

Japan Water Agency (Incorporated Administrative Agency)

http://www.water.go.jp

1. Summary of operations implemented using FILP funds

Japan Water Agency undertakes the construction and management of dams, estuary barrages, facilities for water level adjustment for lakes and marshes, multipurpose canals and other water utilization or flood control facilities at seven river systems nationwide, including the Tone River, Ara River, Toyo River, Kiso River, Yodo River, Yoshino River and Chikugo River. The Corporation is generally engaged in large-scale, emergency projects contributing to water utilization of large areas, for the national government or local public bodies.

Of the projects implemented by the Corporation, FILP is applied only to the portion categorized as construction costs for water utilization projects. The Corporation pays those costs temporarily until the construction of water utilization facilities is completed and the beneficiary starts to gain income from water supply services.

Note: Projects not eligible for FILP include those for flood control in construction of a dam for the purpose of flood control and management service for the completed facilities.

Here, "water utilization project" is defined as a project to secure a supply of domestic, industrial and agricultural water, and flood control project" is defined as the flood control and maintenance of normal river functions of the circulatory system of basins.

2. Amount of lending under FY2019 FILP

(Unit: billion yen)

FY2019 FILP	Estimated outstanding amount of FILP lending at the end of FY2018
5.8	282.6

3. Estimated policy cost analysis of the project

(1) Policy cost (Unit: billion yen)

Category	FY2018	FY2019	Fluctuation
1. Government expenditure (subsidies, etc.)	76.0	82.6	+6.6
2. Government revenue (payments to the government, etc.)*	-	-	-
3. Opportunity cost of capital investments, etc.	-5.1	-4.1	+1.0
Total (1+2+3=policy cost(A))	70.8	78.5	+7.6
Analysis period (years)	38 years	29 years	-9 year

(2) Breakdown of policy cost by the time of the provision of funds (Unit: billion yen)

Category	FY2018	FY2019	Fluctuation
(A) Policy cost (previously cited)	70.8	78.5	+7.6
1) Opportunity cost of capital investments, etc. provided before the beginning of the analysis period	1.8	1.1	-0.7
2) Policy cost expected to be newly accrued during the analysis period	69.0	77.3	+8.3
Government expenditure (subsidies, etc.)	76.0	82.6	+6.6
Government revenue (payments to the government, etc.)*	-	-	-
Opportunity cost of surplus, etc.	-6.9	-5.2	+1.7
Opportunity cost of capital investments, etc.	-	-	-

(3) Year-to-Year comparison analysis

(Computing any fluctuation from previous year)

(Unit: billion yen)

Policy cost		FY2018	FY2019	Simple fluctuation
		Simple comparison (before adjustment)	70.8	78.5
Past year comparison (after adjustment)	1) Adjusting initial years (Analysis results after adjusting initial year to that for FY2019 analysis)		2) Adjusting assumed interest rates (Analysis results of re-estimation using assumed interest rate for FY2018)	Real fluctuation (2-1)
		59.0	78.5	+19.5

[Real fluctuation factor analysis]

○Factors behind policy cost increase

- Increase in cost due to increase in subsidies for new operations (+13.6 billion yen)

- Increase in cost due to finalization of FY2017 results and revision of FY2018 projections (+3.1 billion yen)

- Others (increase in subsidies due to increase in operation expenses) (+2.8 billion yen)

○Factors behind policy cost decrease

- None

(4) Sensitivity analysis (cases where assumptions change)

(Unit: billion yen)

(A) Policy cost (previously cited)	A case in which a fundraising interest rate is raised by 1 %	Fluctuation	Fluctuation		
			1. Government expenditure (subsidies, etc.)	2. Government revenue (payments to the government, etc.)*	3. Opportunity cost of capital investments, etc.
78.5	91.3	+12.8	-3.7	-	+16.5

