

# Nuclear Policy in Japan and TEPCO's business plan

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# Contents

- Japan energy policy- still dependent on nuclear
- TEPCO's business plan- no hope
  - 2012ver.
  - 2014ver.
  - 2017ver.

March 2011



Source : TEPCO

Still...

“Strategic Energy Plan” a cabinet decision in April 2014  
aims at

“Re-establishment  
of the nuclear energy policy” (p.47)

- **Nuclear power is an important base-load power source** as a low carbon and quasi-domestic energy source, contributing to stability of energy supply-demand structure, on the major premise of ensuring of its safety. (p.24)
- judgment as to whether nuclear power plants meet the new regulatory requirements will be left to the Nuclear Regulation Authority (NRA) and in case that the NRA confirms the conformity of nuclear power plants with the new regulatory requirements ,which are of the most stringent level in the world, **GOJ** will follow NRA's judgment and **will proceed with the restart of the nuclear power plants.** (p.24)
- Dependency on nuclear power generation will be lowered to the extent possible by energy saving and introducing renewable energy as well as improving the efficiency of thermal power generation, etc. Under this policy, **GOJ will carefully examine a volume of electricity to be secured by nuclear power generation.** (p.24)

- Nuclear operators are also required to 1) maintain high-level nuclear technologies and human resources, 2) smoothly go through decommissioning work, which will increase in the future, 3) quickly take the best safety measures in response to regulations reinforced after the TEPCO's Fukushima nuclear accident and 4) contribute to global warming countermeasures and stable electricity supply utilizing base-load power sources.(p.51)
- Even after the TEPCO's Fukushima nuclear accident, use of nuclear energy is expected to expand in the world. The scale of the expansion is particularly remarkable in Asian nations where energy demand is rapidly increasing. Japan, with its experience of the accident, is expected to make contributions in the fields of safety, nuclear non-proliferation and nuclear security as an advanced nuclear nation.(p.51)

- “Strategic Energy Policy” further goes,

Creating comprehensive energy companies through market integration and executing a growth strategy centering on energy

Comprehensive international energy cooperation

Promotion of strategic technology development (energy-related technologies for which research and development should be intensively conducted in order to implement measures related to energy supply and demand in a comprehensive and systematic manner in the long-term) etc.

- Under this national policy, **TEPCO's business plan** is made and approved by GOJ.

TEPCO's business plan was originally set forth in 2012, and revised twice in 2014 and 2017.



Fukushima nuclear accident imposed a **heavy burden** to TEPCO.

TEPCO's business plan shows how the government and the company try to deal with the **cost which is tremendously high and whose ultimate amount is still unknown.**

2012 plan

2014 plan

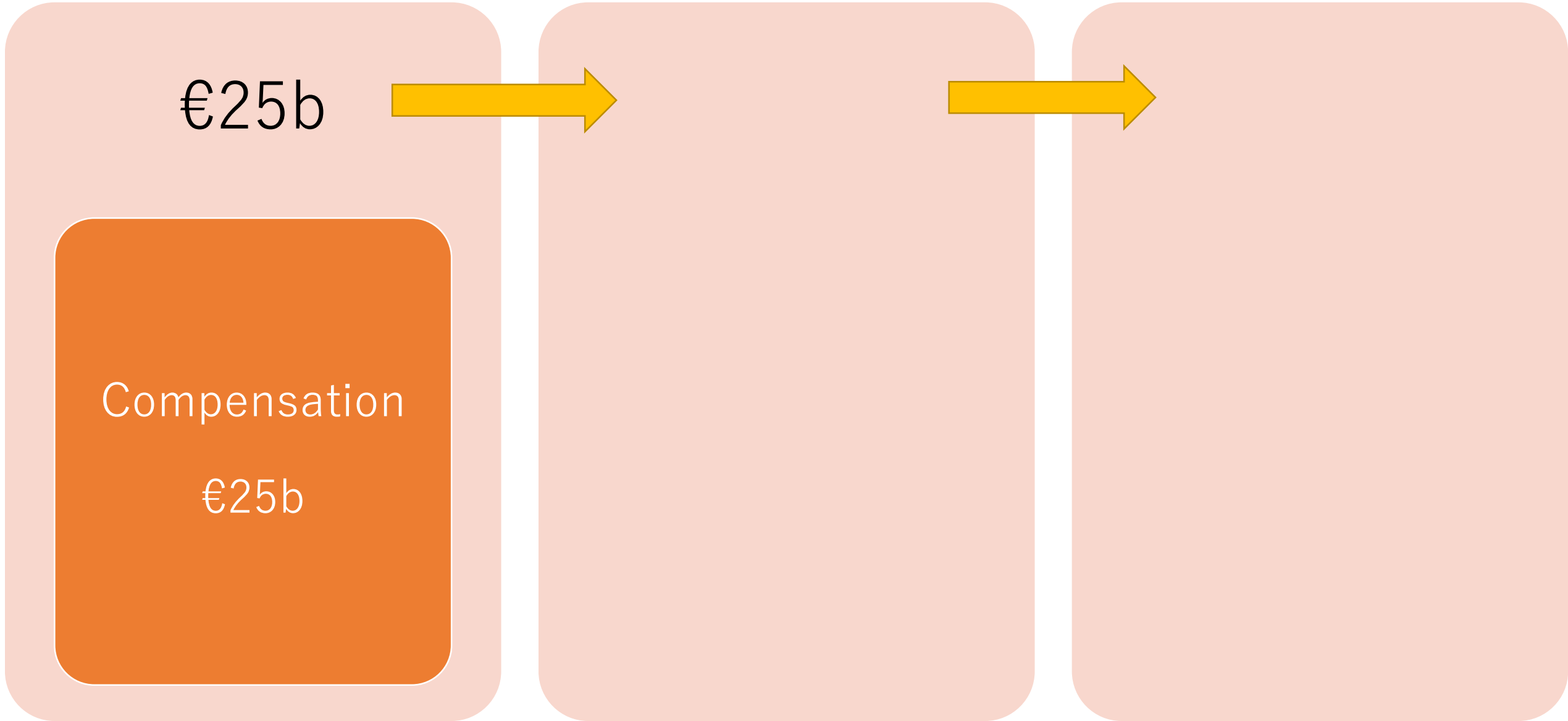
2017 plan

€25b



Compensation

€25b



2012 plan

€25b

Compensation

€25b



2014 plan

€106b

Compensation

€50b

Decontamination

€25b

Interim Storage

€11b

Decommission

€20b



2017 plan

# 2012 plan

€25b

Compensation  
€25b

# 2014 plan

€106b

Compensation  
€50b

Decontamination  
€25b

Interim Storage  
€11b

Decommission  
€20b

# 2017 plan

€215b

Compensation  
€79b

Decontamination  
€40b

Interim Storage  
€16b

Decommission  
€80b



2012 “Comprehensive Special Business Plan”

2012

“Comprehensive Special Business Plan”

Compensation for evacuated people in Fukushima

2.5兆円

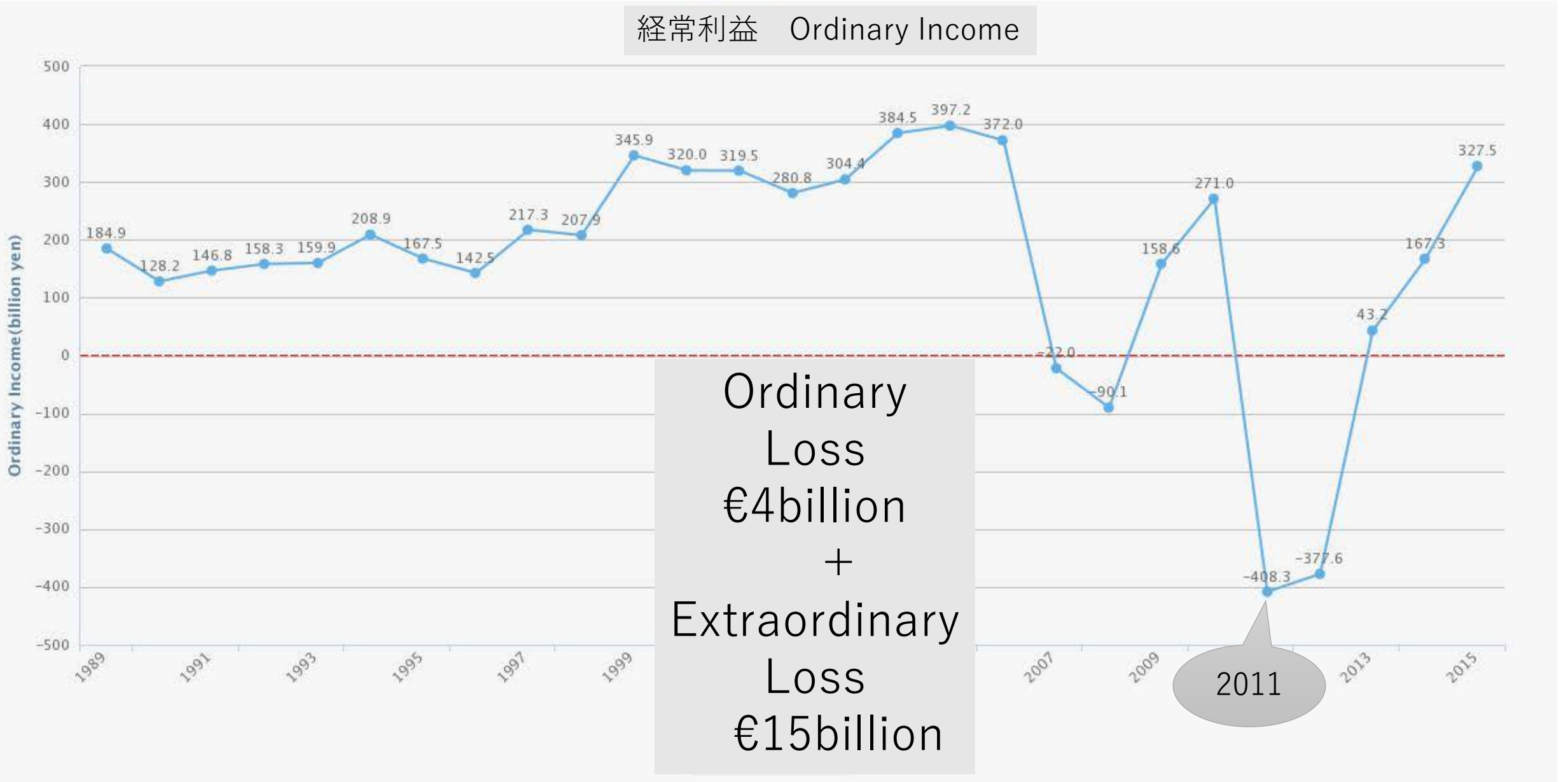
€25 billion

This amount was already beyond TEPCO's solvency.

Before compensation,  
TEPCO's financial condition was damaged  
by asset impairments, cooling of reactors,  
and additional fuel cost.

