I was here to attend the Flame conference two years ago.

At that time Japan was about to be nuclear free for the first time since 1960s. It was not clear when and whether any of reactors would be allowed to come back.

Japan's Basic Energy Plan was optimistically thought to be revised by the fall of that year, ahead of the regular three-year interval. Instead the plan was only approved one year behind, in April this year. But at least it was approved.

Nuclear approval process has been also slower than expected. But the process is alive and the prospect seems to be real.

With this positive note, I would like to talk about the followings:

Outline

1. Overall changes in the LNG market
2. Shifting purchasing patterns and supply sources
3. High prices and inflexibility
4. Procurement and infrastructure plans
5. Notes on the government's plan
6. Factors to shape the market

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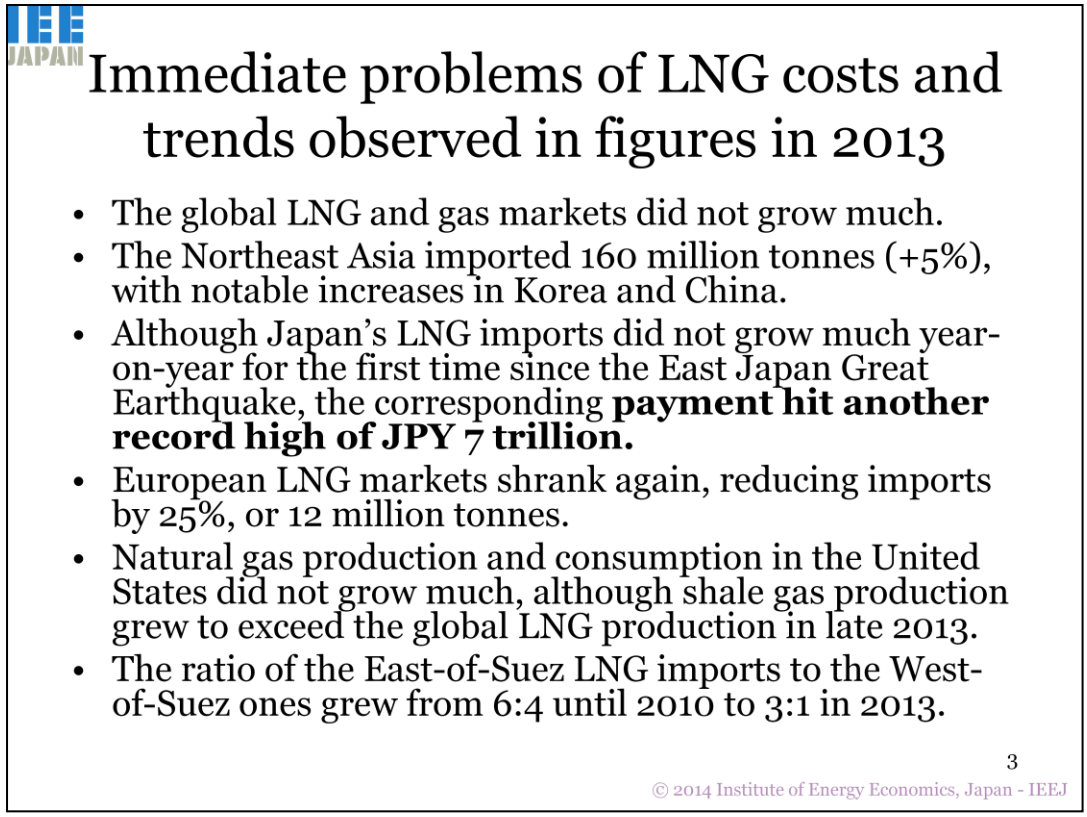
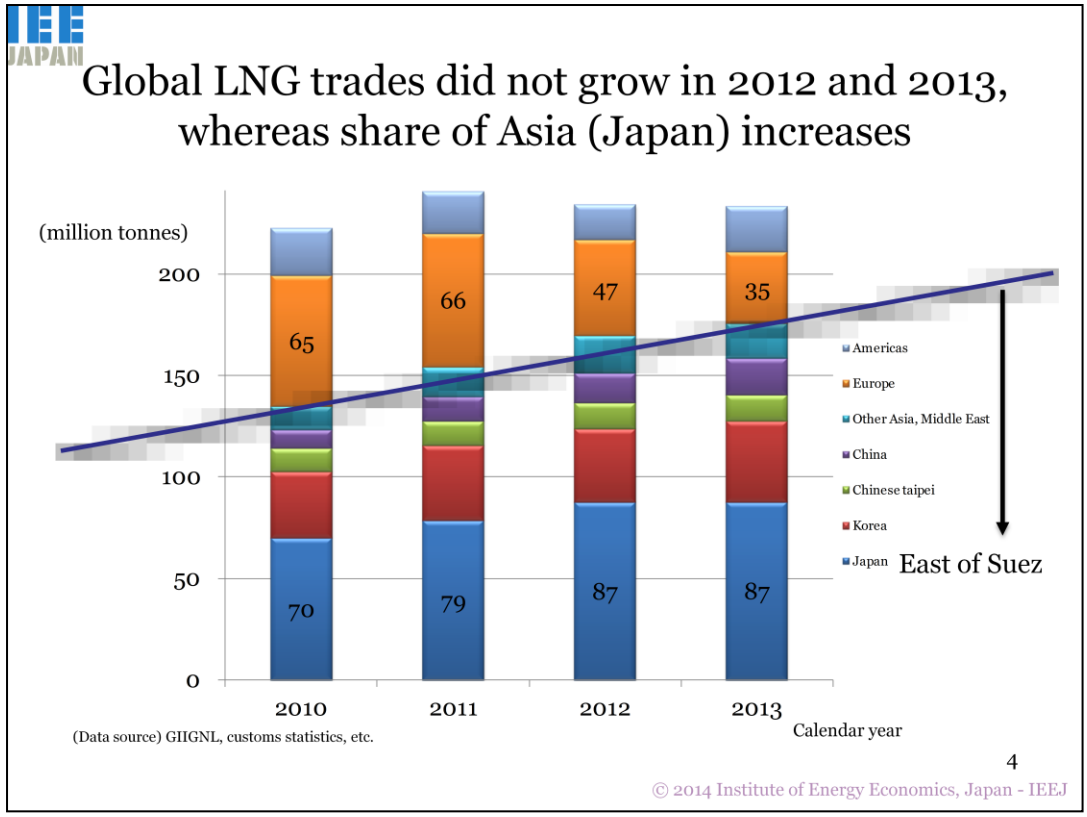
Overall changes in the LNG market;
Shifting purchasing patterns and supply sources;
High prices and inflexibility;
Procurement and infrastructure plans;
Notes on the government's plan; and
Factors to shape the market.