(A) Policy cost (previously cited)	A case in which operation expenses are increased by 10%	Fluctuation	Fluctuation		
			1. Government expenditure (subsidies, etc.)	2. Government revenue (payments to the government, etc.)*	3. Opportunity cost of capital investments, etc.
78.5	86.6	+8.2	+8.2	-	-0.0

4. Outline of estimation and project prospect employed in the analysis

[Outline of estimation]

1) The estimation covers the projects to construct dams, canals, and other facilities. (excluding flood control projects from dam construction projects)

2) The project scale is estimated to be ¥178.3 billion for the period from FY2019 through FY2032. The project scale in FY2019 is estimated to be ¥18.7 billion. (excluding flood control projects)

3) The length of analysis period is 29 years (38 years in FY2018), during which the collection of repayments in installments from local authorities after the completion of the projects are scheduled to be completed.

4) Based on the total project cost and construction periods of the above-mentioned projects, the amount of subsidy for each project is estimated in consideration of the cost allocation and the subsidy ratio of the project.

[Project prospect]

1) Subject to the analysis are 11 projects including a canal construction project starting in FY2019 as well as ongoing projects, which will be completed by FY2032.

2) FY2019 new projects: Narita water facility reconstruction

(Project costs in the past and future)

(Unit: billion yen)

FY	Result				Estimated	Planned	Assumptions for calculation	
	2014	2015	2016	2017			2020-2032	
Project expenses	42.0	41.2	34.1	44.4	68.0	64.2	376.3	Appropriation is based on the construction period and project expenses required for the completion of the construction projects.
Project expenses subject to the analysis	24.4	23.9	14.5	20.1	20.0	18.7	159.6	

Note: The project cost subject to the analysis excludes the flood control project which is not eligible for FILP.

(Note) Components in each column may not add up to the total because of rounding.

* Government revenue (payments to the government, etc.) is booked as a negative amount. Example: -10 b. yen for 10 b. yen in payments to government, etc.

3) The beneficiaries of the water utilization projects agreed to bear the debt individually after the completion of the projects. They plan to make all repayments as the payment of principal in installments by FY2047. The amount to be repaid includes the amount already spent for projects that have not been completed.

(Typical period for which debt*)

Domestic and industrial water: 23 years / Agricultural water: 17 years

* Recovery period is to be decided by the Institution after the transition through discussion with the parties who pay the fees and obtaining the approval from the minister and competent minister of Land, Infrastructure, Transport and Tourism according to the Article 31 (municipal water) and Article 34 (agricultural water) of the cabinet order of the Japan Water Agency Act.

4) Beneficiaries (local authorities, etc.) agreed to bear the debts and prepare project plans accordingly and have never made overdue installment payments. The Agency can therefore count on the punctual repayments of debts and estimate policy costs without taking into account unrecoverable contributions.

5. Reasons for granting of subsidies, mechanism and underlying laws

Subsidies are granted in order to reduce the financial burden on beneficiaries of water supply service for domestic, industrial, and agricultural purposes.

(Underlying laws and regulations)

“Water Resources Development Promotion Act”

Article 13: The national government shall make efforts to take a measure to secure necessary funds and other measures to cover the costs of the implementation of the Basic Plan.

“Japan Water Agency Act”

Article 35: The national government may grant a subsidy to the Agency under a Cabinet Order within the budget. The Agency shall use the subsidy to pay a part of the expenses to carry out the operations specified in Clause 1 or Clause 3 of Paragraph 1 of Article 12.

The Agency receives the following subsidies from the general account of the national budget under the above-mentioned laws.

Domestic water: Subsidy for improvement of facilities to develop water resources for domestic water (Subsidization rate: one third or one half)

Industrial water: Subsidy for projects to secure industrial water (Subsidization rate: 40% or lower)

Agricultural water: Subsidy for projects to develop infrastructure for agricultural business (Subsidization rate: 70% or lower)

Note: The subsidization rate applied to the use of agricultural water in a developing area might exceed 70%.

