

Nuclear Waste Governance in Japan: from business & accounting perspective

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*Initially Professor Kenichi Oshima was making presentation with me today,
But unfortunately he could not come this time for his family reason.

Outline

1. Summary of previous presentations 2012&13
2. What happened in this year
3. New system 1 – creation of decommissioning company (in 2016)
4. New system 2 – accounting change for decommissioning (from 2013)
5. Concluding remarks

*in this presentation, 1 euro is calculated as 137 yen.

1. Summary of previous presentations (about nuclear waste management in Japan)

- 17th REFORM Group Meeting in 2012
 - Impact of Fukushima, **Nuclear Waste Management**, and Possible Nuclear Future in Japan
 - By Tetsu IIDA
- 18th REFORM Group Meeting in 2013
 - From Irrationality to Chaos, and to where?: **Nuclear (waste) Governance** collapse after Fukushima
 - By Tetsu IIDA

1.1 summary of presentation 2012

- Fukushima contamination
 - Decontamination, Interim storage, final disposal?
- Spent fuel and others
 - Official national policy: (under discussion by AEC)
 - Political “meltdown” and chaos
 - Social Polarization and distrust to the politics
- Only 1 year after Fukushima, most were still to be settled, and many things seemed chaotic.

1.2 Summary of presentation 2013

- New crisis in Fukushima
 - contaminated water (cooling water & ground water) keeps leaking
- From December 2012 (Abe-METI cabinet)
 - People elected LDP which favored nuclear promotion
 - The government do not integrate nuclear (waste) policy
 - Revival of pre 3.11 “nuclear village”
 - Mass media appraise Abe Adim. in order to keep stock market high
- 2 years after Fukushima, things were getting worse (from chaos to “collapsed” situation)

2. What happened in this year

- New system 1 – creation of **decommissioning** company by TEPCO holding company (in 2016)
- New system 2 – accounting change for **decommissioning** (from 2013)

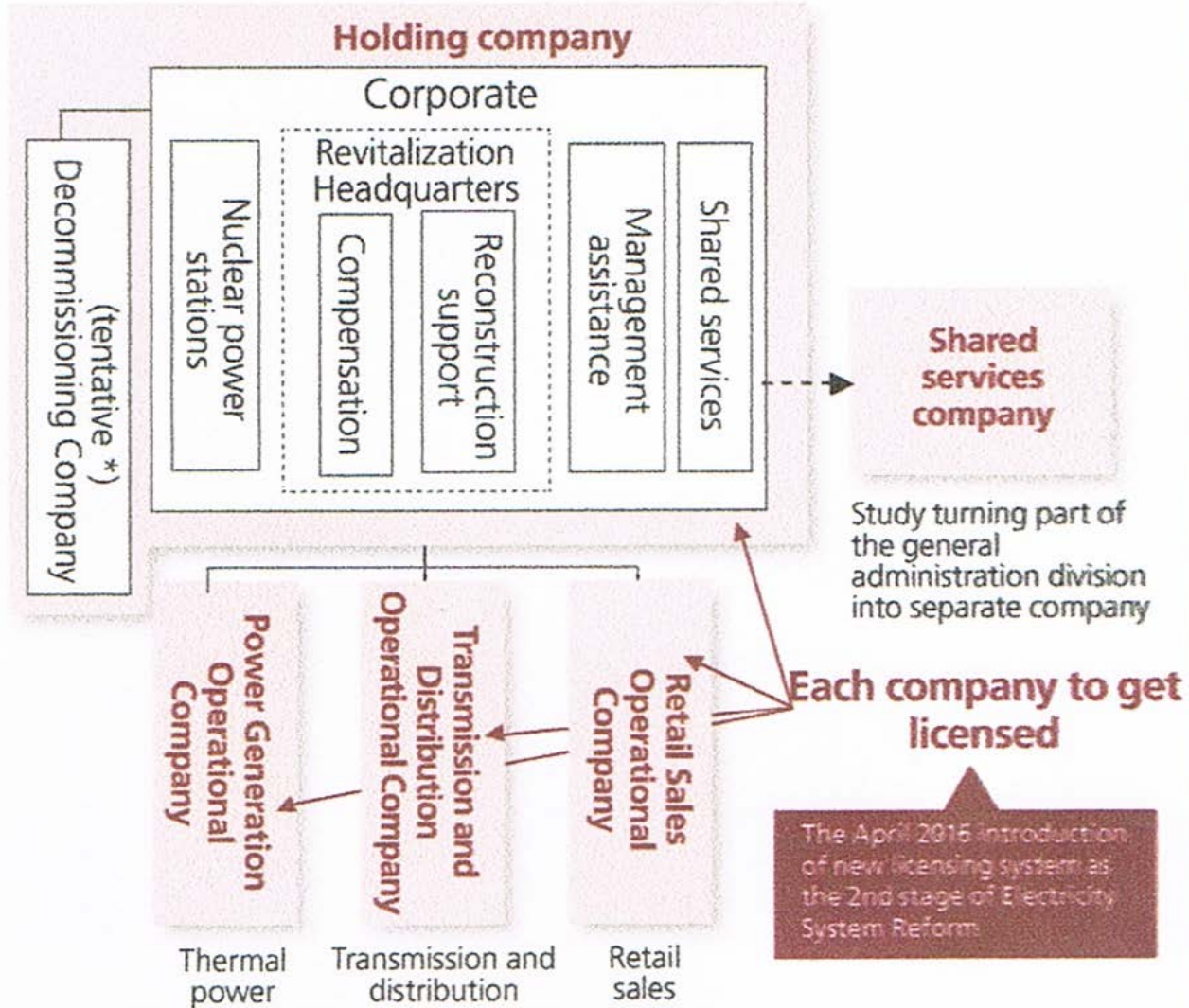
- In General, nuclear wastes consist of: **spent fuels** & **plant decommissioning**
- In Japan, **plant decommissioning** have been focused upon in the last twelve months,
- whereas **spent fuels** have been little discussed during this period.
 - Japanese government and electric company have to somehow deal with **melted fuel (debris)** in Fukushima on one hand,
 - And on the other hand, they put aside spent fuel problems **in order to restart generating nuclear power again** in Japan.