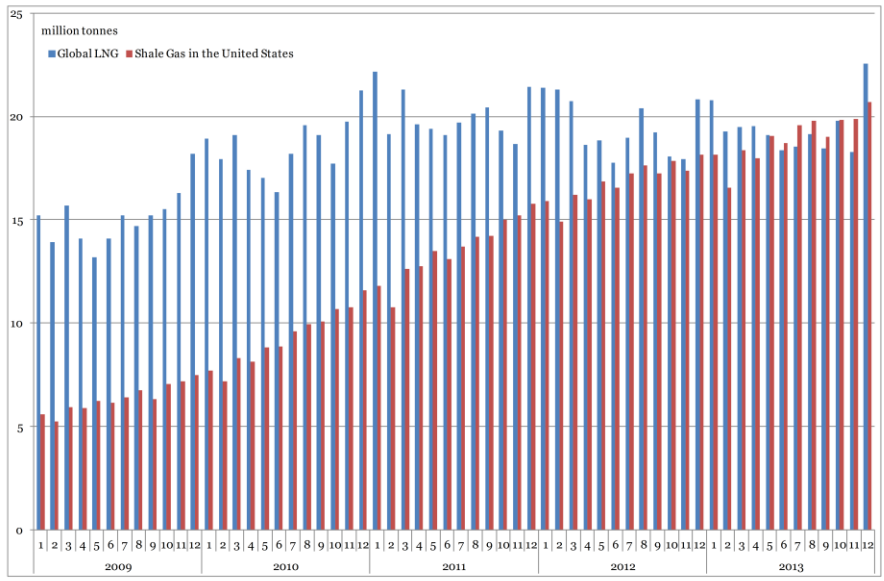
The most immediate and biggest problem for Japan is the unprecedented high cost of LNG purchases.

Although Japan's LNG imports did not grow much year-on-year for the first time since the East Japan Great Earthquake, the corresponding payment hit another record high of JPY 7 trillion.



Because of increasing LNG imports in Asia and decreasing LNG imports in Europe, the ratio of the East-of-Suez LNG imports to the West-of-Suez ones grew from 6:4 until 2010 to 3:1 in 2013.

Shale gas in the United States > global LNG



(Data source) EIA, customs statistics, etc.