Payment to the national treasury is stipulated in the Japan Water Agency Act as below:

“Japan Water Agency Act”

(Disposition of Reserve Funds)

Article 31: When the Agency has settled an account pursuant to the provisions of paragraph (1) or paragraph (2) of Article 44 of the Act on General Rules for the final business year of the mid-term target period prescribed in Article 29, paragraph (2), item (i) of the Act on General Rules (hereinafter referred to as the “midterm target period” in this paragraph), and there remains a reserve fund under Article 44, paragraph (1) of the Act, the portion of the amount equivalent to the amount of the reserve fund that was approved by the Minister of Land, Infrastructure, Transport and Tourism may be appropriated for the operations prescribed in Article 12 during the following mid-term target period in accordance with the mid-term plan permitted as set forth in Article 30, paragraph (1) of the Act on General Rules for the next mid-term target period (when the permission for a change pursuant to the provisions of the second sentence of the relevant paragraph is obtained, in accordance with the mid-term plan after the change).

2 If there is a surplus after subtracting the amount for funding the operations involving Paragraph 1-2-(c), 1-5, Paragraph 2 and Paragraph 3 of Article 12 out of the amount approved by the Minister of Land, Infrastructure, Transport and Tourism as provided in the previous paragraph from the amount provided in a Ministry of Land, Infrastructure, Transport and Tourism ordinance as profit involving the operations out of the reserve fund amount as provided in the previous paragraph, the Agency shall pay the surplus to the national treasury.

3 (omitted)

6. Special remarks

1) In accordance with the Japan Water Agency Act (Act No. 182 of 2002), the Water Resources Development Public Corporation was dissolved and the Japan Water Agency (Incorporated Administrative Agency) was established on October 1, 2003.

2) It was specified in the “Reorganization and Rationalization Plan for Special Public Corporations” approved at a cabinet meeting in December 2001 that a new system to have water users pay the cost in advance should be introduced and used as much as possible. The system has been implemented for some operations and reflected in the policy cost analysis.

3) It should be noted that the values of dams, irrigation channels, and other facilities are not considered in the policy cost analysis.

4) The policy cost of the Agency contributes to ensuring a stable supply of domestic and industrial water, promoting more efficient and intensive agricultural business through a stable supply of agricultural water, and enhancing the national economy and the standard of life of Japanese people.

5) Facilities constructed and managed by the Agency serve for various purposes such as providing places to local people where they like to come to relax and developing the local water circulation system by letting used agricultural water return to rivers and recharge groundwater.

6) In addition to water utilization projects, the Agency carries out flood control projects to ensure the safety of people’s lives, properties, and land. The ongoing projects for flood control such as the construction of dams is expected to save about ¥1.1 trillion (on the basis of price levels in FY2018;

Calculated by the Agency based on the materials provided by the Ministry of Land, Infrastructure and Transport) by reducing the damage that would have been caused by floods.

(Reference) Outcome and social and economic benefits of operations

1) Special features of FILP-funded projects

- a. Consistent implementation from construction of regional and multi-purpose facilities extending over several prefectures to management (domestic water, industrial water, agricultural water)
- b. Unified implementation from water resources development to aqueducts
- c. Implementation of regional water utilization projects in large urban areas (7 river systems) accounting for approximately 50% of the population, including the Tokyo metropolitan area. This covers approximately 80% of the new water supply goal in the target areas, so the Corporation projects function as a local lifeline.

2) Overview of FILP-funded projects

Total of 11 projects are under way including new construction of new water facilities such as dams and reconstruction of existing water facilities (functional recovery and enhancement).

3) Results of FILP-funded projects

With the completion of 11 projects subject to the analysis coupled with water supply projects implemented by water utilization establishments, water that can be supplied stably to agricultural land and households is approximately 188 m³/s (72 for domestic water, 11 for industrial water and 105 for agricultural water (including supply volume for reconstruction projects)).

