Fatal and non-fatal accidents in electric utility service in Japan in 1999-2021

electric utility service industry Code No.011601

Type of accidents in electric utility service in 1999-2021

Type of accidents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Type of accidents
fall from height	13	9	10	11	13	9	15	9	16	10	10	8	9	17	10	11	18	8	11	12	9	10	15	263	fall from height
falling to same level	6	7	24	10	11	16	5	11	14	7	14	8	14	3	11	9	6	7	11	16	14	7	20	251	falling to same level
crash	4	1	4	4	4	3	3	2	2	2	1	4	2		3	3	7	2	2	1	1	5	1	61	crash
struck by flying or falling object	1		4	1		1	2	1	4	1	1	2		1	1		2	1		4	1	1		29	struck by flying or falling object
collapse		1	2			2		2		1			1		2				1			1	1	14	collapse
crashed by	4	1	1	2	3	1	3		1	1		3	3		1	4	1	1	2		1	1		34	crashed by
caught in/between	2	3	7	2	1	1	3	3	3	3	4		5	4	2	2	1	3	3	4	5	2	1	64	caught in/between
cut		1	2	1	1	2	2	1		2	1	1	1		2	2	2		1			1	1	24	cut
injury to the sole of the foot																			1			1		2	injury to the sole of the foot
drown								1					1		1									3	drown
contact to high/low-temperature	3	2	4	2	4	2		2	2	2	1	4	3	1	2	1	1	2	1	2	1	5	1	48	contact to high/low-temperature

contact to harmful substance												2		2								1	1	6	contact to harmful substance
electric shock	2	2	2	2	2	1	5	1	1	1		1	1	6	1			1	1	3		2	1	36	electric shock
explosion					5								3											8	explosion
burst																						1		1	burst
fire						1	1										1							3	fire
traffic accident (public road)	14	12	9	13	22	14	11	5	15	4	3	4	4	7	5	5	2	4	8	9	5	2	2	179	traffic accident (public road)
traffic accident (others)																				1				1	traffic accident (others)
reaction to motion/improper motion	3	3	8	3	2	4	10	11	5	11	3	3	4	5	3	3	4	7	5	4	7	3	11	122	reaction to motion/improper motion
others		2		3		2	2	4	7	1		3	2	2	1	1		4	3	4		25	71	137	others
unclassifiable	1	1	2		1		1																	6	unclassifiable
total	53	45	79	54	69	59	63	53	70	46	38	43	53	48	45	41	45	40	50	60	44	68	126	1,292	total

Causal agents (large) of fatal and non-fatal accidents in electric utility service in 1999-2021

Causal (L) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Causal (L) agents
machine	2		4	1	2	1	4	2	2	1	4		2	6		2	4	3	3		1	1	2	47	machine
crane, conveying																									crane,

machine	17	13	14	15	23	15	12	7	18	10	8	7	12	11	8	6	3	7	11	15	8	8	6	254	conveying machine
other equipment	10	9	12	7	18	8	15	10	10	10	4	9	8	11	10	5	9	2	12	13	5	9	9	215	other equipment
temporary buildings, establishments	12	14	24	16	22	19	16	19	21	14	16	17	13	14	12	17	18	13	13	16	15	15	18	374	temporary buildings, establishments
substance, material		1	2	3		3	3		4	2		2	4	1	1		1	1		1		3	2	34	substance, material
load			1			2	2	2	2	1		1		1	2		1	1		1	1		1	19	load
environment	6	5	10	7	2	7	5	6	3	3	3	3	11	1	9	8	7	6	4	10	11	7	9	143	environment
others	6	3	12	5	2	4	6	7	10	5	3	4	3	3	3	3	2	7	7	4	3	25	79	206	others
total	53	45	79	54	69	59	63	53	70	46	38	43	53	48	45	41	45	40	50	60	44	68	126	1,292	total

Causal agents (middle) of fatal and non-fatal accidents in electric utility service in 1999-2021