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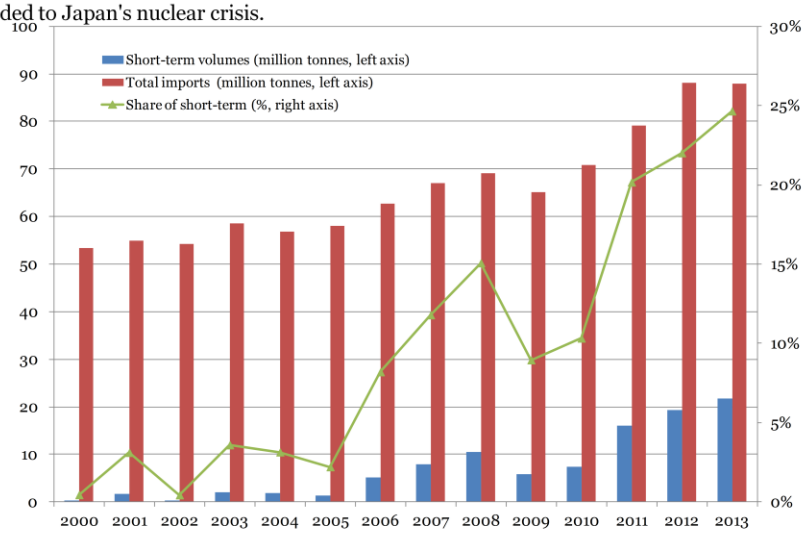
The chart shows monthly production of global LNG and shale gas in the United States.

Natural gas production and consumption in the United States did not grow much, although shale gas production grew to exceed the global LNG production in late 2013.

Evolving short-term procurement

- Flexibility of global LNG has responded to Japan's nuclear crisis.

Share of short-term volume in the total imports in Japan



(Data sources) compiled from customs statistics and GIIGNL data

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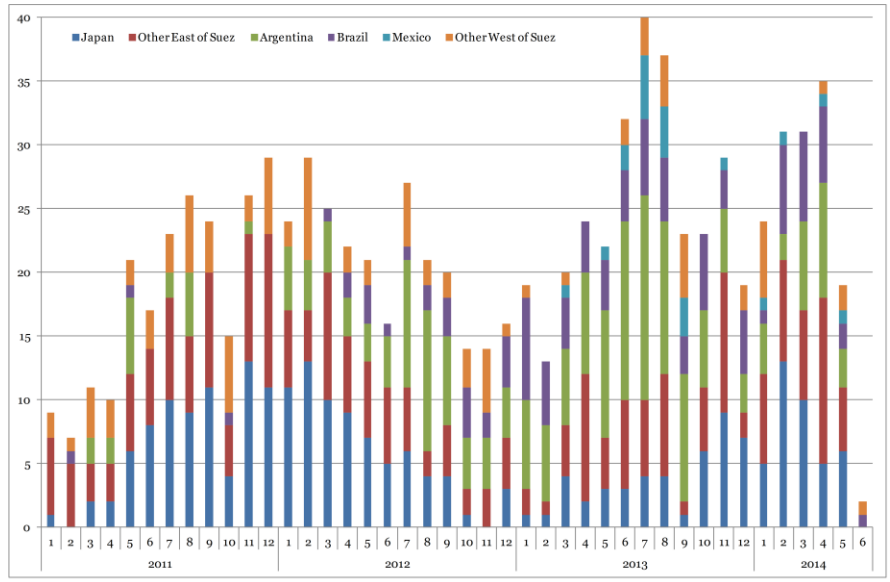
This chart compares total Japanese LNG imports and spot and short-term volumes among them from 2000.

While there was virtually no short-term procurement in 2000, more than 20% of the total was purchased through such arrangements in 2011, 2012, and 2013.

Partial shifting back to contracts in Japan and shifting cargo activities between regions

Monthly spot cargo purchase in different countries in 2011-2014



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(Data sources) compiled from ICIS Heren, Argus, Platts information

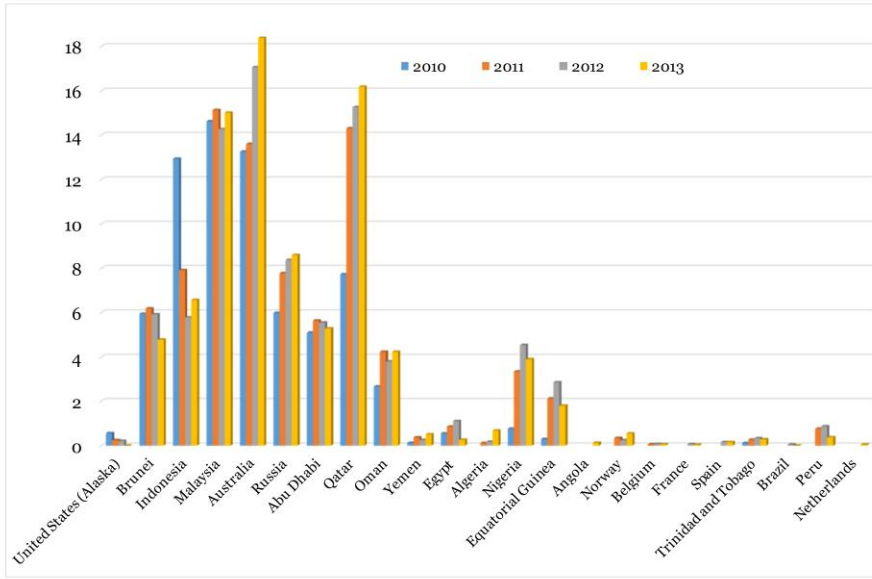
But if I look at monthly breakdowns of spot LNG purchases of various importing countries since 2011, notably different patterns are observed between the years in question.

