rate of renewable energy but also maintaining nuclear power generation with zero emissions in addition to the conversion from coal-fired to gas-fired power

8　On September 10, 2018, California state passed a bill to supplement the state's electricity with a 100% zero-emission power supply by 2045. The state also aims to accelerate the timing of achievement of renewable energy introduction and to raise the target percentage, which newly set them 50% by 2026 and 60% by 2030.

9　A qualified power station meeting the public need can receive ZEC for 12 years from April 1, 2017, to March 31, 2029. As of October 2017, there are three qualified power plants, and the upper limit of ZEC's annual purchase amount is set based on the annual power generation amount. The price of ZEC is determined in two years and is 17.48/MWh in the first two years.

10　The percentage of renewable energy in the whole U.S. in 2016 is 8.4% and the percentage of zero-emission power source is 34.5%.

with relatively smaller emissions from coal-fired power plants. As a result, we can see that a significant effect is obtained.

The Zero-Emission Credit system that evaluates the environmental benefits of nuclear energy has already been introduced in Illinois states[11]. As well, preparations are being made for introduction in eastern-area states such as Ohio state, New Jersey state and New Hampshire state.

5-1-2 Texas State

Since Texas state has ever taken an opposed stance against CPP, thermal power plants have not had their emissions regulated. As mentioned earlier, because fossil resources such as gas and coal are abundant and self-sufficient in the state, gas fired power and coal fired power generation costs are both low[12]. Therefore, the selection of the power supply of the generation operators is not influenced by the environmental regulation by the emission amount, and the competitive environment on a cost basis is being developed based on economic importance policy. This policy is also the same for renewable energy, and from early on, Texas state has been systematically planning the installation and construction of transmission lines by the REZ (Renewable Energy Zone) policy [13]. Especially, the cost of wind power generation dropped to the same level as conventional thermal power generation, and the introduction advanced at a fast pace. Texas state had set targets for renewable energy introduction as 5 million kW by 2015 and 10 million kW by 2025, but these targets have already been achieved in 2011.

In the U.S., the suitable range of wind speed classification of 6.5 m/s or more spreads mainly in states of the central region such as Texas state. Large-scale wind power plants are widely located, and the average capacity utilization rate is high at 25 to 40%. Compared with Japan where the suitable land area of 6.5 m/s or more is only about 10% of the total land area and the occupancy rate remains at the early 20% level, it is in a blessed environment of high standards.

5-1-3 Ohio State

In Ohio state, coal-fired power generation accounts for 58% of total power generation in 2016. Together with nuclear power, which accounts for 15%, coal-fired power plays an important role as a base load power source to support stable and cheap electricity supply within the state. Ohio state set a target to reduce greenhouse gas emissions in 2030 by 37% compared with 2012 in response to federal CPP. Ohio state also set emission standards for existing thermal power plants and urged the generation operators to abolish the aged coal-fired power plants.

Meanwhile, among the people in the state, there have been many opinions that industrial policy should be emphasized rather than environmental policy, since the abolition of many coal-fired power plants adversely affects the economy within the state. As a result, the state government has ever expressed a stance to abolish CPP.

[11] As the electricity demand within the state is chronically above the supply, there are many imports of electricity generated outside the state, which accounts for 23.3% of the total in 2016.

[12] ERCOT (Electric Reliability Council of Texas), a transmission system operator in Texas state, also emphasizes the principle of merit order based on the market principle. Based on the policy that market price rise due to supply shortage promotes necessary power development, ERCOT takes an operational stance that does not disturb the market as much as possible without restriction intervention.

[13] A comprehensive development plan was devised to undertake simultaneous examination of "development district of wind power generation" and "necessary electricity transmission network" led by ERCOT, and construction was advanced.