Causal (M) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Causal (M) agents
engine					1		1		1		1			2										6	engine
power transmission mechanism			1	1												1		1						4	power transmission mechanism
woodworking machine			1								1					1			1				1	5	woodworking machine

construction machine	2		1			1	3	1	1	1	1		1	3			3		2		1	1	1	23	construction machine
metal manufacturing machine					1																			1	metal manufacturing machine
general machine			1					1			1		1	1			1	1						7	general machine
mobile silviculture machine																		1						1	mobile silviculture machine
crane									1				1	1								2		5	crane
conveying machine	3	1	5	1	1	2	2		1	5	4	1	4	4	2		1	2	3	5	2	2	2	53	conveying machine
vehicle	14	12	9	14	22	13	10	7	16	5	4	6	7	6	6	6	2	5	8	10	6	4	4	196	vehicle
pressure vessel	1		1								1	1			1				1	1				7	pressure vessel
chemical facilities																									chemical facilities
welding equipment																									welding equipment
kiln, caldron																									kiln, caldron
electric equipment	4	4	6	3	7	1	6	3	3	3	1	5	3	5	2		1	1	1	4	1	5	2	71	electric equipment
human power machine, tools	2	1		1	1	2	3	3		2	1			2	3	3	2		2	1	1	1	1	32	human power machine, tools

tools	3	1	5	3	5	5	5	3	5	3	1	3	3	2	2	1	5	1	7	7	3	3	6	82	tools
other equipments, facilities		3			5		1	1	2	2			2	2	2	1	1		1					23	other equipments, facilities
temporary buildings, establishments	12	14	24	16	22	19	16	19	21	14	16	17	13	14	12	17	18	13	13	16	15	15	18	374	temporary buildings, establishments
hazards, harmful substances				1		2			1			2	3									1		10	hazards, harmful substances
materials		1	2	2		1	3		3	2			1	1	1		1	1		1		2	2	24	materials
load			1			2	2	2	2	1		1		1	2		1	1		1	1		1	19	load
natural environment	6	5	10	7	2	7	5	6	3	3	3	3	11	1	9	8	7	6	4	10	11	7	9	143	natural environment
other causal agent	4	2	3	1	1	1	4	1	6	1		1		1	1			2	2	2	1	25	71	130	other causal agent
no causal agent	2	1	8	3		3	2	6	3	4	3	3	3	2	2	3	2	4	5	2	2		7	70	no causal agent
unclassifiable			1	1	1				1									1					1	6	unclassifiable
total	53	45	79	54	69	59	63	53	70	46	38	43	53	48	45	41	45	40	50	60	44	68	126	1,292	total

Causal agents (small) of fatal and non-fatal accidents in electric utility service in 1999-2021

Causal (S) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Causal (S) agents

engine					1		1		1		1			2										6	engine
power transmission mechanism			1													1		1						3	power transmission mechanism
circular sawing machine																									circular sawing machine
band sawing machine																									band sawing machine
wood planer machine																									wood planer machine
hollow chisel mortiser, wood borer																									hollow chisel mortiser, wood borer
chamfering machine, router, woodworking milling machine																									chamfering machine, router, woodworking milling machine
chain saw			1								1					1			1				1	5	chain saw
other woodworking machines																									other woodworking machines
leveling, transporting or loading machine																							1	1	leveling, transporting or loading machine
excavating machine							1																	1	excavating machine
foundation work machine																									foundation work machine

hardening machine																									hardening machine
demolition machine																									demolition machine
vehicle for high lift work							2	1	1		1		1	3			3		2		1	1		16	vehicle for high lift work
other construction machines			1							1														2	other construction machines
lathe																									lathe
drill press, milling machine																									drill press, milling machine
grinding machine, buffing machine					1																			1	grinding machine, buffing machine
power press																									power press
forging pressure hammer																									forging pressure hammer
shearing machine																									shearing machine
other metal manufacturing machines																									other metal manufacturing machines
centrifugal machine																									centrifugal machine
mixer, grinder											1													1	mixer, grinder
roll machine (except printingroll machine)																									roll machine (except printingroll machine)
injection molding																									injection molding