In 2011, Japan went on increasing spot purchases after the crisis toward the end of the year. In contrast in 2012, Japan gradually decreased spot purchases as the buyers shifted back to contract purchases as they recognized that the incremental demand vacated by lost nuclear power was expected to stay some time. In 2012 and 2013, notable increases of spot purchases by Latin American importers were observed.

Shifting supply sources are observed

(million tonnes)

Japan's LNG supply sources 2010-2013



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(Data sources) Custom statistics of Japan

There have been shifts of LNG supply sources to the Japanese market since 2010.

A complicated world of LNG

- While destination clauses are banned in European Union countries, 4 million tonnes of LNG was reloaded in Europe in 2013:
  - because initial cargo destinations in delivered-ex-ship (DES) contracts are still restricted, and buyers can avoid profit sharing by reloading
  - but with regard to final usage of molecules, territorial restrictions cannot be imposed in sale transactions
  - This shows both rigidity and flexibility of LNG transactions
  - As a result reloaded cargoes played a significant role in balancing the markets

9

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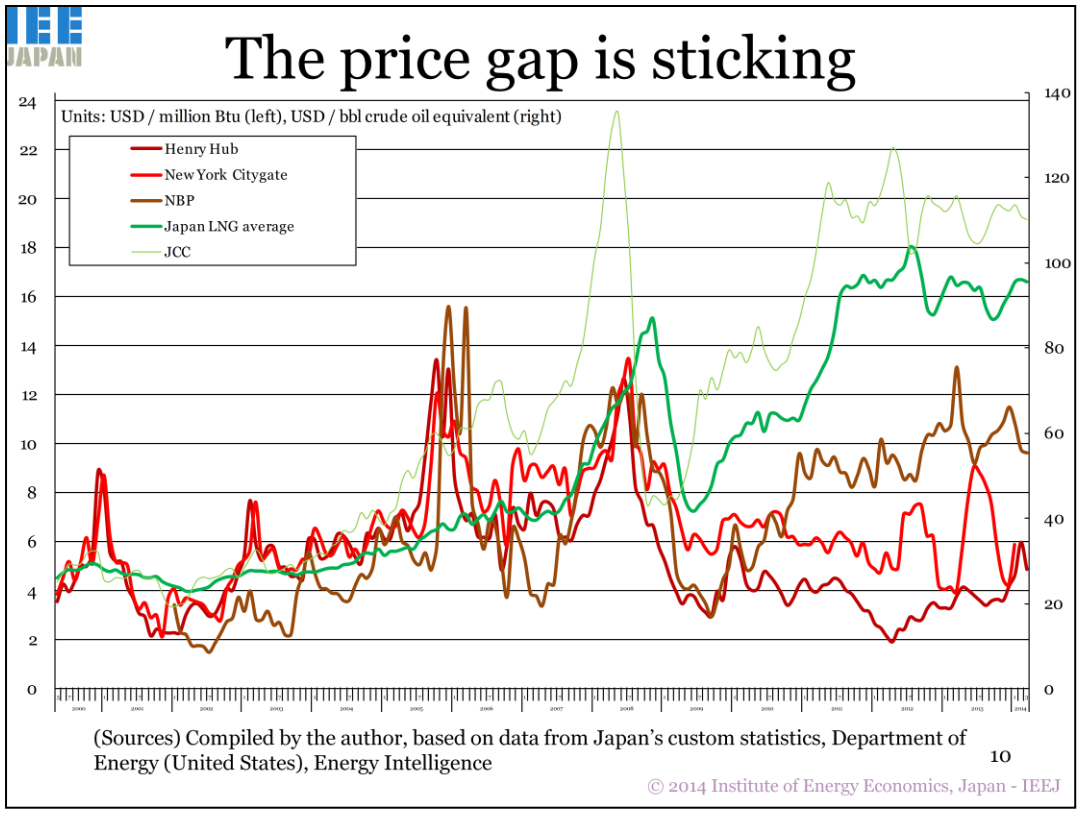
This shows both rigidity and flexibility of LNG transactions.

As a result reloaded cargoes played a significant role in balancing the markets.

This is also an indication that the global LNG market is not really tight. One major market does not need much LNG.



This is the biggest problem.

The chart shows representing gas prices around the world from 2000 to 2014. Since 2008 the gap between regional prices have been widening and persisting.

Greater flexibility is needed

- Equity participation and equity lifting are expected to play a more important role.
- More FOB purchases are expected to be favoured.
- Greater flexibility means greater penetration of LNG to downstream market, leading to mutual benefits of LNG producers and consumers.