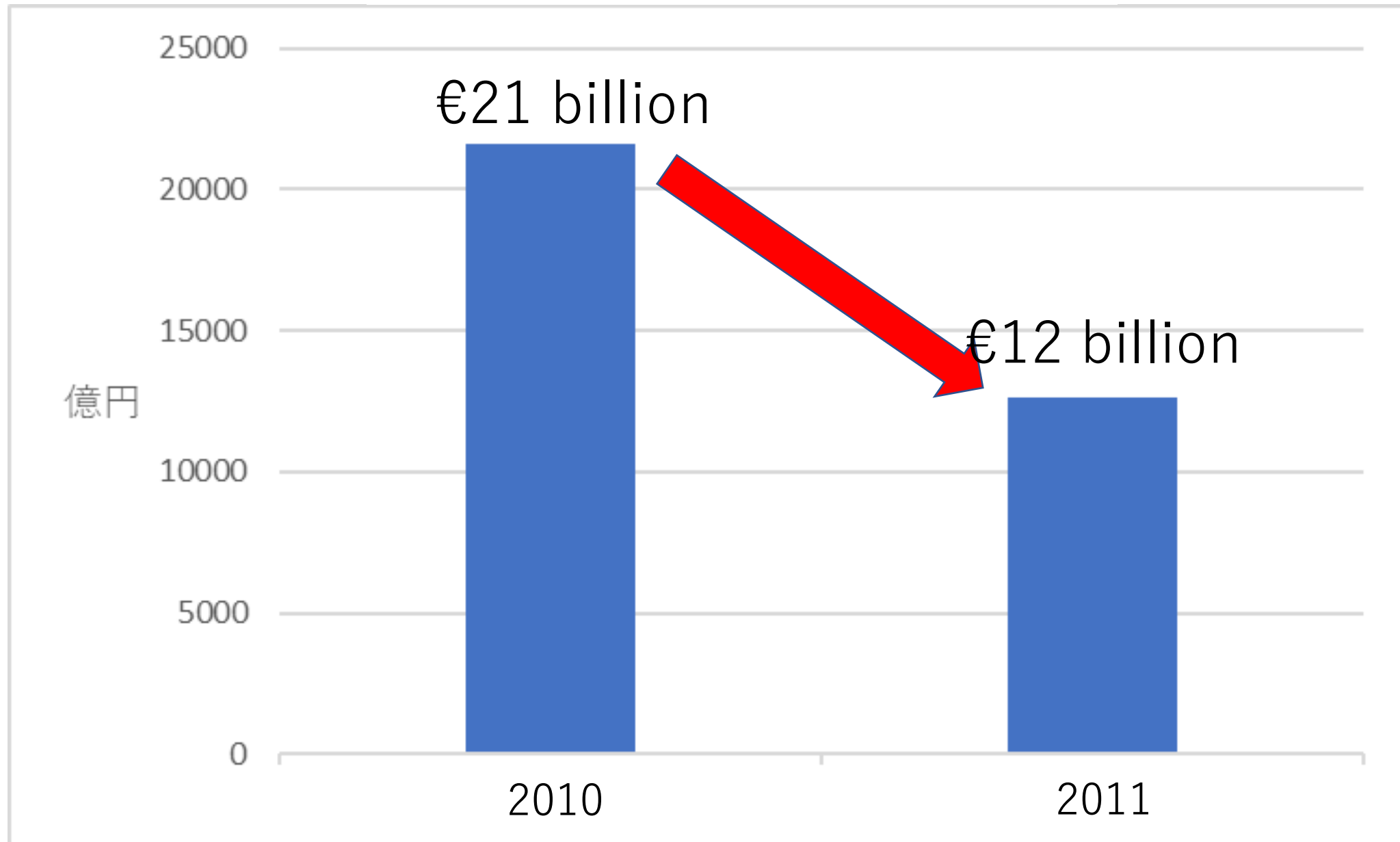
2012 plan's compensation of €25b.  
already exceeded TEPCO's solvency.

# TEPCO in the aftermath of Fukushima





# Net Assets of TEPCO



# 2012 “Comprehensive Special Business Plan”

Compensation  
for evacuated  
people

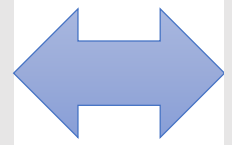
2.5兆円

€25 billion

# 2012 “Comprehensive Special Business Plan”

Compensation  
for evacuated  
people

2.5兆円  
€25 billion



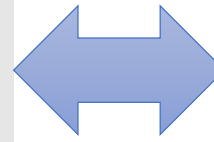
TEPCO's  
Net Assets  
(April 2011)

1.2兆円  
€12 billion

# 2012 “Comprehensive Special Business Plan”

Compensation  
for evacuated  
people

2.5兆円  
€25 billion

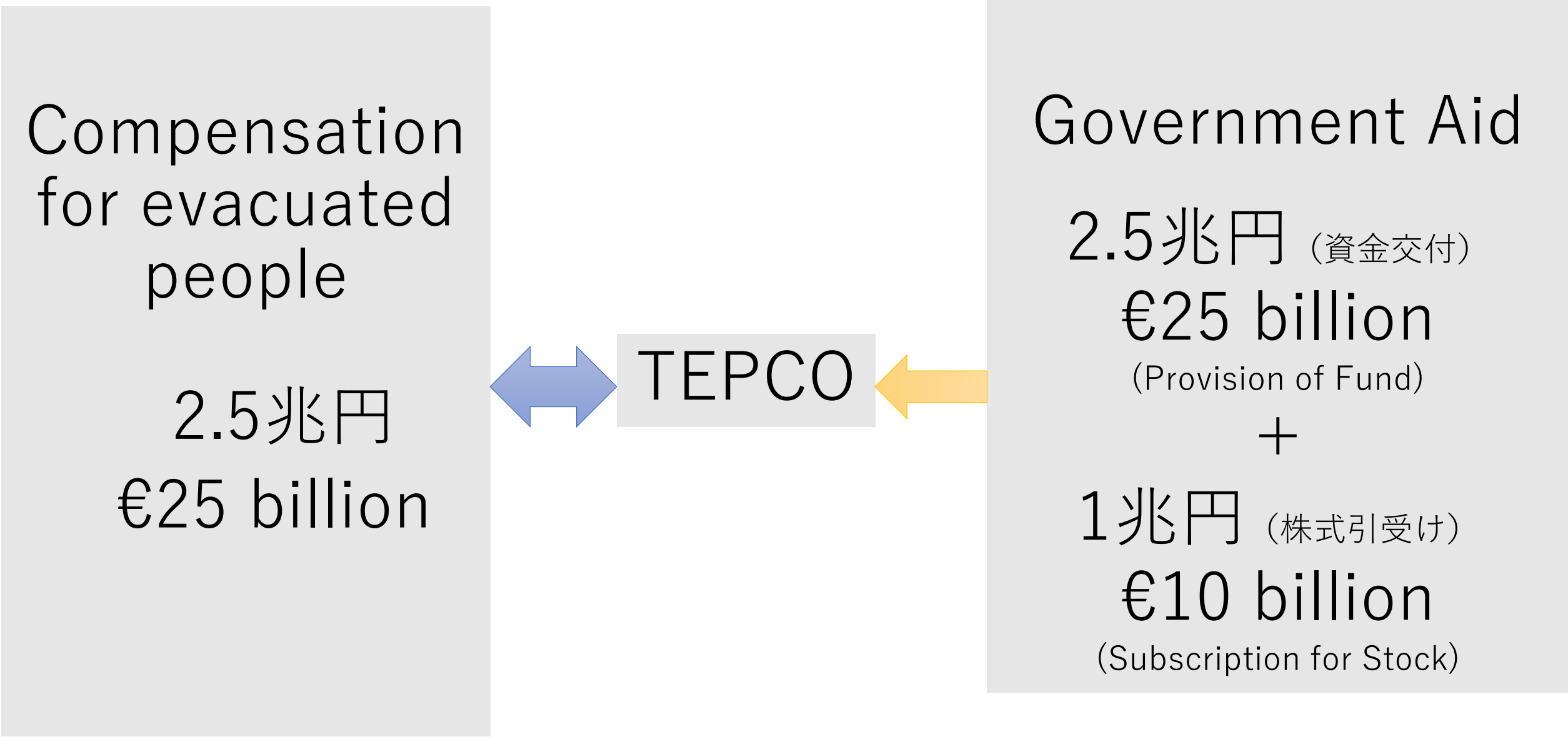


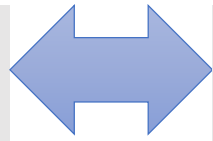
TEPCO's  
Net Assets  
(April 2011)

1.2兆円  
€12 billion

unaffordable

# 2012 “Comprehensive Special Business Plan”





TEPCO

Government Aid

Compensation  
for evacuated  
people

2.5兆円  
€25 billion

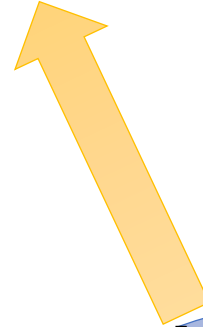
2.5兆円 (資金交付)

€25 billion  
(Provision of Fund)

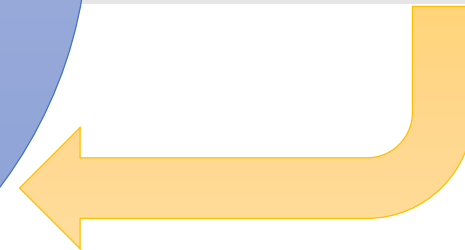
+

1兆円 (株式引受け)

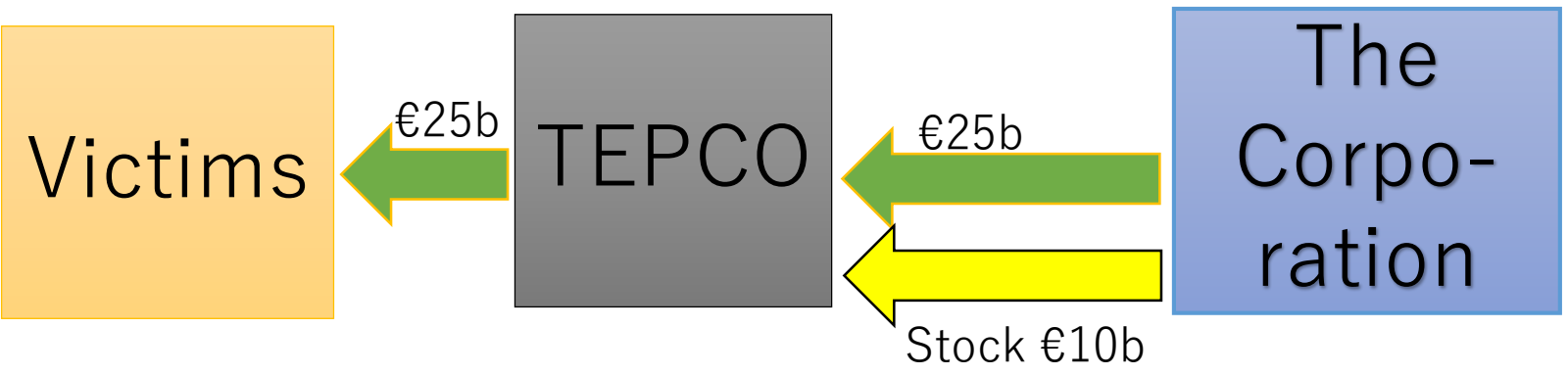
€10 billion  
(Subscription for Stock)