machine																									machine
food manufacturing machine																									food manufacturing machine
printing machine																									printing machine
industrial robot																									industrial robot
other general power machines			1					1					1	1			1	1						6	other general power machines
felling machine																		1						1	felling machine
mobile logging machine																									mobile logging machine
skyline yarding machine																									skyline yarding machine
other mobile silviculture machine																									other mobile silviculture machine
crane																									crane
mobile crane									1				1	1								2		5	mobile crane
derrick crane																									derrick crane
elevator, lift																									elevator, lift
cargo lifting appliance																									cargo lifting appliance
gondola																									gondola
lumberyard equipment, logging cableway																									lumberyard equipment, logging cableway

simple skyline yarding equipment																									simple skyline yarding equipment
other powered crane																									other powered crane
truck			4		1		2			3	2		2	3	1			1	1	1	1	1	1	24	truck
forklift												1												1	forklift
railway equipment																									railway equipment
conveyor			1						1	2	2		2	1	1		1	1	2	2	1		1	18	conveyor
loader																									loader
straddle carrier																									straddle carrier
rough terrain hauler																									rough terrain hauler
other powered conveying machines																				2		1		3	other powered conveying machines
cars, bus, motorcycle			9		22		10	6	15	5	3	6	7	6	6	5	2	4	8	10	5	2	3	134	cars, bus, motorcycle
railway vehicle																									railway vehicle
other vehicles								1	1		1					1		1			1	2	1	9	other vehicles
boiler			1									1			1				1					4	boiler
pressure vessel																									pressure vessel
other pressure vessels											1									1				2	other pressure vessels
chemical facilities																									chemical facilities
gas welding																									gas welding

equipment																									equipment
arc welding equipment																									arc welding equipment
other welding equipment																									other welding equipment
kiln, caldron																									kiln, caldron
industrial dryer																									industrial dryer
other kiln, caldron																									other kiln, caldron
transmission			2		1		2	1	1					3	2			1	1	3	1	4	1	23	transmission
electric power facilities			4		6		4	1	2	2	1	5	3	2			1					1	1	33	electric power facilities
other electrical equipment								1		1										1				3	other electrical equipment
human power cranes							1																	1	human power cranes
human power hauling equipment					1		2	1			1				2	2	1				1		1	12	human power hauling equipment
human power machine														1										1	human power machine
hand tool								2		2				1	1	1	1		2	1		1		12	hand tool
ladder			5		4		5	2	3	1	1	3		2	2	1	5	1	6	6	1	2	5	55	ladder
slinging tool					1					1														2	slinging tool
other tools								1	2	1			3						1	1	2	1	1	13	other tools
other equipment,																									other equipment,

facilities					5		1	1	2	2			2	2	2	1	1		1					20	facilities
scaffolding			1					2	1			1			1								1	7	scaffolding
timbering																									timbering
stairs, landing stage			6		6		4	5	8	3	2	5	2	4	3	6	5	5	3	2	2	4	4	79	stairs, landing stage
opening							1		1					1	1									4	opening
roof, beam, haze, crossbeam, principal rafter					3									1				1		1	1			7	roof, beam, haze, crossbeam, principal rafter
working platform, boot board			4		1		2	1	1	1			2				1		3	2				18	working platform, boot board
passage			5		6		3	5	9	4	12	4	3	4	4	7	4	6	5	7	7	3	11	109	passage
building, establishment			6		4		3	3	1	3	1	4	5	4	3	2	6	1	2	2	2	6	2	60	building, establishment
other temporary buildings, establishments			2		2		3	3		3	1	3	1			2	2			2	3	2		29	other temporary buildings, establishments
explosive substance																									explosive substance
inflammable substance																									inflammable substance
inflammable gas									1				3											4	inflammable gas
harmful substance												2										1		3	harmful substance
radiation																									radiation
other hazards, harmful substances																									other hazards, harmful substances