Fig. 6　Ohio State: Number and Capacity of Closed Coal-fired Power Plants (2002-2018)

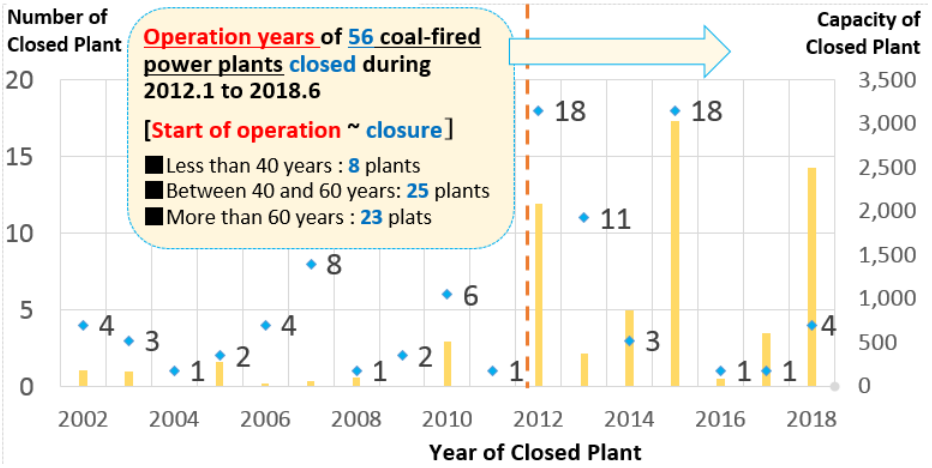


Fig. 6 shows the trend in the number and capacity of closed coal-fired power plants. The number of closed coal-fired power plants has increased sharply since 2012, and the total number is 56 and total capacity is 9.5GW during the period until June 2018. Approximately 40% of these are aged coal-fired plants that have already been in operation for more than 60 years. The emission factor reference value set by Ohio state under the CPP is such a level that it cannot be cleared unless it is equipped with CCS (Carbon Dioxide Capture and Storage). It is 1,383 lbs-CO_2/MWh (= 0.627 kg-CO_2/kWh) during the period from 2022 to 2029, and 1,190 lbs-CO_2/MWh (= 0.540 kg-CO_2/kWh) after 2030.

The new standard, "ACE" proposed by President Trump is planned to have a system where the state governments have discretion. As a result, current emission standards under the CPP, which has been requested by the state government for mandatory pursuance, may be lowered. The state government's regulatory trend and business operator's trend will be closely watched.

5-2　Impact on Retail Electricity Charge due to Increase in Renewable Energy Introduction

RPS is a system that obligates electric utilities (mainly retail electricity companies) in the state to procure an amount of electricity generated by renewable energy over a certain percentage. Costs required by the electric utilities for procurement are subject to be transferred to the retail electricity charge and collected. Therefore, it substantially affects the price level.

Fig. 7　4 States: Trend of the Ratio of Renewable Energy Cost to Electricity Charge (2013-2016)

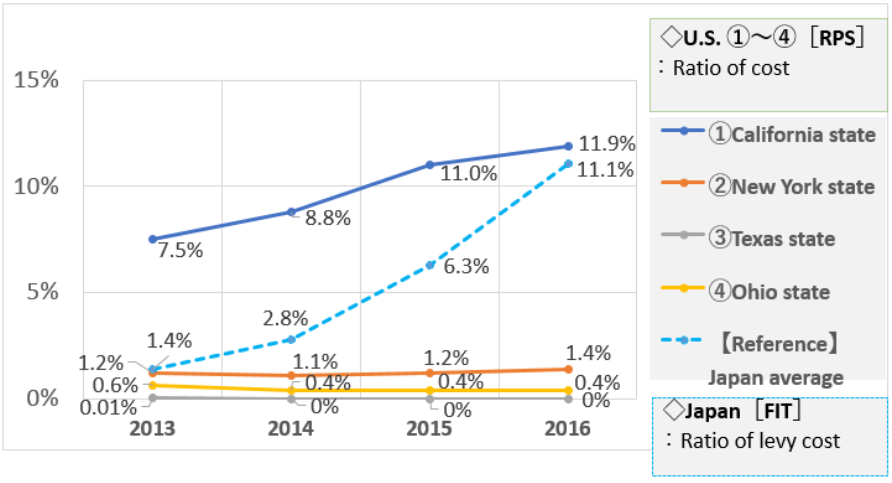


Fig. 7 is a trend showing the ratio of renewable energy costs to retail electricity charges. Since 2013, the ratio of California state has remained at a high level of 7.5 to 11.9%, indicating that the effect of the rise in electricity charges as a consequence of the increase in renewable energy introduction is very large. Meanwhile, in New York State, it has been at a low level of 1.1 to 1.4%.