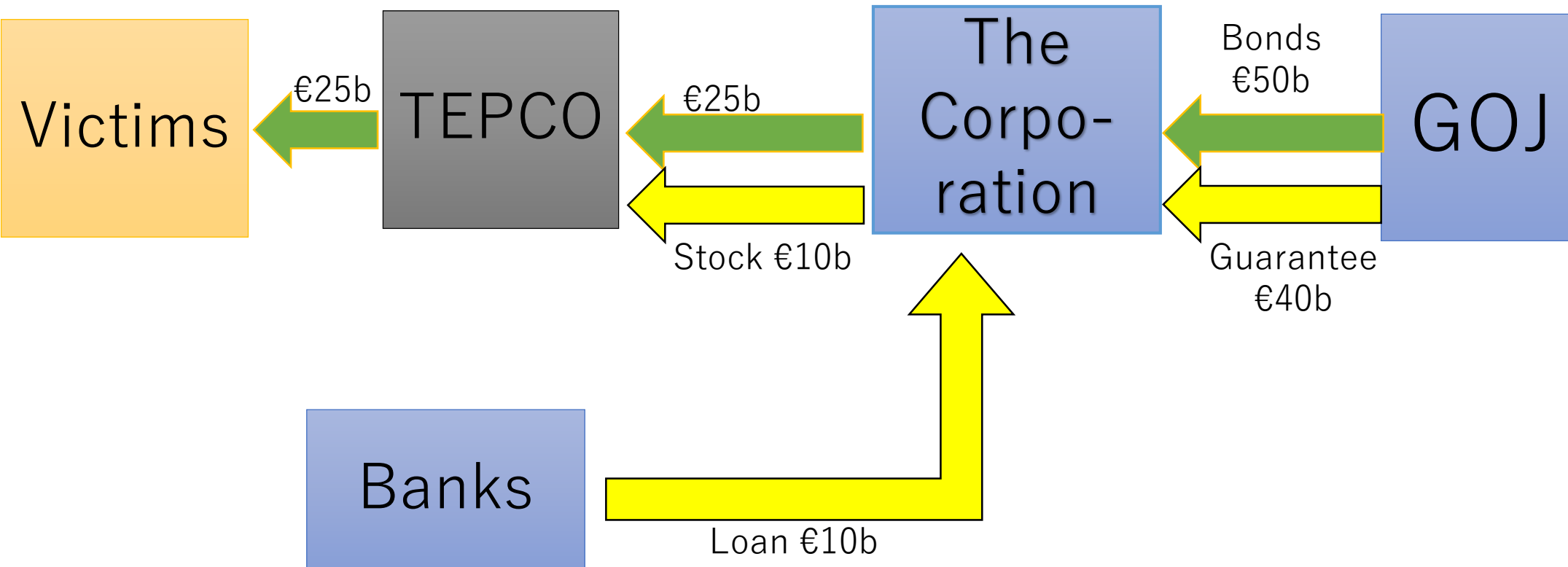
Nuclear  
Damage  
Liability  
Facilitation  
Corporation  
(the  
Corporation)

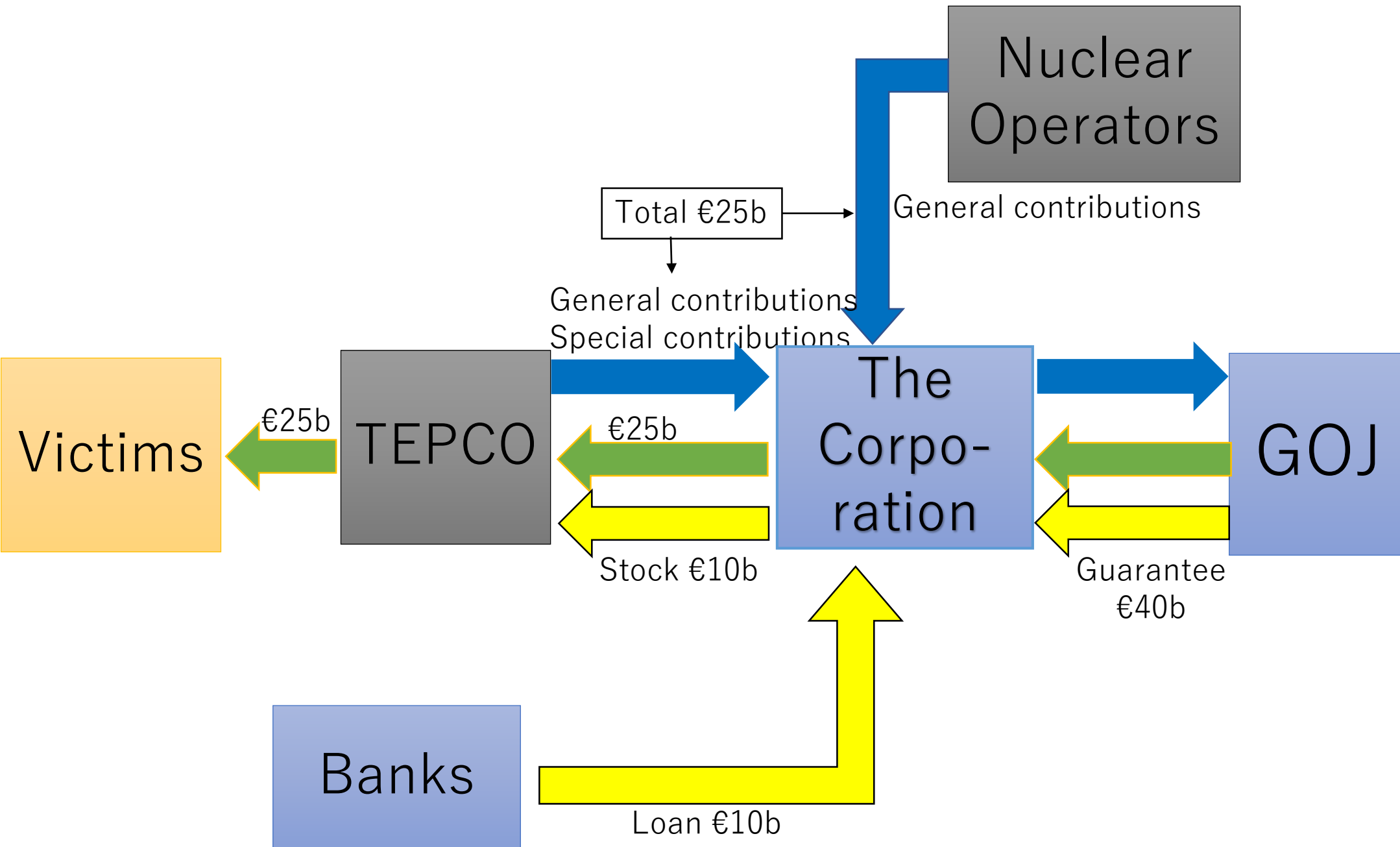


Top 10 Shareholder Name	Number of Shares Held (in thousand share units)	Equity Share (%)
<b>Nuclear Damage Compensation and Decommissioning Facilitation Corporation</b>	1,940,000	<b>54.69</b>
TEPCO Employees' Stock Sharing Organization	47,046	1.33
The Master Trust Bank of Japan, Ltd. (Shintaku account)	44,947	1.27
Tokyo Metropolitan Government	42,676	1.20
Sumitomo Mitsui Banking Corporation	35,927	1.01
Japan Trustee Services Bank, Ltd. (Shintaku account)	34,963	0.99
MSIP CLIENT SECURITIES	26,959	0.76
Nippon Life Insurance Co.	26,400	0.74
Mizuho Corporate Bank, Ltd.	23,791	0.67
STATE STREET BANK WEST CLIENT - TREATY 505234	21,601	0.61











# 2014 “New Comprehensive Special Business Plan”

# 2014 “New Comprehensive Special Business Plan”

showed that not only Compensation but also Decontamination, Interim Storage, Decommissioning costed far beyond what was planned in 2012.

Compensation	€50 billion	5兆円
Decontamination	€25 billion	2.5兆円
Interim Storage	€11 billion	1.1兆円
Decommissioning	€20 billion	2兆円
<b>Total</b>	<b>€106 billion</b>	<b>10.6兆円</b>