metal material			1						2	1			1	1								2		8	metal material
lumber, bamboo			1				1										1						1	4	lumber, bamboo
stone, sand, substance									1	1														2	stone, sand, substance
other materials							2								1			1		1			1	6	other materials
load							2	2	1	1		1			2		1	1		1	1			13	load
machine/equipment as load			1						1					1									1	4	machine/equipment as load
natural ground, rock			3		1		2	3		2	1		1		3	2	1	2	2		4	3	2	32	natural ground, rock
standing tree			2		1				1		1		1		3	3	2			5		1		20	standing tree
water								1					3		1									5	water
abnormal environment																							1	1	abnormal environment
high/cold temperature environment												1	1		1	1	1	2	1	1	1	3	1	14	high/cold temperature environment
other environments			5				3	2	2	1	1	2	5	1	1	2	3	2	1	4	6		5	46	other environments
other causal agent			3		1		4	1	6	1		1		1	1			2	2	2	1	25	71	122	other causal agent
no causal agent			8				2	6	3	4	3	3	3	2	2	3	2	4	5	2	2		7	61	no causal agent
unclassifiable			1		1				1									1					1	5	unclassifiable
total			79		69		63	53	70	46	38	43	53	48	45	41	45	40	50	60	44	68	126	1,081	total

Workers age of fatal and non-fatal accidents in electric utility service in 1999-2021

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Age
19 years old or less	3	1	1	1	1	1						1	3				1		1			2	1	17	19 years old or less
20-29	16	14	28	13	21	14	20	8	16	9	6	8	13	8	8	11	6	7	9	14	10	7	17	283	20-29
30-39	8	5	19	14	17	20	9	17	19	14	8	12	7	8	9	6	6	2	9	9	5	10	17	250	30-39
40-49	8	11	14	10	13	13	15	13	14	10	8	13	7	15	14	12	18	15	14	13	8	16	33	307	40-49
50-59	16	13	14	15	17	10	17	12	19	9	11	8	21	13	11	9	9	14	14	17	15	26	42	352	50-59
60 years old or more	2	1	3	1		1	2	3	2	4	5	1	2	4	3	3	5	2	3	7	6	7	16	83	60 years old or more
total	53	45	79	54	69	59	63	53	70	46	38	43	53	48	45	41	45	40	50	60	44	68	126	1,292	total

Workers' number of workplace of fatal and non-fatal accidents in electric utility service in 1999-2021

Workers scale	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Workers scale
9 workers or less	3	3	7	2	4	1	7	2	3	3	2	1	3	3	2		6	6	2	7	6	5	6	84	9 workers or less
10-29	6	5	7	9	4	6	4	3	6	7	4	4	6	4	4	5	5	6	7	11	8	7	8	136	10-29
30-49	4	4	5	3	9	4	7	6	7	5	8	4	6	3	5	2	8	2	5	8	2	9	8	124	30-49
50-99	10	10	15	13	12	17	11	9	16	9	7	7	7	6	8	9	9	10	15	13	11	35	38	297	50-99
100-299	26	19	38	23	24	22	20	22	26	18	15	20	15	25	21	17	15	9	18	19	15	8	56	491	100-299
300 workers or more	4	4	7	4	16	9	14	11	12	4	2	7	16	7	5	8	2	7	3	2	2	4	10	160	300 workers or more
total	53	45	79	54	69	59	63	53	70	46	38	43	53	48	45	41	45	40	50	60	44	68	126	1,292	total

Month of fatal and non-fatal accidents in electric utility service in 1999-2021

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Month
January	5	3	8	3	7	4	12	3	2	2	5	9	3	3	8	2	6	3	5	8	6	3	4	114	January
February	4	5	9	3	5	2	2	4	8	7	1	5	3	7	6	2	6	4	2	3	6	1	5	100	February
March	7	4	6	5	4	5	5	9	4	4	4	2	9	2	2	5	1	2	6	5	2	2	9	104	March
April	3	1	5	1	5	8	8	2	8	4	3	1	6	3	2	1	1	6	4	3	3	4	11	93	April
May	3	3	3	6	5	5	4	5	6	4		2	6		7	2	3	1	4	8	3	3	7	90	May
June	8	5	5	3	5	3	4	4	4	3	6	4	6	10	1	3	2	4	6	6	3	8	12	115	June
July	4	6	5	5	9	5	3	1	4	4	3	1	4	5	2	4	4		3	6	5	5	8	96	July
August	5	6	6	5	7	5	8	6	5	4	3	1	3	1	2	4	6	6	2	3	4	5	38	135	August
September	3	1	6	7	7	5	5	5	6	5	3	6	6	5	2	1	6	1	4	1	2	2	15	104	September
October	5	4	11	6	4	6	4	6	7	2	3	2	2	3	3	7	8	2	7	8	4	4	5	113	October
November	2	3	7	6	4	6	1	4	11	4	4	3	3	9	6	2	1	8	2	5	2	3	7	103	November
December	4	4	8	4	7	5	7	4	5	3	3	7	2		4	8	1	3	5	4	4	28	5	125	December
total	53	45	79	54	69	59	63	53	70	46	38	43	53	48	45	41	45	40	50	60	44	68	126	1,292	total