3. New system 1 – creation of decommissioning company by TEPCO (in 2016)

- Tokyo Electric Power Company (TEPCO)
- “Fukushima Daiichi Decontamination and Decommissioning Engineer Company”
 - 1. Stabilization of Nuclear Units
 - 2. Monitoring by sampling
 - 3. Contaminated water processing
 - 4. Fuel (debris) Removal

Launching in FY2016: Holding Company System

Taking end-to-end responsibility for accident as TEPCO Holdings



*On March 25, 2014, TEPCO named the company Fukushima Daiichi Decontamination and Decommissioning Engineer Company

- Company Management Committee
- President/CDO (Chief Decommissioning Officer): Naohiro Masuda
 - From TEPCO, Vice Head, Nuclear Safety Oversight Office
- VPs (Vice Presidents):
- Hiroshi Arima
 - From Hitachi-GE Nuclear Energy, Limited., Senior Vice President
- Takuji Takayama
 - From Toshiba, Senior Manager
- Shigemitsu Suzuki
 - From Mitsubishi Heavy Industries, Senior General Manager



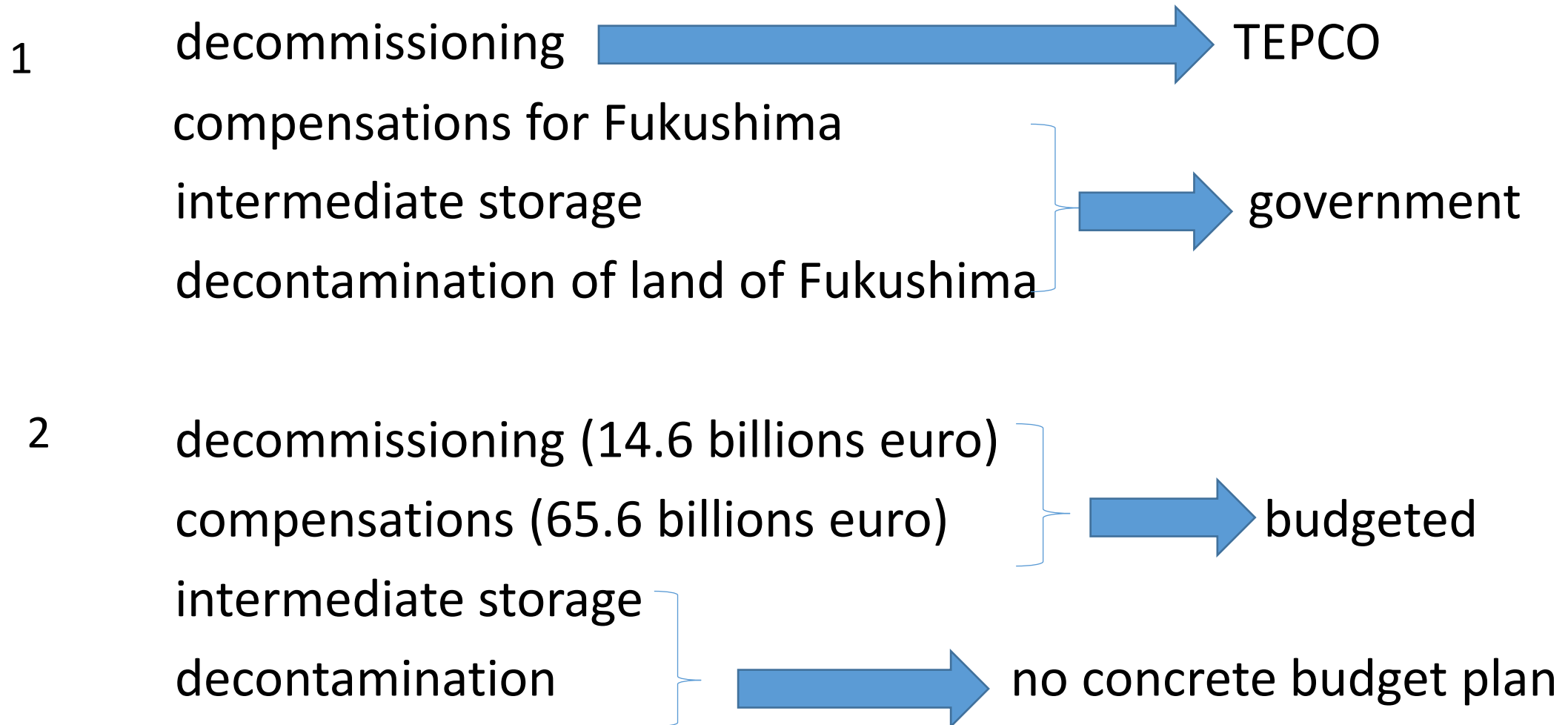
- This means that the decommissioning company will be established by old, pro-nuclear regime called “nuclear village”.
- New website has been launched, and the revived “nuclear village” seems proud of and enthusiastic about starting the new venture.
- The disaster of Fukushima is getting something about to be forgotten and little to be reflected and examined.

TEPCO New Comprehensive Special Business Plan (New Plan)