Both states set high targets to reduce greenhouse gas emissions by 40% compared with 1990 and to increase the ratio of renewable energy introduction to 50% by 2030. California state is noticeably affected by the increase in electricity charges and is quite different from other states.

6. Conclusion

This time, I picked up 4 major states of the U.S., analyzed and compared them diversely. The state governments determined the direction by judging the necessary policies of energy, industry, the environment, etc. while keeping in mind the points to be emphasized or maintained by the state. At the same time, I could understand them to be taking into consideration the balance between these factors, judging the necessary electricity business policy according to the direction, and proceeding with that.

We could see that California state is prominent in economic scale due to advanced technology industries and IT related industries that continue to boom. Meanwhile, environmental consciousness is also high, so even if the electricity price rises to achieve the goal of introducing renewable energy, the economic level doesn't need to worry about the negative impact on their industries. On that assumption, the electricity business policy was planned and being advanced. As you can see, it is an exceptional state that other states cannot imitate easily.

Also, we could see that New York state has seen a trend of recovery in the core industries such as finance and real estate in recent years, but the growth scale has been not as high as California state. On the other hand, environmental policy is emphasized, and high goals are set for reduction of greenhouse gas emissions. Since electricity charges tend to soar like California state, New York state has not been limited to only renewable energy, and a comprehensive approach including the zero-emission power source such as nuclear power and hydropower has been advanced in recent years. We could understand that New York state has been maintaining a balance with environmental policy while trying to control the electricity charge level.

Since Texas state is blessed with energy resources as well as wind conditions, each generation cost of gas, coal, wind power is low, and the electricity charge is also inexpensive. Among them, the industrial rate of electricity charge is half the national average. In addition, Texas state is also active in attracting corporations including the taxation system. As a result, the number of employees has increased mainly in energy-related industries such as petrochemicals, and the number of corporate relocations from other states to Texas state has increased, resulting in a virtuous cycle leading to population growth and economic growth.

Ohio state is a high-quality bituminous coal producing area. So, among all power generation, coal-fired power with low generation cost occupies a high percentage. Along with nuclear power, Ohio state emphasized cheap and stable coal power plants as base load power supply. Especially, the industrial electricity charge rate is about 70% of the national average. We could see that Ohio state has been focusing on industrial policies that emphasize economies and employment in the steel industry and the automobile industry rather than environmental policies.

In Japan, the population continues to decline, and the economic growth rate is not as high as 1% in recent years. The situation is very different from the U.S. And Japan's energy self-sufficiency rate is only about 8% in 2016, and the domestic price of liquefied natural gas, which depends almost entirely on imports, is at least

twice that of the U.S. Regarding renewable energy such as wind power, equipment availability is low due to weather conditions and others. Therefore, the power generation cost is more than double that of the U.S.

Given the situation in Japan, the environmental policy that set high targets for the introduction of renewable energy like California state and the industrial policy of attracting corporations by making full use of abundant gas resources such as gas price and cheap electricity rates like Texas state seem to be high policy hurdles that cannot easily be imitated.

On the other hand, environment and electricity policy efforts to promote utilization of zero-emission supply and low power generation cost such as nuclear and hydro power, which reduce greenhouse gas emission and suppress soaring electricity charges like New York state, and industry and electricity policies that emphasize inexpensive and stable power supply by utilizing coal-fired power with low power generation cost, employment and economic growth like Ohio state, seem to be important. As an important direction for Japan, which is an industrial nation that supports the foundation of the economy, we should recognize again that these viewpoints can never be neglected in order to judge the necessary electricity policy.

We should determine the direction by appropriately judging the policies of energy, industry, environment, etc. that should be emphasized as Japan. At the same time, considering the balance between these, we should judge the necessary electricity policy according to the direction and proceed with efforts to produce effective results.

＜Reference＞

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