Prefecture of fatal and non-fatal accidents in electric utility service in 1999-2021

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Prefecture
Hokkaido	2	2	1		5		3	2	4	4	6	3	3	2	1	2	4	1	4	4	2	3	4	62	Hokkaido
Aomori	1						1	1	3					1	2	1	1			1	2	1	3	18	Aomori
Iwate			2									1		1					1	1			1	7	Iwate

Miyagi							1	3	3					3		2	3	1	1		1	1	5	24	Miyagi
Akita			2				2		1	1		1				1	1	2	2	1			1	15	Akita
Yamagata		2	1					1					1		1		1		1	1		2		11	Yamagata
Fukushima		1	6		4		3	4	3	3		1	7	4	3	4	5	4	3		3	2	9	69	Fukushima
Ibaraki	1	2	1		1				2	1	1		1	1	1	1			1	2	1			17	Ibaraki
Tochigi			1		2		1			1	1		1		1	1					1			10	Tochigi
Gunma		1	1				1	1	2	1	2	1	3		2		1	1		1				18	Gunma
Saitama	3	2	1				1	1	1	1	1		2		1	1						1	1	17	Saitama
Chiba			2		6		4	3	4		1		1			1	2	1	3	2	1	1		32	Chiba
Tokyo	2	2	8		2		1	2	1	1	1	3		3		1		2	2	2		3		36	Tokyo
Kanagawa	1	3	5		3			2	1	4	1	2	3	1	2		2	1	3	2	1	1	3	41	Kanagawa
Niigata		1	2		3			1	3	2	1	2	2		1				1	1	3	2	5	30	Niigata
Toyama	2	3	5		1		2	2		2		3		1	2	4		2		1	1	2	3	36	Toyama
Ishikawa	3	1	1					1	2		1									2	1	1	1	14	Ishikawa
Fukui			3		1		2				2		3	1		4		3		3	1			23	Fukui
Yamanashi					2		1	1	1										1					6	Yamanashi
Nagano			1					3	5		1		1	5	1	2	1		2	3	1	2	2	30	Nagano
Gifu	1				2		1			2		1		2	2	1		1	1	2	3	1	1	21	Gifu
Shizuoka	3	4	2		2			1	2	2	2	1	1	2	1	1	2	3	3	2	1	2	3	40	Shizuoka
Aichi	7	2	5		3		3	5	4	2	2	4	4	5	5	6	4	2	2	4		1	2	72	Aichi
Mie					7		1	1		1		3	1	2	1	1	3	2	2	1	1	1		28	Mie
Shiga								1				1			1						2			5	Shiga
Kyoto	3	1			2		2	1	1				2		1		1				1	1	3	19	Kyoto