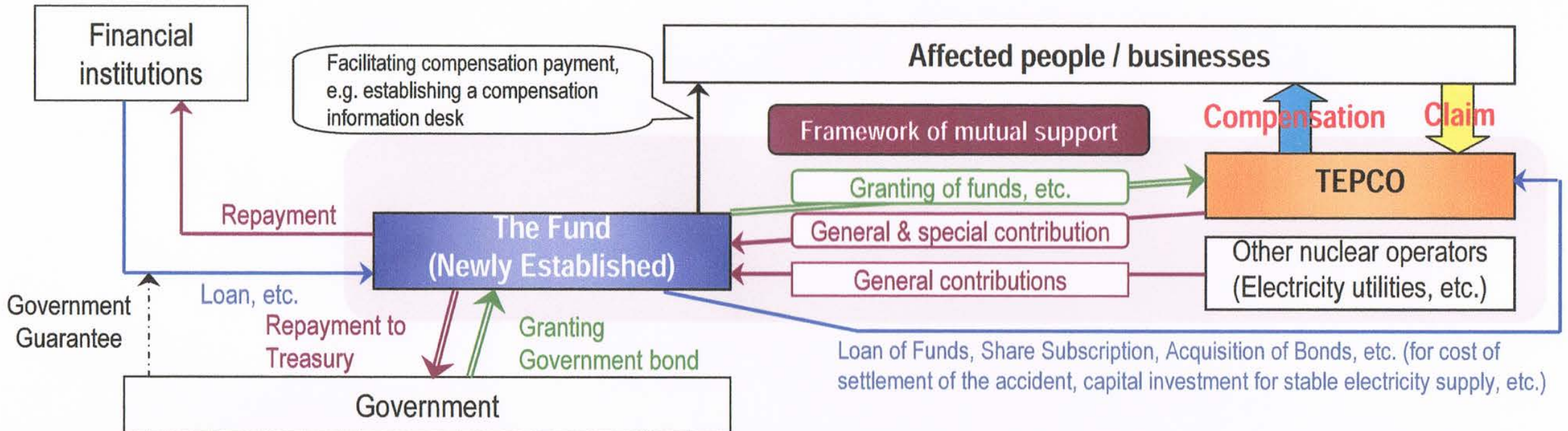
	National Government	TEPCO
Compensations for Fukushima	Expand the level of government guarantees by increasing the amount of bonds issued from 36.4 billions euro to 65.6 billions euro*	Compensation payments to disaster victims
Decommissioning	A stronger role and the construction of technical support systems	Commitment to a 7.3 billions euro expenditure quota in addition to the 7.3 billions euro already allowed
Intermediate storage	Budgetary measures equivalent to the costs	Receiving and taking on new support measures by the National Government
Decontamination of Fukushima	Appropriation of profits from the sale of Fund* (virtually government) -owned shares equivalent to the costs	Receiving and taking on new support measures by the National Government

* 1 trillion yen ≙ 7.3 billions euro