# 2012 plan

€25b

Compensation  
€25b

# 2014 plan

€106b

Compensation  
€50b

Decontamination  
€25b

Interim Storage  
€11b

Decommission  
€20b

# 2017 plan

€215b

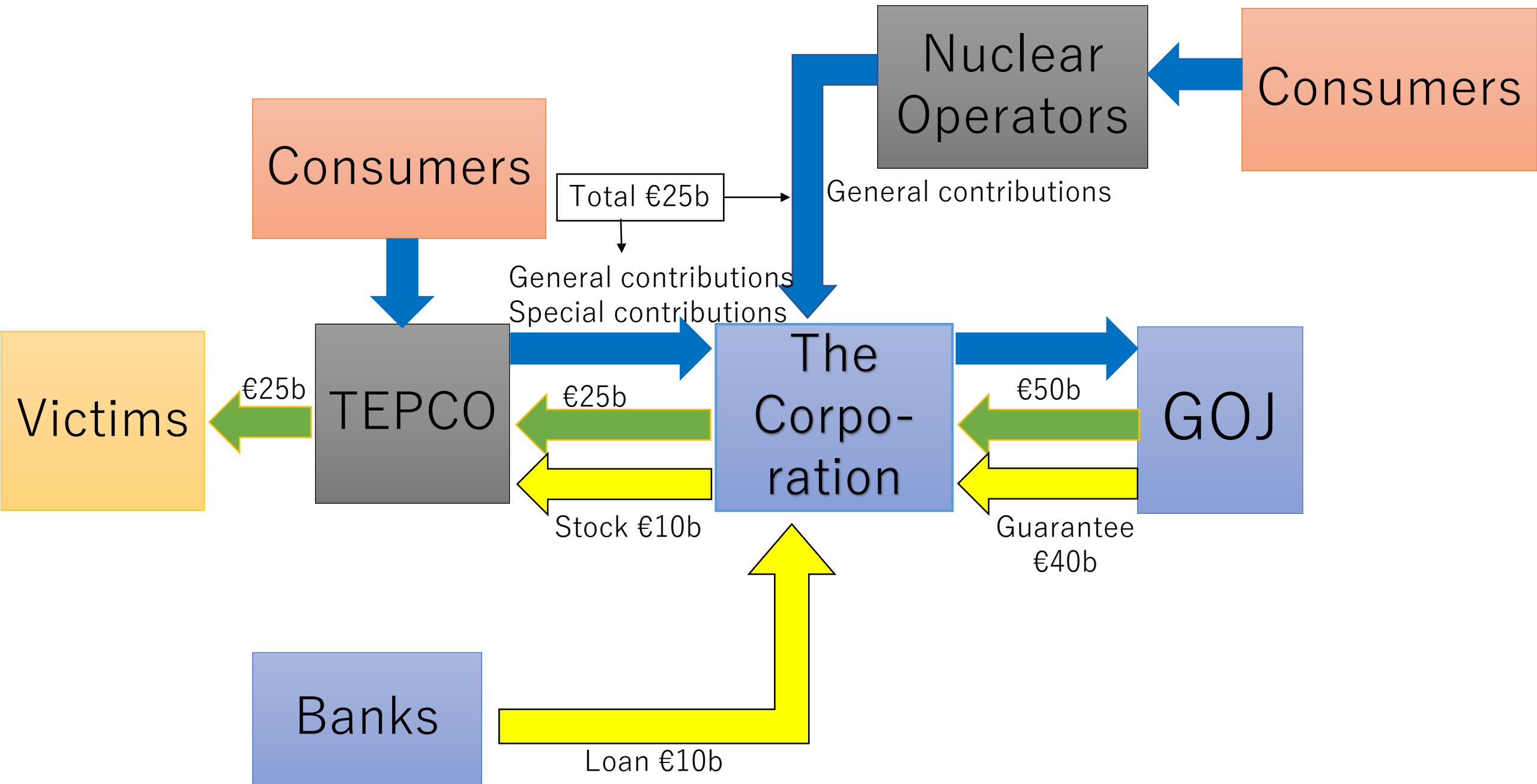
Compensation  
€79b

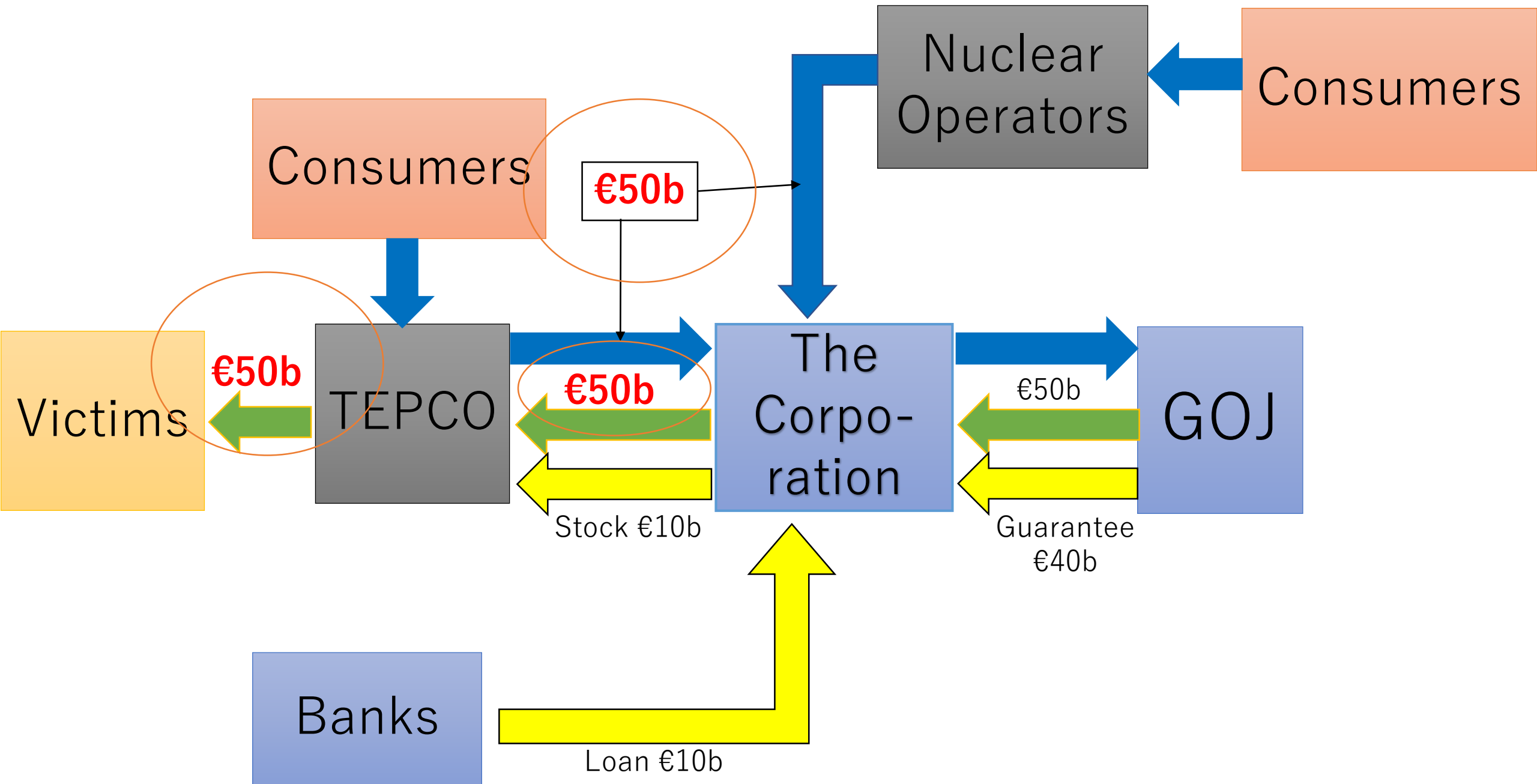
Decontamination  
€40b

Interim Storage  
€16b

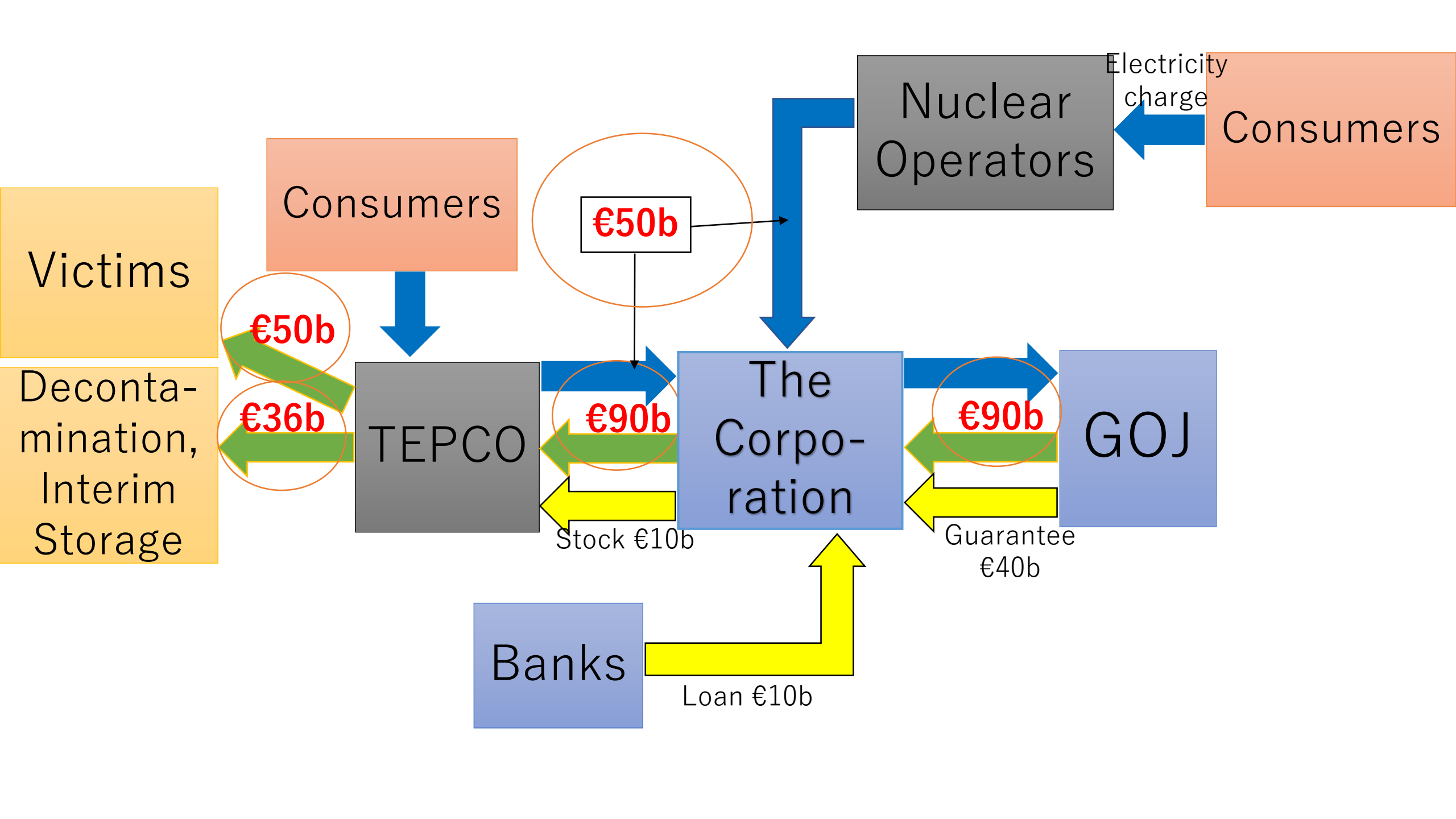
Decommission  
€80b



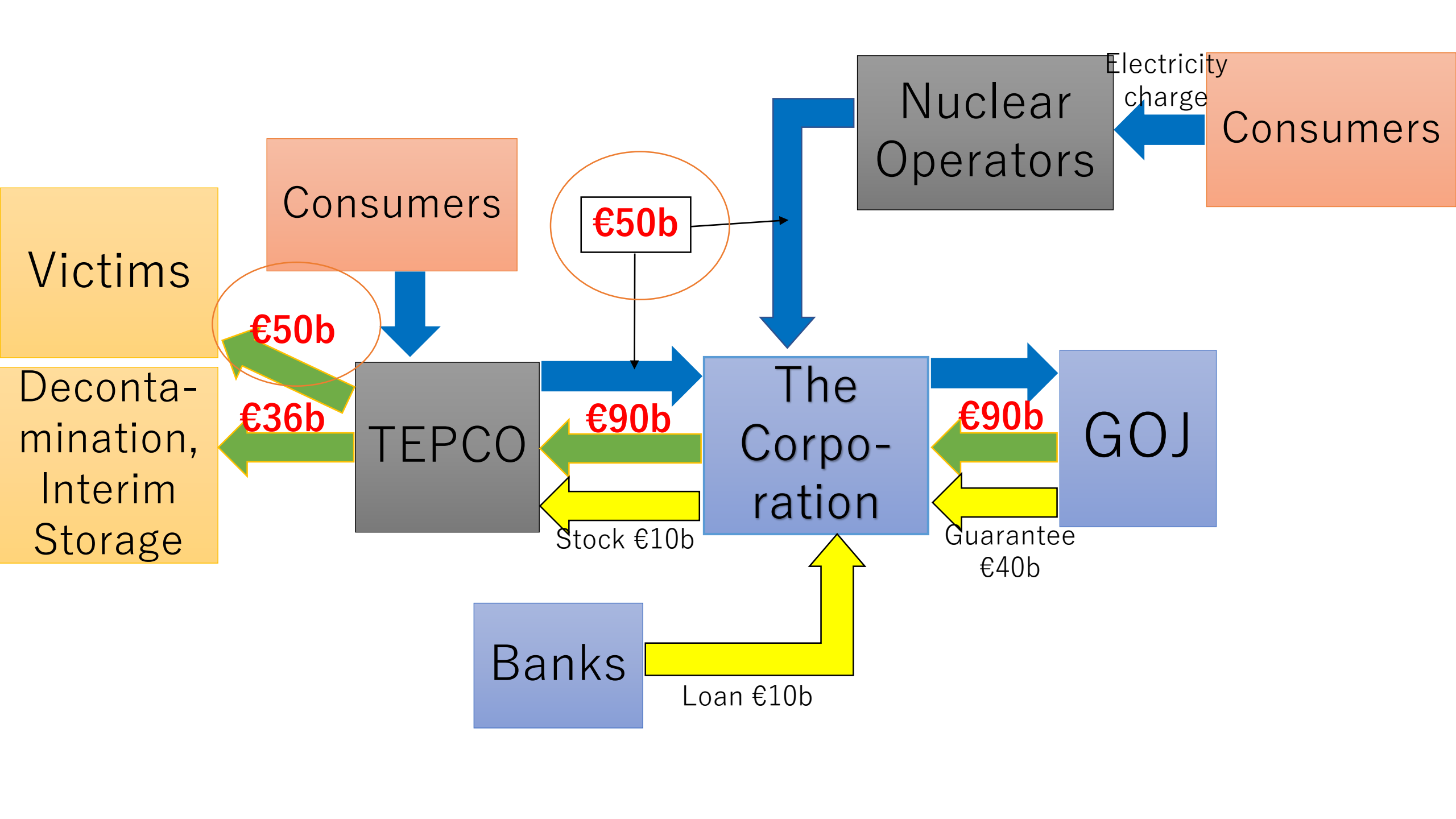


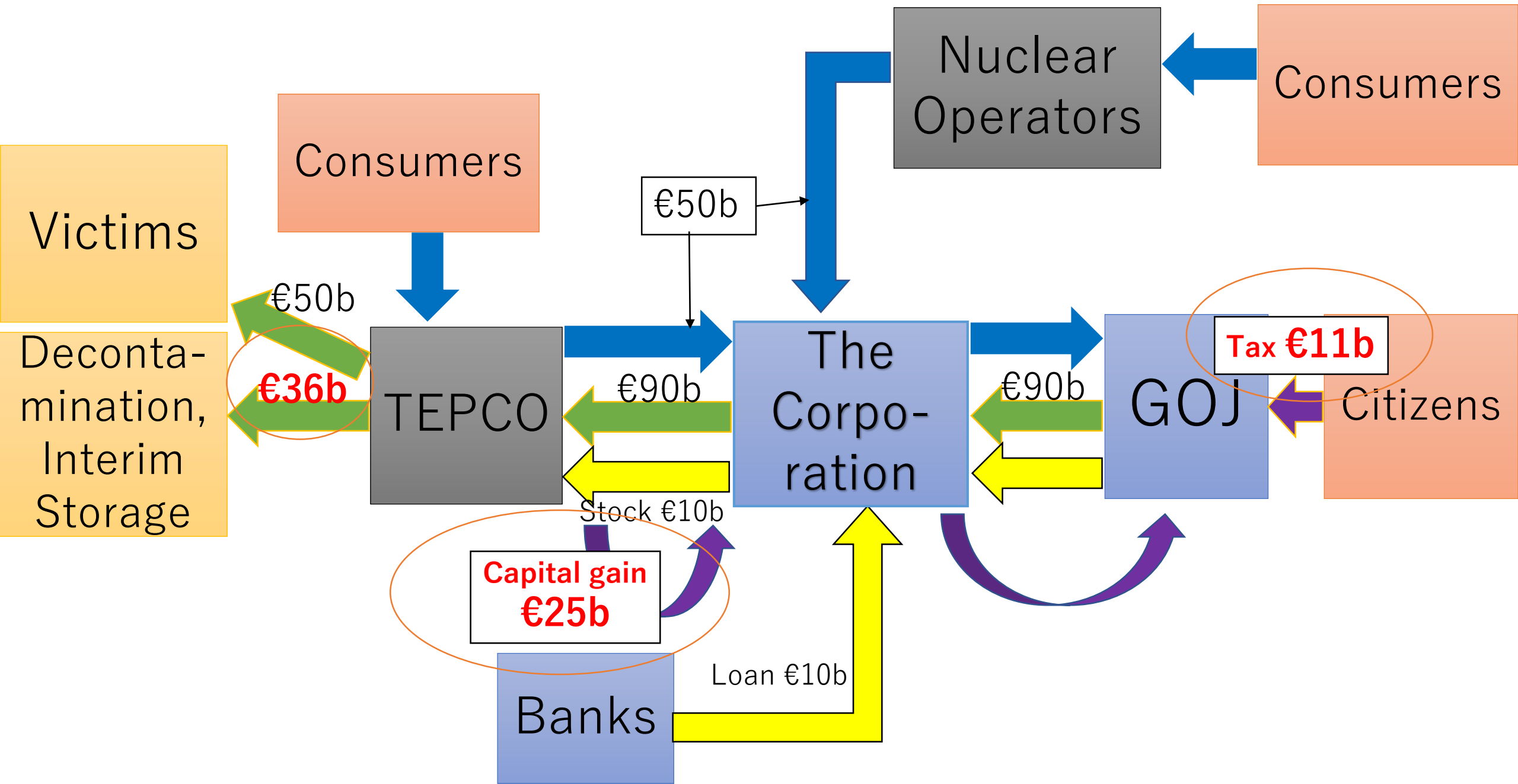


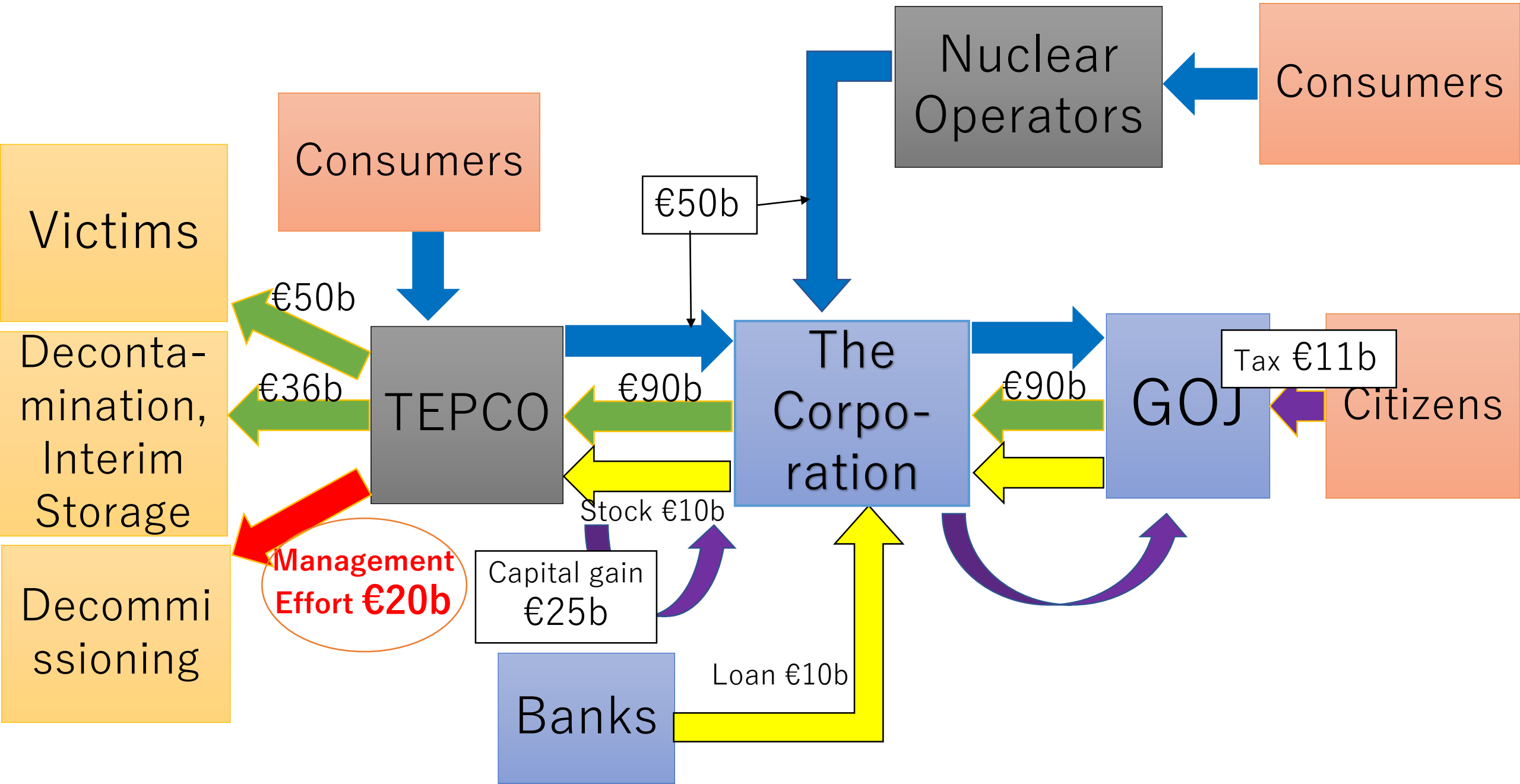




賠償 Compensation	除染 Decontamination	中間貯蔵 Interim Storage	廃炉 Decommissioning
↓	↓	↓	↓