Japan needs greater flexibility to reduce the gap.

Traditional Japanese LNG buyers are in jeopardy but may also have chances to change

- More people recognise LNG these days.
- Ordinary people tend to think that "Japan buys the most expensive LNG because it is supplied as LNG and because the utility buyers do not work hard to reduce prices."
  - Some external experts have described "Asian buyers are willing to pay higher prices for security of supply" and "Utility companies can easily pass incremental fuel costs onto customers."
- Stringent reviews of rate cases and more market openings are expected.
- Some of them are becoming more proactive.

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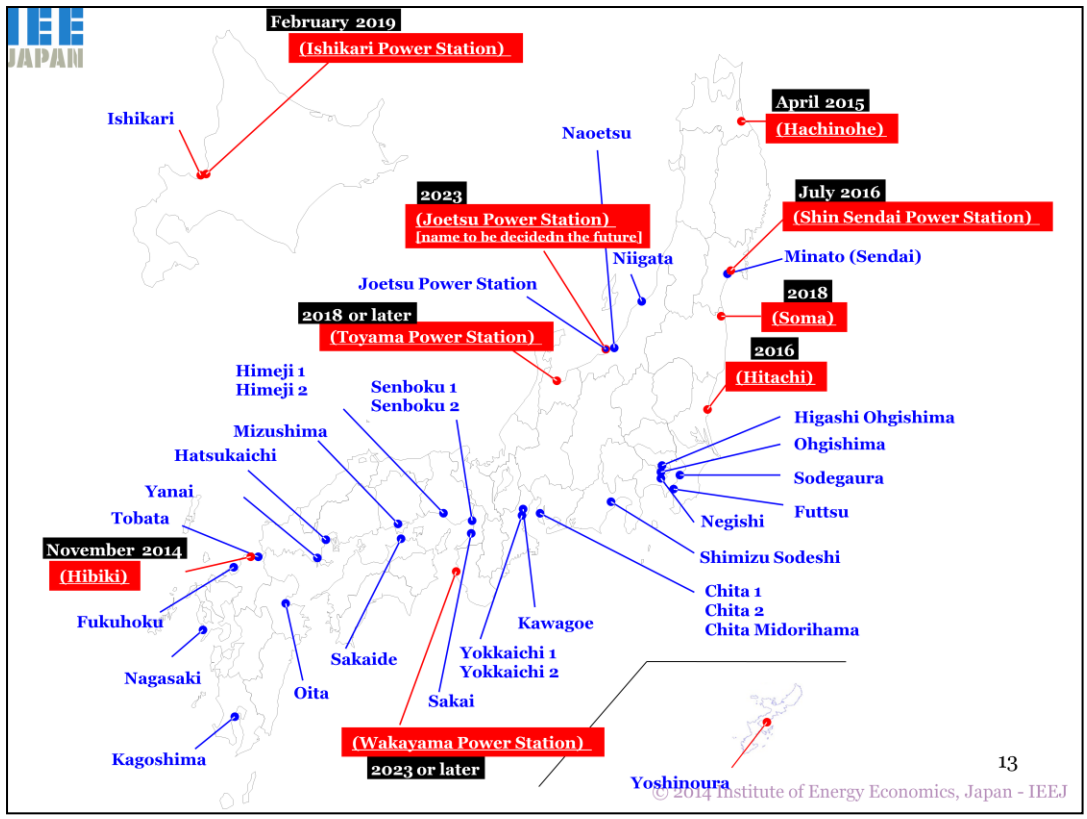
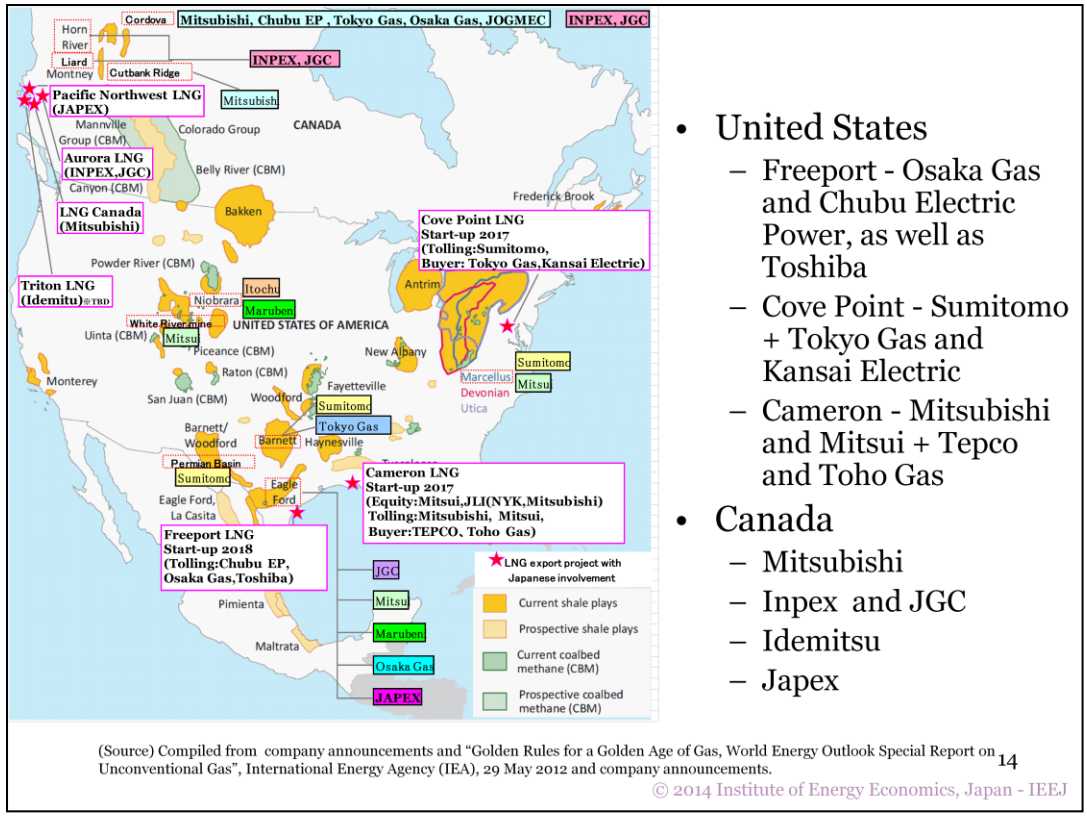
Another important change that has become apparent is the fact that more ordinary people are interested in, or aware of, energy and LNG issues. People are becoming more vocal on the issues, leading to pressures to reduce prices.