This means that...



Money flow between TEPO and the Fund (Nuclear Damage Liability Facilitation Fund)



(source) TEPCO Presentation Material FY2013

4. New system 2 – accounting change for decommission (from 2013)

- The Ministerial Ordinance to Revise a Part of Accounting Rules for Electricity Industry (Ordinance of Ministry of Economy, Trade and Industry (METI)) was enforced on October 1, 2013.
- On 31 January 2014, TEPCO and the METI decided decommissioning of Fukushima Daiichi Nuclear Power Station Units 5 & 6.

- Spent Fuel
 - Allowance for reprocessing (from 2005-)
 - Expenditure for final disposal (from 2000-)
- Plant decommissioning
 - Allowance for decommission (from 1988, amended in 2000, revised in 2013)

How was accounting rule changed?

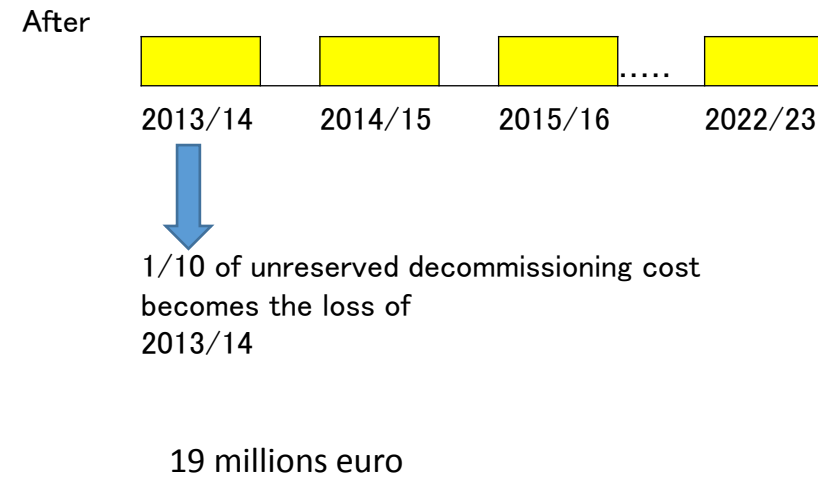
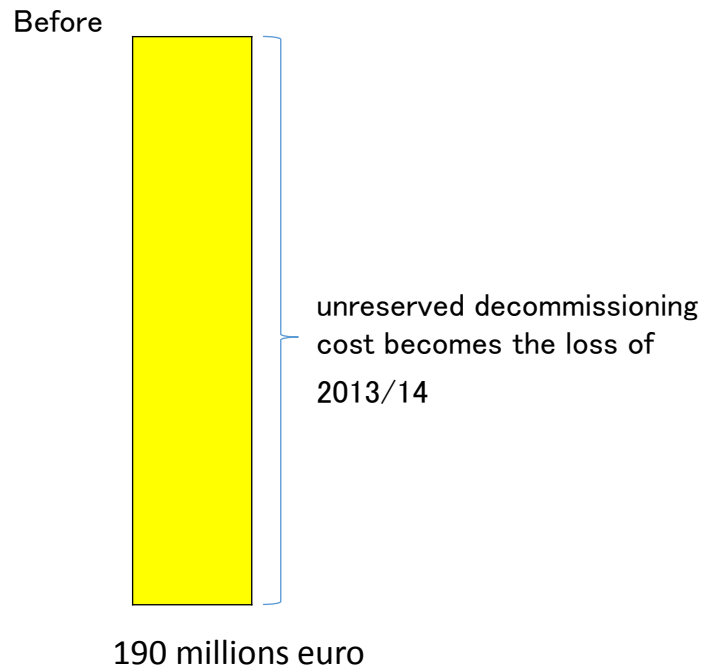
- Before