消費者 Consumers (of TEPCO, other utilities, and of all other power suppliers)	株式売却益 Capital gain of TEPCO's share price	エネルギー 予算 Government's Energy Budget	東京電力 TEPCO (through cost reduction and sales of assets)





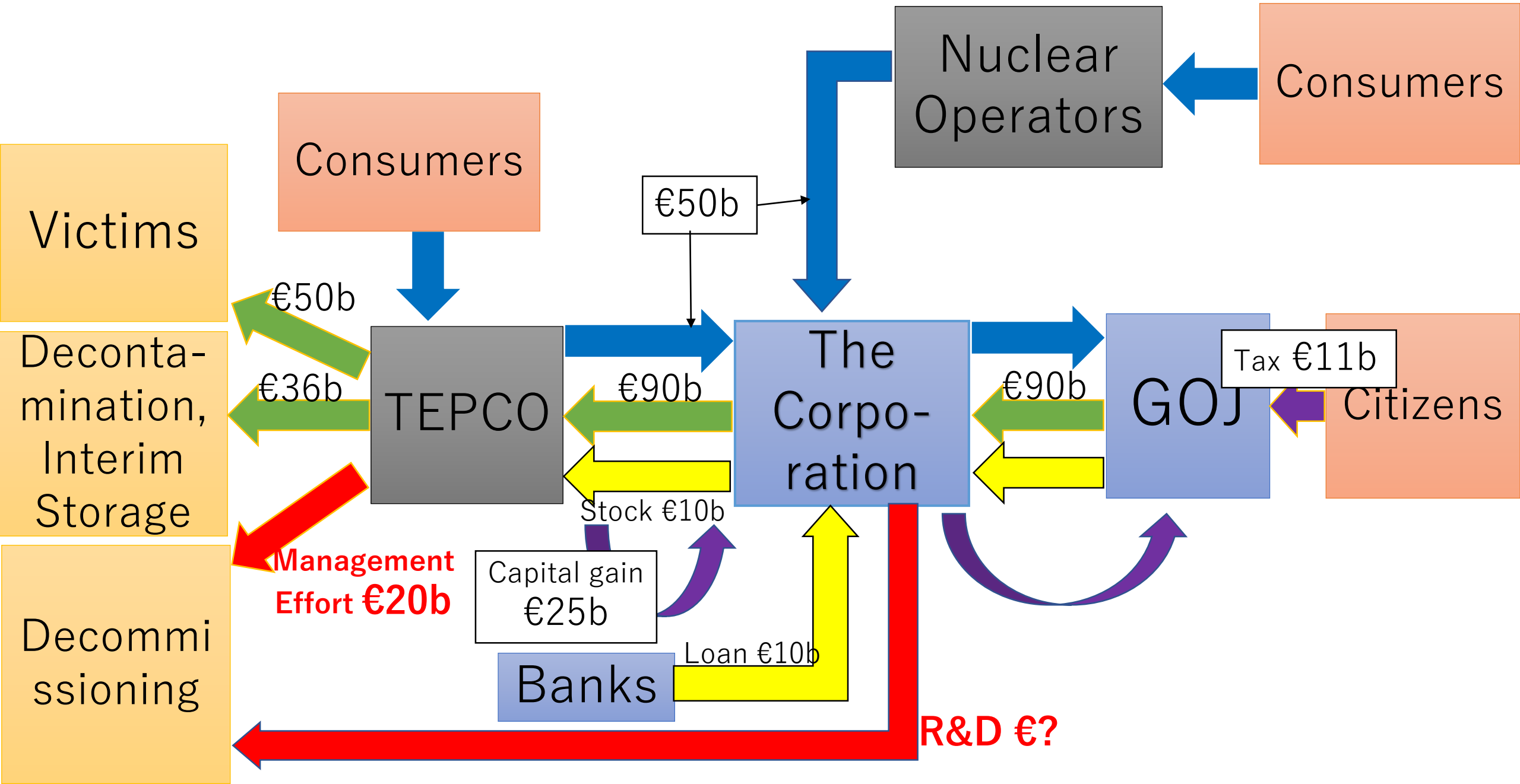


# 2014 “Strategic Energy Plan”

- Moreover, in terms of the decommissioning and measures against contaminated water issue of TEPCO’s Fukushima Daiichi Nuclear Power Plants, which are expected to require 30 through 40 years to solve, **it is necessary to reinforce a support system from technological perspective so that the decommissioning can be progressed more steadily where GOJ plays a more proactive role.** (p.48)