- a. The supply volume of domestic water is 72m³/s. When converted to daily volume, it is approximately 6.22 million m³, when converted to water utilization volume per person, it will serve approximately 15 million persons.
- b. The supply volume of industrial water is 11m³/s. When converted to daily volume, it is equivalent to approximately 0.95 million m³, and when converted to supply volume utilized in the plants of 3 industries (chemical industry, steel industry and pulp, paper and paper processed manufacturing), it contributes to product shipments equivalent to approximately 1.6 trillion yen annually (estimate by the Agency).
- c. The supply volume of agricultural water of 105m³/s (busy farming season) is approximately 9.07 million m³ in daily volume, which irrigates approximately 48,000 hectares of agricultural land (equivalent to 1% of agricultural land nationwide). This contributes to stable agricultural management and the production of approximately 100,000 farming households.

(Reference) The daily supply volume is equal to 14 times (domestic water 5, industrial water 1 and agricultural water 8) of the capacity of Tokyo Dome (about 1.2 million m³).

While it is rather difficult to grasp the quantitative benefits generated from operations, as for the 11 operations (Omoi River Development, Bouso Connection Canal Facilities Emergency Reconstruction, Narita water facility reconstruction, Tone Connection Canal large-scale Earthquake Countermeasures, Kiso River System Connection Canal, Kiso River Right Bank Emergency Reconstruction, Miyoshi Branch Canal Emergency Measures, Toyogawa Canal Stage II, Kawakami Dam, Koishiwara Dam, Fukuoka Connection Canal Facility Earthquake Countermeasures), the total following benefits with respect to them, the benefit concerning

- a) The reducing effects of low or disrupted water damage by maintaining the water resource development facilities and of disrupted water damage by reinforcing the facilities to earthquake-resistant in the field of domestic water;
- b) The reduction effect of industrial water procurement costs when forced to seek water from other sources and damage risk aversion effect for the facilities by turning them into earthquake resistant; and
- c) The production and upgrade effects of agricultural products in the field of agricultural water will be estimated as follows;