Japanese buyers are in jeopardy in the face of pressure to reduce prices and looming prospects of restructuring of both electricity and city gas markets.

However, they may also have chances to change.



There are about 10 additional LNG receiving terminal plans or proposals in Japan, in addition to around 30 already in operation. Additional gas-fired power generation projects are either proposed, planned, or under construction to add 20 GW or so capacity to the existing 64 GW at the beginning of 2011.



- United States
  - Freeport - Osaka Gas and Chubu Electric Power, as well as Toshiba
  - Cove Point - Sumitomo + Tokyo Gas and Kansai Electric
  - Cameron - Mitsubishi and Mitsui + Tepco and Toho Gas
- Canada
  - Mitsubishi
  - Inpex and JGC
  - Idemitsu
  - Japex

(Source) Compiled from company announcements and "Golden Rules for a Golden Age of Gas, World Energy Outlook Special Report on Unconventional Gas", International Energy Agency (IEA), 29 May 2012 and company announcements.

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Proposed solutions include North American LNG exports, especially those projects in the lower 48.

Several Japanese companies have been already involved and made offtake commitment in the most advanced ones among them. Or rather, those projects have advanced thanks to those Japanese involvements.

Japan's Basic Energy Plan (Strategic Energy Plan)

- Stable procurement of energy supply
  - Strengthening ties with resource supplying nations in North America, Russia, and Africa
  - Improving procurement terms and conditions
  - Developing domestic resources including methane hydrates
- Strengthening energy-saving measures and realizing smart and flexible energy consumption
- Accelerating introduction of more renewable energy
- Re-establishing solid nuclear policy
- More efficient and stable use of fossil fuels
- Integrating end-use energy supply businesses
  - Restructuring electric power, city gas and heat markets
- Strengthening energy transmission and distribution infrastructure
- Improving final energy supply systems in part to combat against global warming
- Integrating energy markets to create integrated energy companies
- Enhancing comprehensive international cooperation on energy issues

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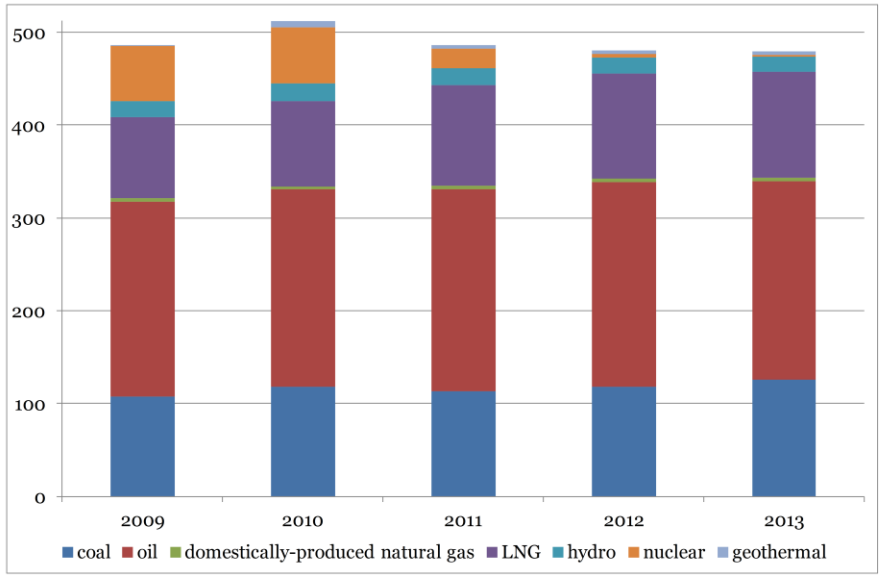
Stable procurement of LNG is one of the top priorities in the newly installed version of Japan's Basic Energy Plan.