# 2014 “Strategic Energy Plan”

- Therefore, GOJ submitted “the Act for Partial Amendment to the Act of Nuclear Damage Compensation Facilitation Corporation” in 164th ordinary session of the Diet, where “Nuclear Damage Compensation Facilitation Corporation” is going to be renamed as “Nuclear Damage Compensation and Decommissioning Facilitation Corporation”, and the function of decommissioning facilitation is going to be added to the Corporation. (p.48)





2017 “Revised Comprehensive  
Special Business Plan”  
 (“The Third Plan”)

2017

# “Revised Comprehensive Special Business Plan”

showed much more cost:

Compensation	€79 billion	7.9兆円
Decontamination	€40 billion	4兆円
Interim Storage	€16 billion	1.6兆円
Decommissioning	€80 billion	8兆円
<b>Total</b>	<b>€215 billion</b>	<b>21.5兆円</b>

# 2012 plan

€25b

Compensation  
€25b

# 2014 plan

€106b

Compensation  
€50b

Decontamination  
€25b

Interim Storage  
€11b

Decommission  
€20b

# 2017 plan

€215b

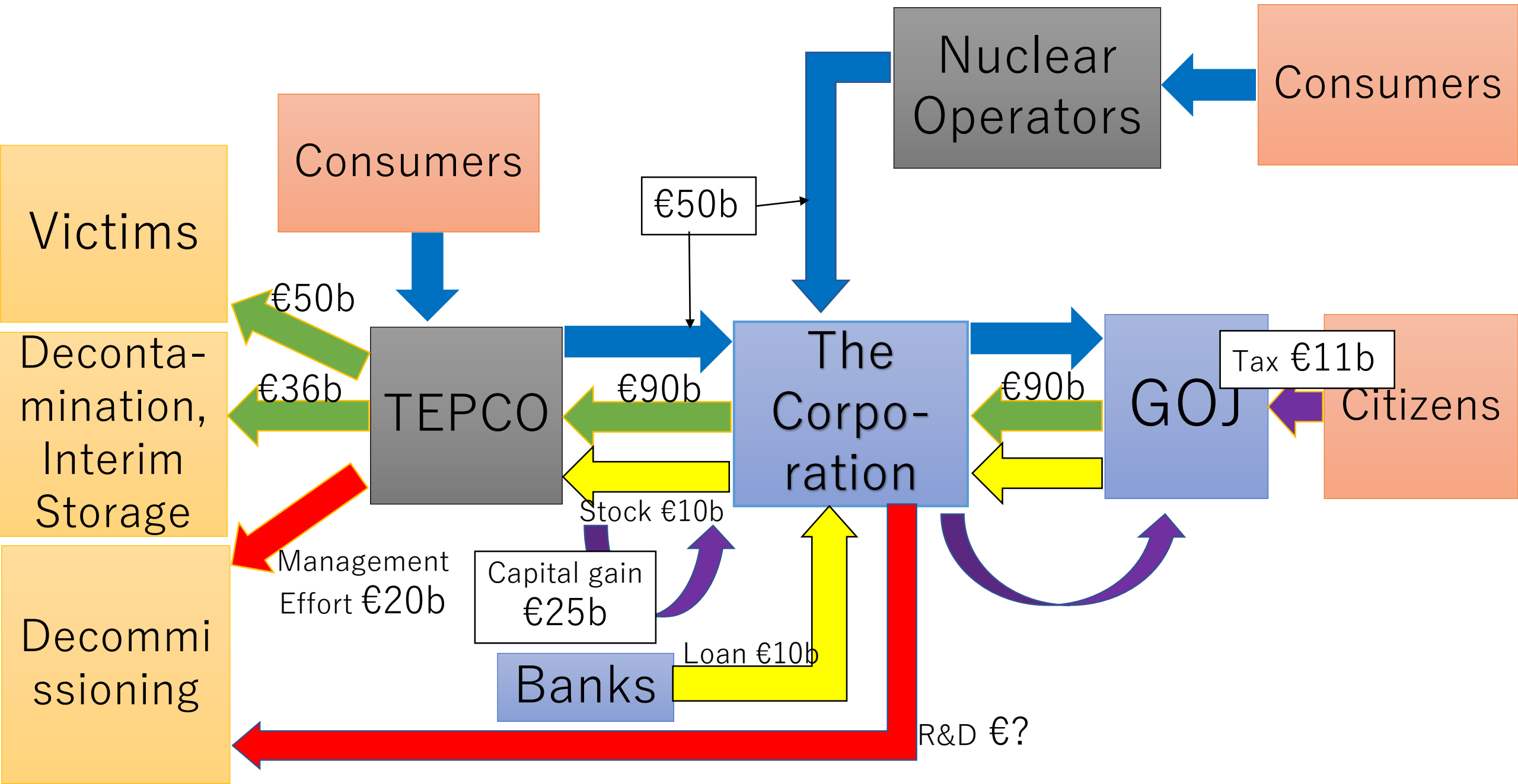
Compensation  
€79b

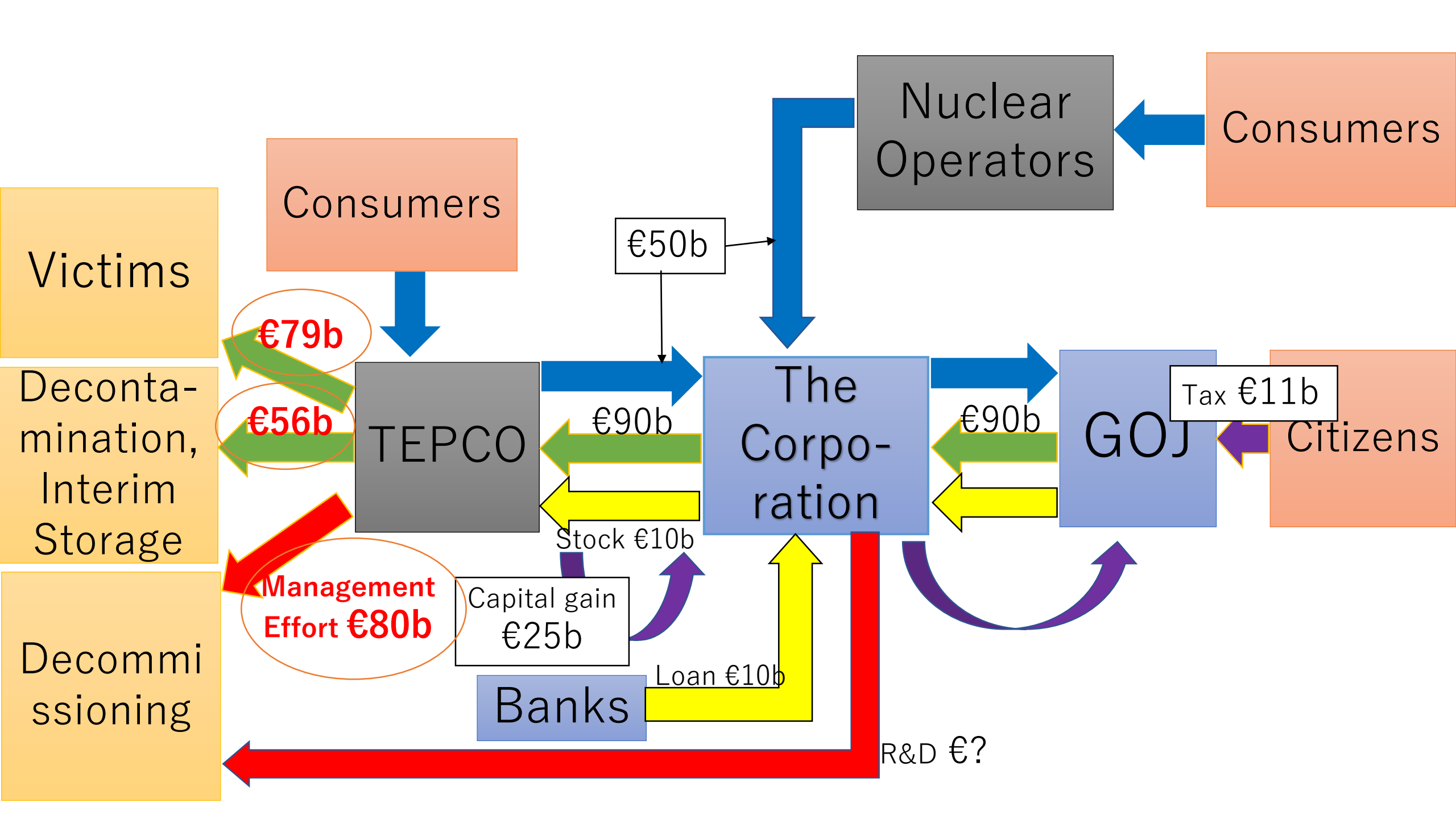
Decontamination  
€40b

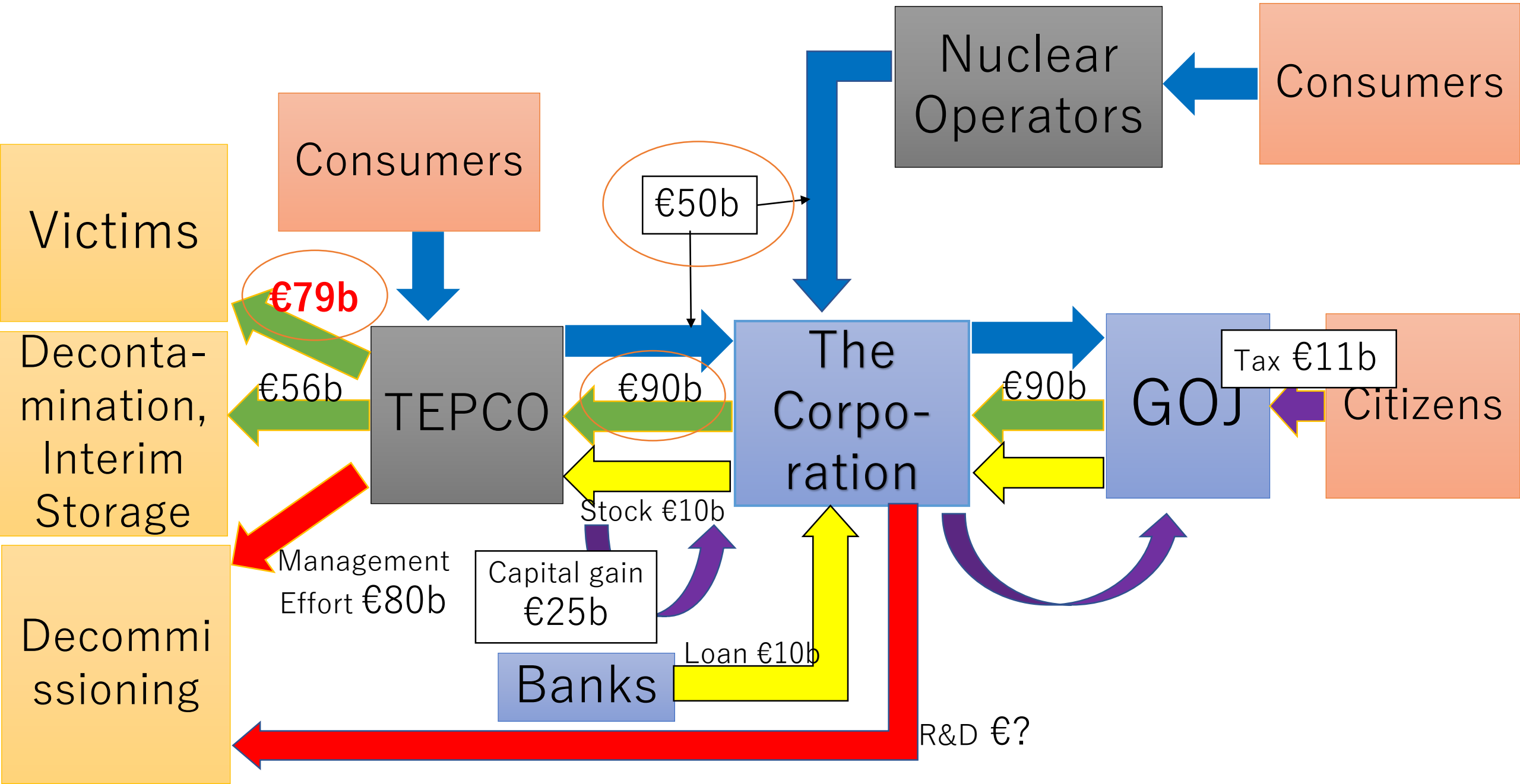
Interim Storage  
€16b

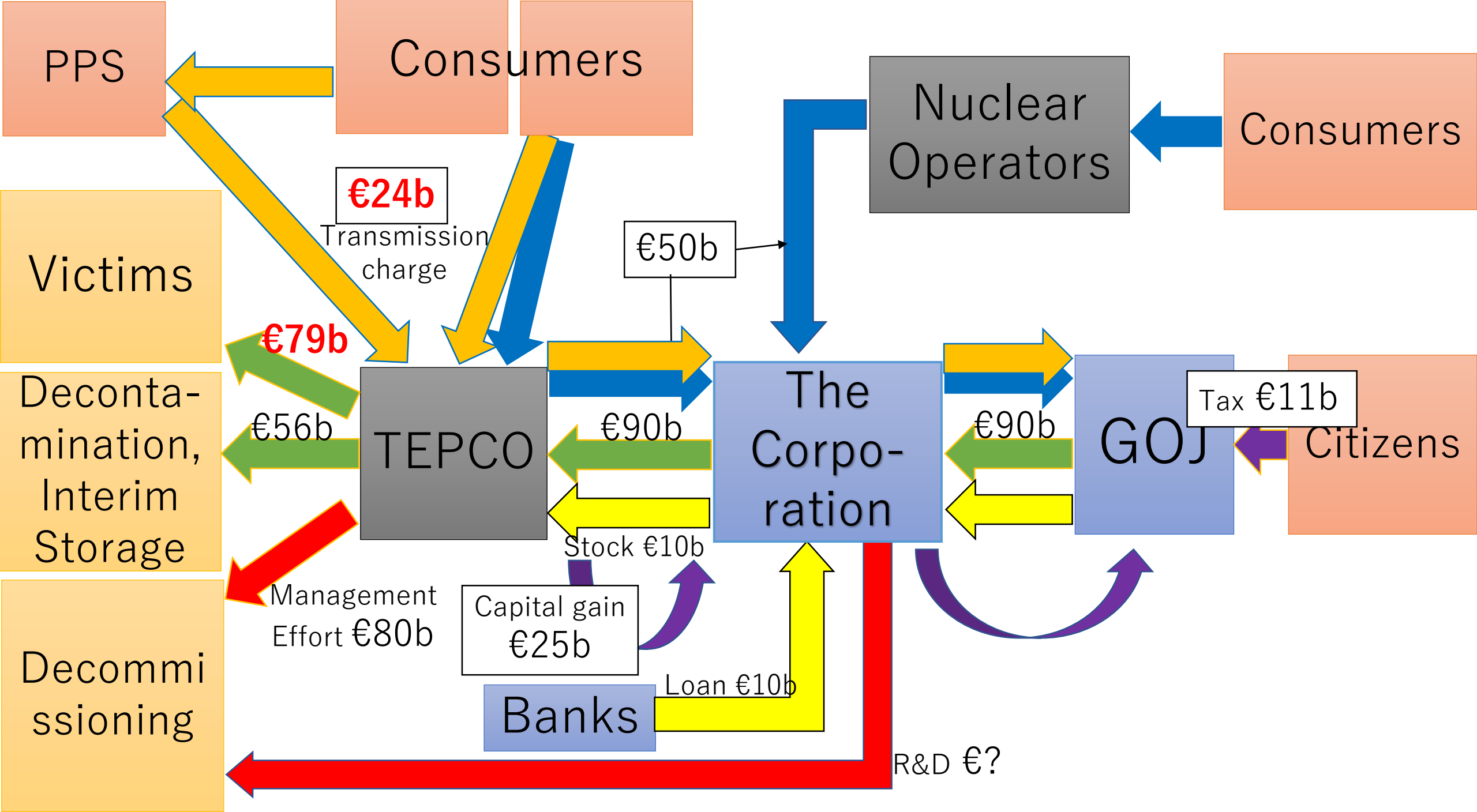
Decommission  
€80b

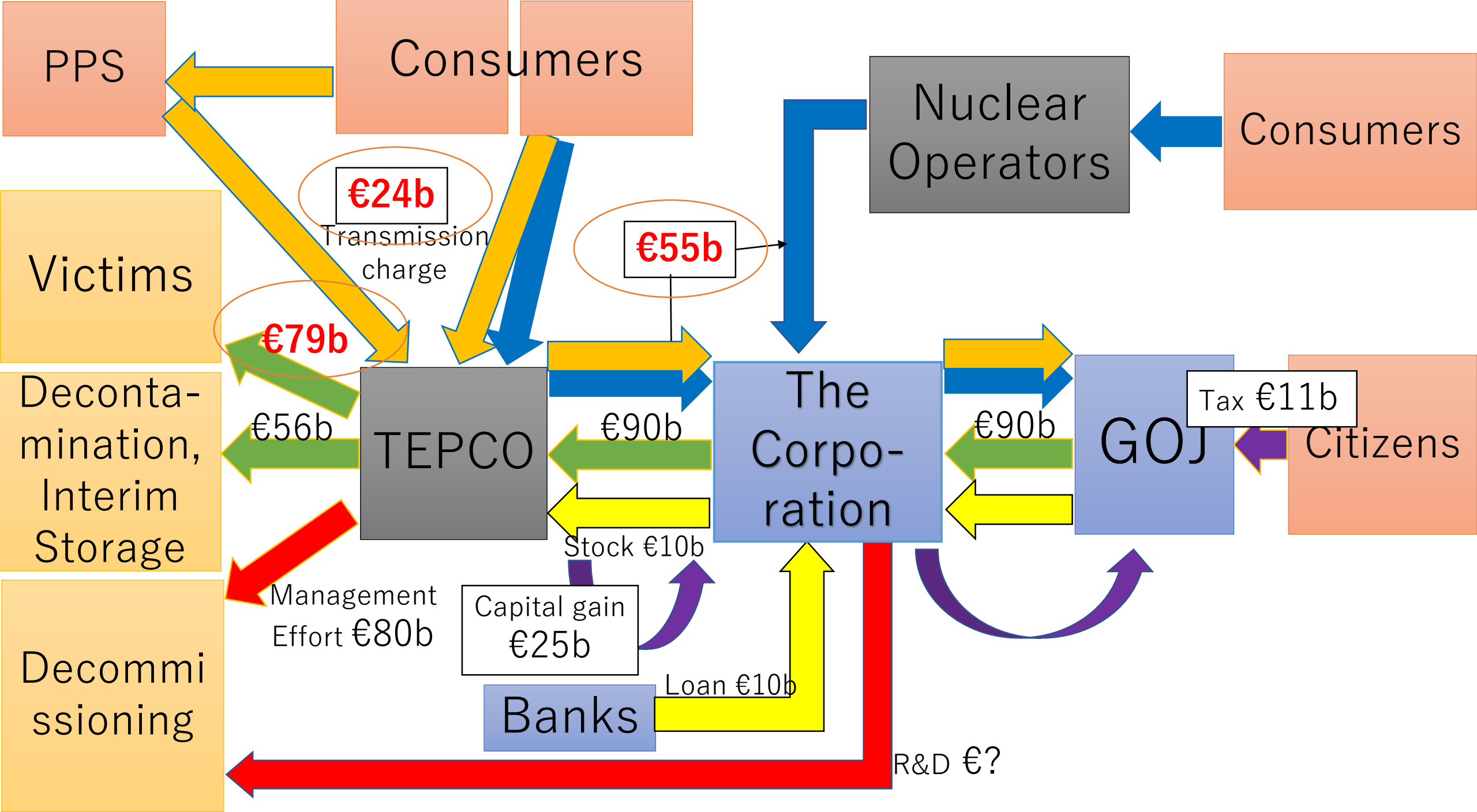




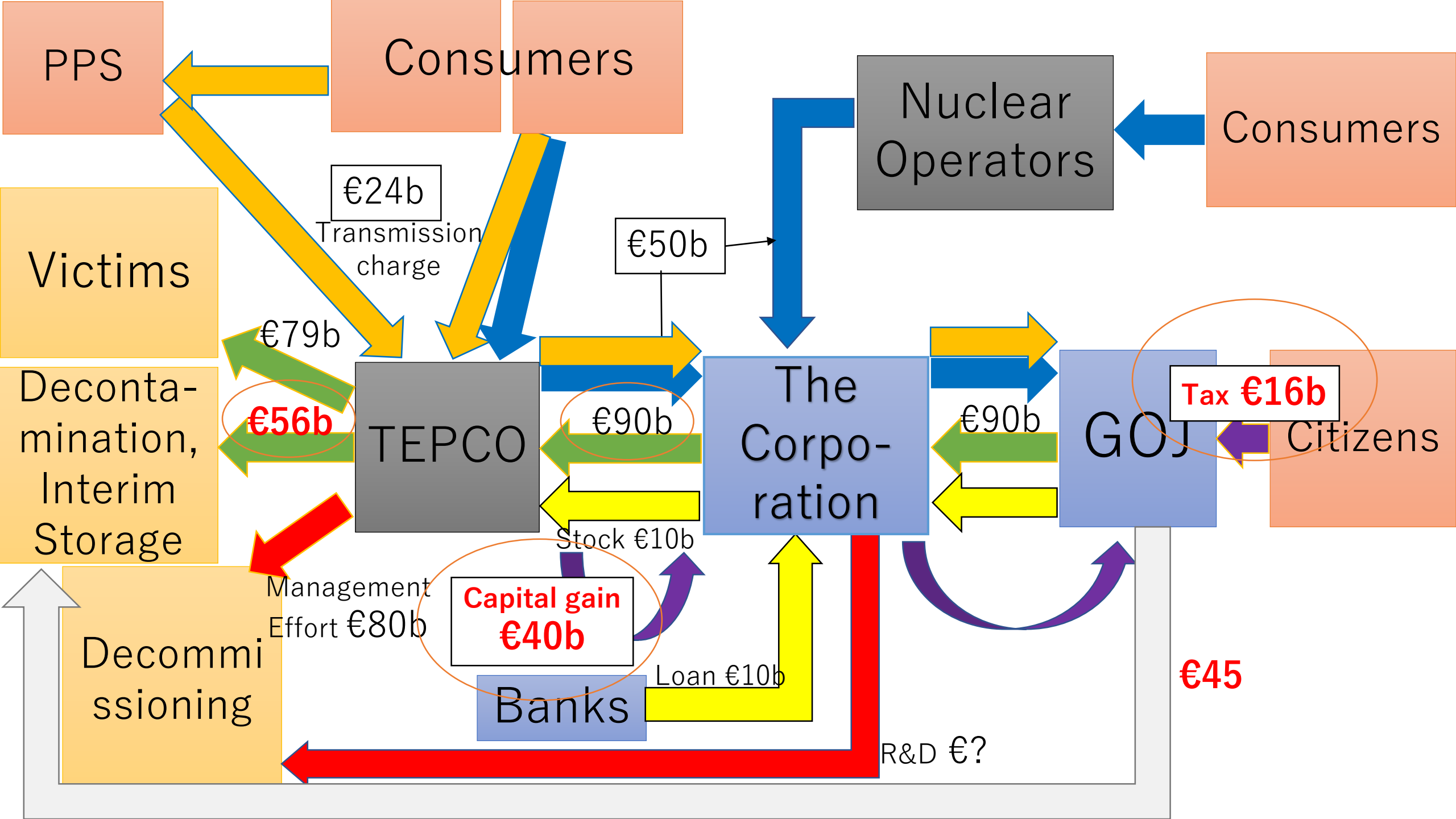