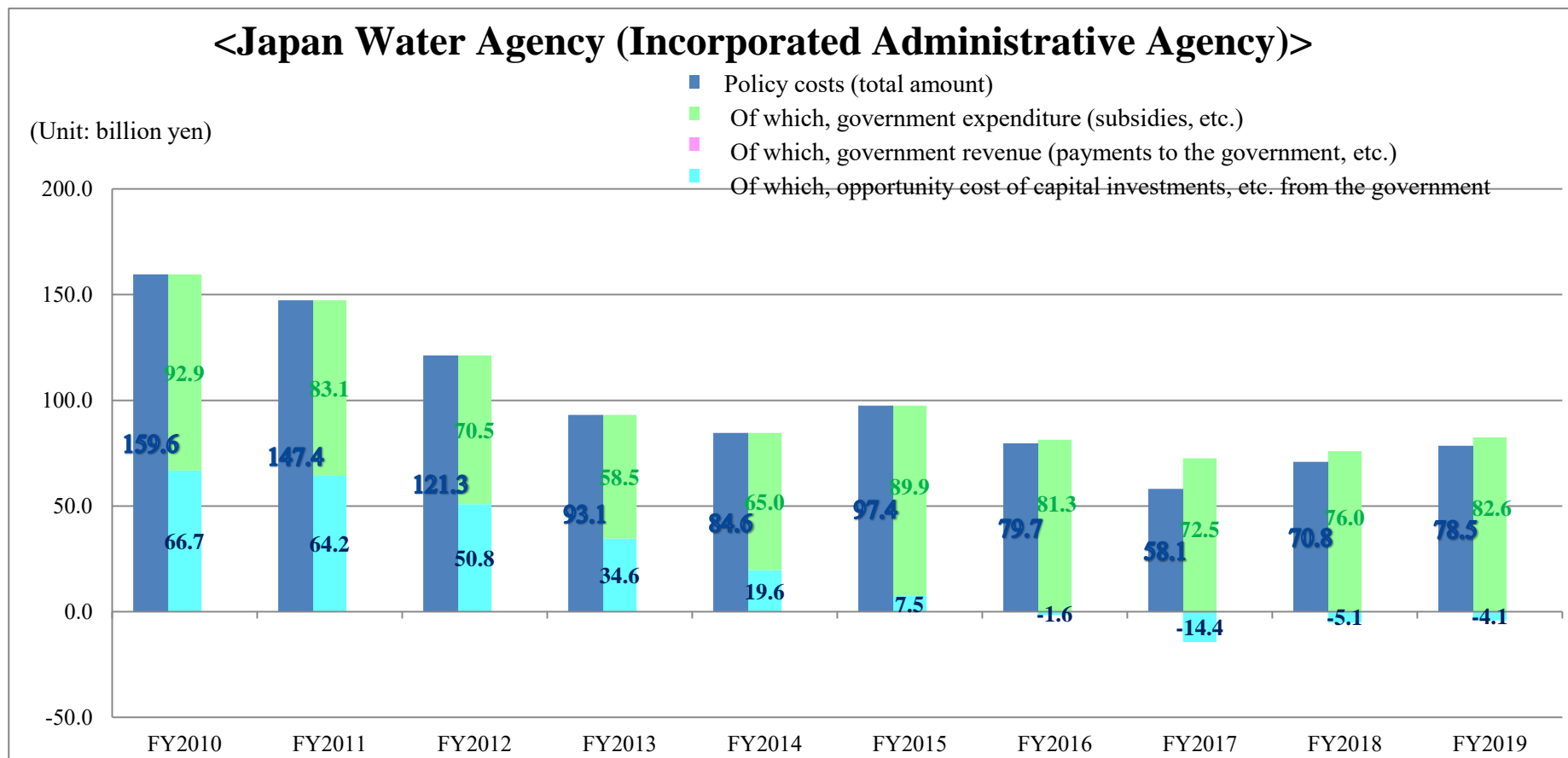
•in the case where the social discount rate is set to 4% and the longest analysis period is set to 50 years;

17,306.1 billion yen (estimated by the Agency)

•in the case where the social discount factor is set to that of the policy cost analysis;

22,812.8 billion yen (estimated by the Agency)

(Reference) Changes in Policy Costs by Component



Note: Policy costs for each fiscal year differ in assumptions including interest rates applied to estimates.

(Points)

- The total project cost of construction projects that are subject to policy cost analysis is stipulated in the project execution plan, therefore, remaining project cost decreases as construction projects proceed. Along with this, subsidies, etc. decrease, resulting in policy costs basically being on a decreasing trend.
- In FY2019, the policy costs increased as government subsidies during the analysis period increased due to the addition of a new reform project.

(Reference) Financial Statements

Balance Sheet

(Unit: million yen)