Measures include strengthening ties with producing countiries.

Shifts to gas, and coal more recently



(Million tonnes oil equivalent)
(Sources) Compiled by the author, based on data from IEEJ, April 2014

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The chart illustrates changing composition of primary energy sources in the last five years.

In the face of declining nuclear power output, Japan increased LNG consumption significantly. But in 2013, coal consumption in power generation grew by 20%.

Coal is described as an important baseload power generation source in the Basic Energy Plan.

Emphasis on renewables

	Operational capacity			Approved capacity
	Before FIT	After FIT		Approved under FIT
	By June 2012	June 2012 - March 2013	April 2013 - January 2014	June 2012 - January 2014
Solar (residential)	4,700	969	1,133	2,370
Solar (non-residential)	900	704	4,608	28,774
Wind	2,600	63	11	967
Small-scale hydro	9,600	2	3	253
Biomass	2,300	30	89	846
Geothermal	500	1	0	13
Total	20,600	1,769	5,844	33,223
		Subtotal after FIT	7,613	

(Sources) Compiled by the author, based on data from Ministry of Economy, Trade and Industry, April 2014

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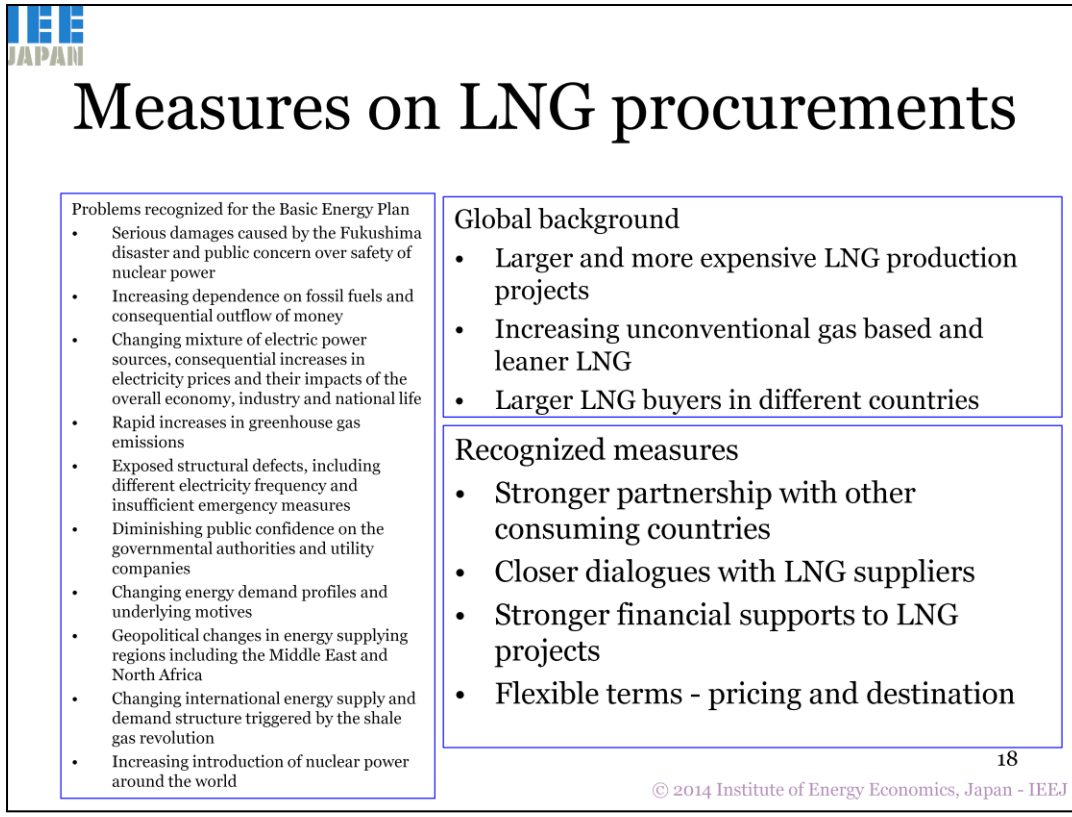
Another important feature of the plan is the greater emphasis of renewables.