The removal costs had been charged to income by allocating the total estimated decommissioning costs of nuclear power units according to the actual volume of electricity generated over the estimated operational periods

- After

Electric power companies have recorded the removal costs by allocating the total estimated decommissioning costs of nuclear power units over the expected operational period (40 years) plus expected safe storage period (10 years) on a straight-line basis.

- Why “plus 10 years” matter?
- Because it helps TEPCO to reduce the cost of decommissioning in FY2013/14, and therefore prevent the company from going deficit.
- In Japanese business convention, 4 consecutive year deficit means the company being bankrupt. TEPCO already recorded deficit for 2010/11, 2011/12, and 2012/13. TEPCO had to avoid deficit somehow in the year of 2013/14.



* 1 billion yen \approx 7.3 millions euro

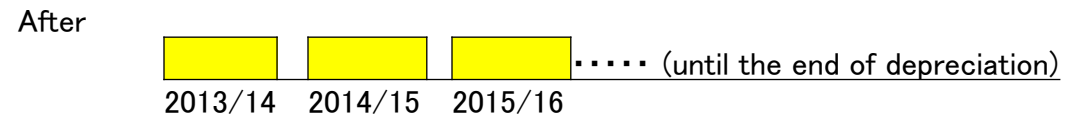
- How much was the effect?
- TEPCO reduced decommissioning cost of Fukushima Daiichi 5 &6 from **190 millions euro** to **19 millions euro**

One more accounting change...

- After the enforcement date, some scrapping assets are included in the grouping of fixed assets used for electricity business even after the termination of operation.
- This accounting change is the same system as the accounting change above.



1,016 millions euro



↓
normal depreciation cost becomes the loss of 2013/14

123 millions euro

* 1 billion yen \approx 7.3 millions euro

- How much was the effect?
- TEPCO reduced decommissioning cost of Fukushima Daiichi 5 & 6 from **1,016 millions euro** to **123 millions euro**
- Putting two accounting change together, TEPCO could reduce decommissioning cost by **1,064{(190-19)+(1,016-123)} millions euro.**

- How big is **1,064 millions euro**?
- TEPCO's "Ordinary Income" in 2013/14 is **739 millions euro**, it is obvious that TEPCO becomes in deficit without the accounting changes.

- TEPCO has been in deficit in 2010/11, 2011/12, and 2012/13. If TEPCO falls to deficit again in 2013/14, the company **records 4 consecutive year deficit, which conventionally means the company bankrupt.**
- In short, accounting change has been made in order to help TEPCO financially survive.

Concluding remarks

- In Japan, **decommissioning** has been mainly discussed, whereas disposal of spent fuel has been little discussed.
- Decommissioning **Fukushima reactors** is the biggest issue in nuclear waste management.
- Accounting change has been made in order to help **TEPCO** financially survive.
- Decommissioning management in Japan seems something **without moral** in the sense that nuclear victims are ignored.
 - 2012 – chaos
 - 2013 – collapsed situation
 - 2014 – collapsed situation continues (without moral)

- Thank you for your attention.