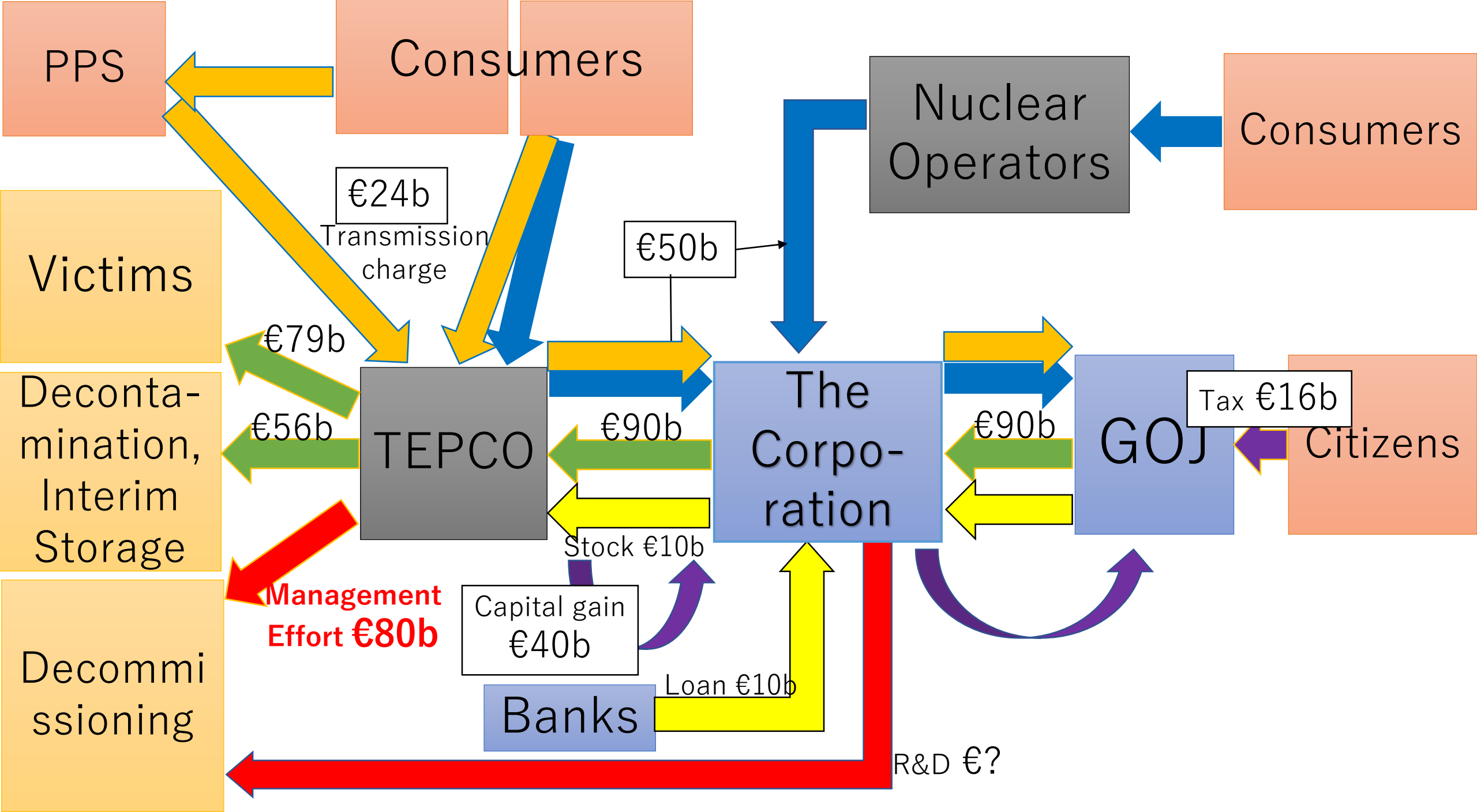


# 40 billion euro capital gain?

- The corporation holds about 50% of TEPCO's shares, paying about 10 billion euro.
- In order to get 40 billion euro capital gain, the share price must increase to 50 billion euro.
- 50 billion euro for 50% means 100 billion euro for 100%.
- 100 billion euro of TEPCO's market value?

For your information...

- E.ON's market value is 20 billion euro (2017.8.18)
- RWE's market value is 12 billion euro (2017.8.17)



# 2017

## “Revised Comprehensive Special Business Plan”

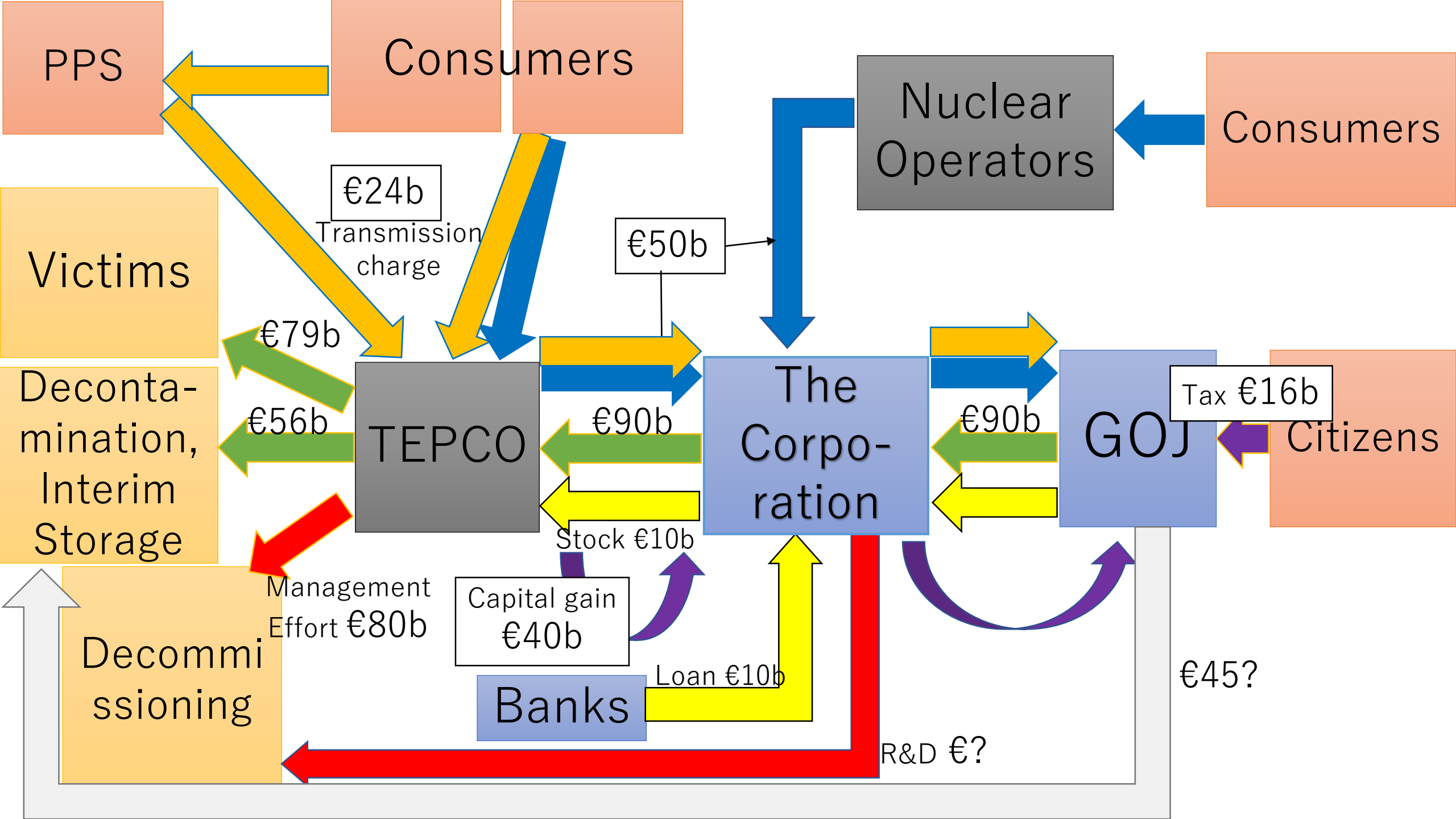
- Fuel/Thermal power business: Fuel price reductions + Fuel amount reductions + **Maintenance cost reductions** (reduction by 30%)
- Transmission and distribution business: Raise **1.2 billion euro/year** on average through rationalization
- Retail business: Make efforts in light of decline in electricity demand and increasing competition
- Nuclear business: Regain the trust of society and realize the **restart of Kashiwazaki-Kariwa nuclear power station**

# Summary

- Complex
- Irregular
- No hope

# Complex

- It is extremely difficult to grasp the whole aspect of the Fukushima cost and the way of treating it.
- This is a plan, and it goes on for 30-40 years. There is no guarantee that the plan will be neatly carried out as it is planned.
- PDCA cycle (plan-do-check-act cycle) is almost impossible since the cost information is dispersed. Some of them are disclosed in TEPCO's annual reports, but some are nowhere and some are combined together.
- It seems very likely that the next plan will show an additional increase of the cost and the chart will become more complex.



# Irregular

- These treatments of Fukushima cost are mainly based on special accounting rules.
- In an ordinary business, accident costs are extraordinary costs, but this is not the case.
- In an ordinary business, impairment must be promptly recognized, but this is not the case.
- In an ordinary business, future capital gain must not be accounted, but this is not the case.



# No hope

- Concerns over nuclear power generation and distrust of resentment at GOJ, nuclear operators and organizations that promoted the nuclear power policy, have grown among the Japanese people.
- But because of the complexity and the irregularity above, the business plan for TEPCO is neither socially acceptable nor useful for open discussion at all.
- The 215 billion euro (or more) is the economic reality of nuclear power. It is only by facing this reality properly and making open discussions that Japan will overcome Fukushima and will go forward to the next step with hope.

Thank you for your attention.