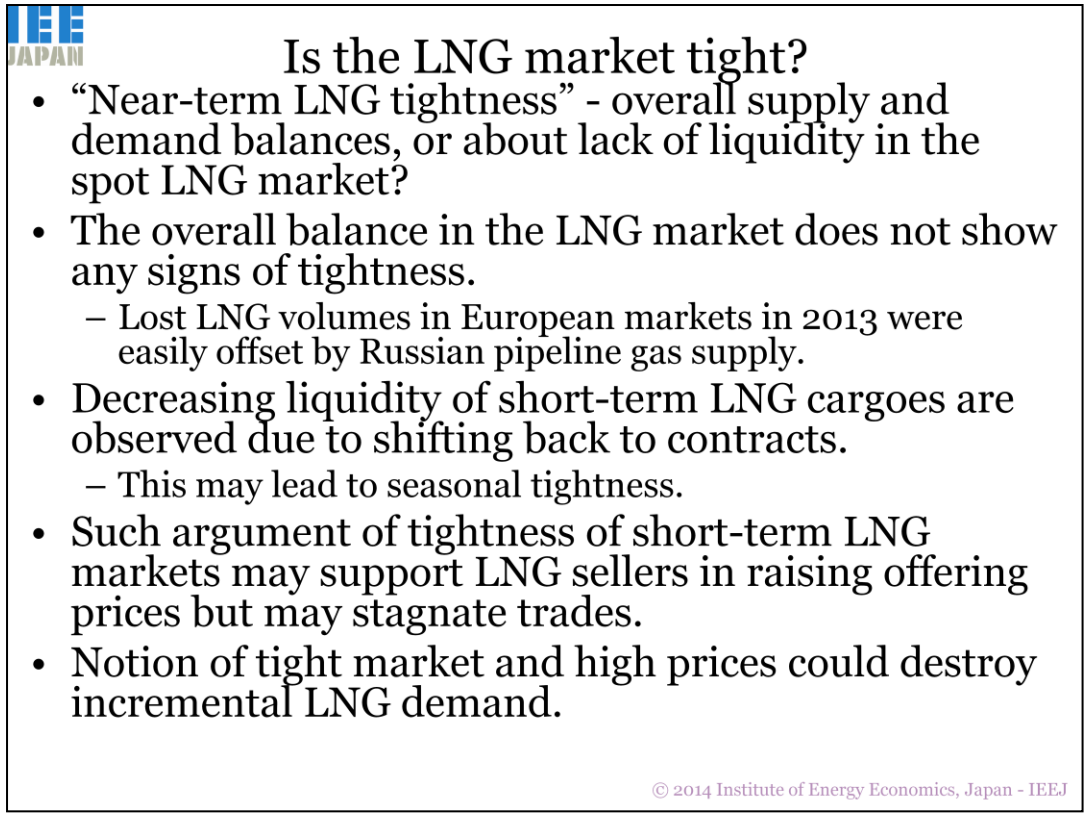
This table shows capacity additions of various renewable energy sources before and after the introduction of FITs.

Increases of solar power capacity, especially for non-residential, have been significant.



These days we are seeing larger and more expensive LNG production projects, increasing unconventional gas based and leaner LNG, and larger LNG buyers in different countries.

Japan is initiating stronger partnership with other consuming countries, closer dialogues with LNG suppliers, including the LNG Producer-Consumer Conference, and stronger financial supports to LNG projects, as well as pursuing flexible terms - pricing and destination.



These days we sometimes hear arguments that the LNG market is tight.

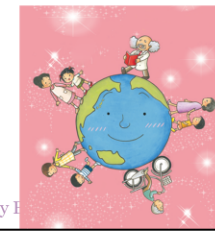
But there are often different interpretations on the same phenomenon. For example, Europe decreased LNG imports by 12 million tonnes in 2013, because, some people say, the LNG market was tight. Others say simply Europe did not need LNG, that is quite opposite to the notion of a tight market..

Those arguments of tightness may be made to encourage stronger commitments from consumers to realize supply projects. But such arguments often discourage buyers to depend on gas and push them out to other energy sources.

Thank you for your attention.

To conclude this presentation. . .
What will shape the future LNG markets?

	Supply	Demand
To date	Expansion of shale gas in the United States LNG capacity expansion in Qatar and others	Deregulation in the downstream electricity and gas markets Emergence of portfolio players Nuclear difficulty
Thereafter	More expansion of LNG capacity in Australia, North America and others Strong commitment continues being important	More Japanese and other Asian buyers becoming more proactive in project participation Government policy



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In concluding this presentation, I have listed past and future drivers that have changed and are expected to change the shape of the global LNG market.

The market will see more expansion of LNG capacity in Australia, North America and others. Strong commitment continues being important.

More Japanese and other Asian buyers are becoming more proactive in project participation. Government policies are also expected to play an important role.