Item	End of FY2017 (Result)	End of FY2018 (Estimated)	End of FY2019 (Planned)	Item	End of FY2017 (Result)	End of FY2018 (Estimated)	End of FY2019 (Planned)
(Assets)				(Liabilities and equity)			
Current assets	91,758	59,352	46,286	Current liabilities	67,581	40,272	38,013
Cash and bank deposits	31,757	19,378	10,032	Accrued payments	18,057	16	16
Securities	21,791	2,990	700	Accrued expenses	258	131	58
Others	38,210	36,983	35,554	Others	49,266	40,124	37,938
Fixed assets	3,486,933	3,448,347	3,411,199	Fixed liabilities	3,426,309	3,385,972	3,341,784
Fixed assets for operations	2,853,025	2,787,957	2,878,441	Contra accounts for assets	3,115,143	3,094,848	3,065,099
Tangible fixed assets	2,847,175	2,782,107	2,872,591	Long-term deposit of subsidies	934	804	753
Intangible fixed assets	5,850	5,850	5,850	Water resource bonds	8,000	8,000	9,000
Fixed assets for general management	7,700	7,807	7,857	Discount on bond	0	0	0
Tangible fixed assets	7,699	7,807	7,857	Long-term loans payable	276,577	256,599	240,858
Intangible fixed assets	1	1	1	Reserves	25,633	25,691	26,030
Construction in progress	282,615	346,008	243,179	Advances received for commissioned operations	22	30	44
Construction in progress for operations	282,602	346,008	243,179	(Total liabilities)	3,493,890	3,426,243	3,379,796
Construction in progress for general management	13	-	-	Capital	5,752	5,752	5,752
Investment and other assets	343,594	306,574	281,721	Financing by the Government	5,752	5,752	5,752
Investment securities	10,717	9,246	11,530	Capital surplus	-1,680	-1,562	-1,491
Installment principal	326,107	287,079	261,549	Capital surplus	1,466	2,705	3,016
Long-term prepayment of consumption tax, etc.	5,999	9,477	7,872	Other administrative costs accumulated	-4,055	-4,267	-4,507
Security deposit and guarantee	275	275	275	Retained earnings	80,729	77,266	73,427
Other investments and other assets	496	496	496	Reserve carried forward during former medium-term target period	45,904	74,928	68,947
				Reserve fund	14,377	-	2,338
				Unappropriated income for the current year	20,448	2,338	2,142
				(Of this, gross profit)	(20,448)	(2,338)	(2,142)
				(Total equity)	84,801	81,456	77,689
Total assets	3,578,691	3,507,700	3,457,485	Total liabilities and equity	3,578,691	3,507,700	3,457,485

Notes 1. The balance sheet includes costs for projects other than those subject to the policy cost analysis.

2. Components may not add up to the total because of rounding.

Income Statement

(Unit: million yen)

Item	FY2017 (Result)	FY2018 (Estimated)	FY2019 (Planned)	Item	FY2017 (Result)	FY2018 (Estimated)	FY2019 (Planned)
(Losses)				(Profits)			
Ordinary expenses	123,260	126,002	128,209	Ordinary income	119,524	122,868	124,682
Cost of management activities	34,364	38,051	36,606	Revenues from commissioned work	386	2,738	2,559
Cost of entrusted activities	381	2,738	2,559	Revenues from subsidies, etc.	31,420	36,126	33,725
Cost of donation-based projects	2	-	-	Donations	2	-	-
Disaster reconstruction operation cost	44	1,197	-	Disaster reconstruction operation revenue	44	1,197	-
Construction project expenses	2,008	398	5,669	Revenues from management miscellaneous sources	1,038	787	784
General and administrative expenses	4,232	4,138	4,279	Reversal of asset collateral subsidies	75,850	74,039	74,562
Depreciation cost of fixed assets for operations	73,797	73,828	74,377	Reversal of collateral subsidies for construction in progress	1,706	25	5,259
Cost of eliminating fixed assets for operations	2,108	259	226	Income regarding return for provision for bonuses	-	-	943
Finance expenses	6,324	5,390	4,492	Financial income	9,064	7,957	6,849
Miscellaneous losses	-	2	2	Miscellaneous income	14	-	-
Temporary losses	9	23	943	Temporary profits	17,890	23	943
Loss on sale of fixed assets	7	1	-	Gain on sales of fixed assets	0	11	-
Payments to the national treasury	2	22	-	Reversal of asset collateral subsidies	9	12	-
Provision for bonuses accompanying accounting standard revision	-	-	943	Gain on return of public portion of employee pension funds to the Government	17,881	-	-
				Income regarding return for provision for bonuses	-	-	943
Gross profit	20,448	2,338	2,142	Reversal of reserve carried forward during former medium-term target period	6,303	5,472	5,670
Total	143,716	128,363	131,295	Total	143,716	128,363	131,295

Notes 1. The income statement includes costs for projects other than those subject to the policy cost analysis.

2. Components may not add up to the total because of rounding.