Osaka	4	2	1		4		2	2	6	2	3	1	1	3	2		1	1	6	5	2	1	40	89	Osaka
Hyogo	5	1	3		3		5		4	2	1		1		2	1	1		2	2	3	1	13	50	Hyogo
Nara	1		2				1	1			2		1	1		2		1		2		1	1	16	Nara
Wakayama					2		1		1	1	1		1	2	2	1		1			1		1	15	Wakayama
Tottori		1	1						1				1			1	1						1	7	Tottori
Shimane			1					1				1					1	1						5	Shimane
Okayama					1				4	1									1				1	8	Okayama
Hiroshima	1	1	1		2		4	3	3		1	3	2	4					2	3	1	26	2	59	Hiroshima
Yamaguchi		1			1			2		2		2	3								1	1	2	15	Yamaguchi
Tokushima		1										1					1	2				1		6	Tokushima
Kagawa			1				1	1				1	1	1	3				1					10	Kagawa
Ehime	1		1				1			2	1	1		1	1		1						1	11	Ehime
Kochi		1	1		1		2		1					1			1	2		1				11	Kochi
Fukuoka	3	2	4		6		6	1	1	4	3		1		2		2	1	1	2	4	2	4	49	Fukuoka
Saga	1	1					1				1	1	1		2		1		1					10	Saga
Nagasaki		2	2		1		1	1	1		1				1				1	1	2	1	1	16	Nagasaki
Kumamoto	4		1				1			1			2	1		1		1		1		2	5	20	Kumamoto
Oita		1	2		1		1	1				1	1			1	2			3	1	1	1	17	Oita
Miyazaki	2	1	3				4			1					1		2	3		2	1	2	3	25	Miyazaki
Kagoshima		2	3				1	2	3	1	1	4							2	1	1	1	3	25	Kagoshima
Okinawa	2	1	2		1		1	1	2	1			1					1		1				14	Okinawa
total	53	45	79		69		63	53	70	46	38	43	53	48	45	41	45	40	50	60	44	68	126	1,179	total

Fatal and non-fatal accidents mean fatal and non-fatal injuries and occupational diseases with work absence of 4 days and more. Data of 2011 year include fatal and non-fatal accidents caused by Great East Japan Earthquake in 2011.

Data sources: https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.htm (MHLW, Japan)

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Fatal accidents in electric utility service in Japan in 1999-2021

electric utility service industry Code No.011601

Type of fatal accidents in electric utility service in 1999-2021

Type of accidents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Type of accidents
fall from height									1			1	1									1	1	5	fall from height
falling to same level																									falling to same level
crash								1																1	crash
struck by flying or falling object								1							1									2	struck by flying or falling object
collapse		1																				1		2	collapse
crashed by																									crashed by
caught in/between																									caught in/between
cut																									cut

injury to the sole of the foot																									injury to the sole of the foot
drown								1					3											4	drown
contact to high/low-temperature																	1							1	contact to high/low-temperature
contact to harmful substance																									contact to harmful substance
electric shock						1																		1	electric shock
explosion																									explosion
burst																									burst
fire																									fire
traffic accident (public road)	1	1																						2	traffic accident (public road)
traffic accident (others)																									traffic accident (others)
reaction to motion/improper motion															1									1	reaction to motion/improper motion
others												1	1											2	others
unclassifiable																		1						1	unclassifiable
total	1	2				1		3	1			2	5		2		1	1				2	1	22	total

Causal agents (large) of fatal accidents in electric utility service in 1999-2021

Causal (L) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Causal (L) agents
machine																									machine
crane, conveying machine	1	1						1																3	crane, conveying machine
other equipment						1						1	1		1									4	other equipment
temporary buildings, establishments									1													1		2	temporary buildings, establishments
substance, material																									substance, material
load								1																1	load
environment		1						1					3		1		1					1		8	environment
others												1	1					1					1	4	others
total	1	2				1		3	1			2	5		2		1	1				2	1	22	total

Causal agents (middle) of fatal accidents in electric utility service in 1999-2021

Causal (M) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Causal (M) agents

engine																									engine
power transmission mechanism																									power transmission mechanism
woodworking machine																									woodworking machine
construction machine																									construction machine
metal manufacturing machine																									metal manufacturing machine
general machine																									general machine
mobile silviculture machine																									mobile silviculture machine
crane																									crane
conveying machine																									conveying machine
vehicle	1	1						1																3	vehicle
pressure vessel																									pressure vessel
chemical facilities																									chemical facilities
welding equipment																									welding equipment

kiln, caldron																									kiln, caldron
electric equipment						1							1		1									3	electric equipment
human power machine, tools																									human power machine, tools
tools												1												1	tools
other equipments, facilities																									other equipments, facilities
temporary buildings, establishments									1													1		2	temporary buildings, establishments
hazards, harmful substances																									hazards, harmful substances
materials																									materials
load								1																1	load
natural environment		1						1					3		1		1					1		8	natural environment
other causal agent																									other causal agent
no causal agent												1	1					1						3	no causal agent
unclassifiable																							1	1	unclassifiable

total	1	2				1		3	1			2	5		2		1	1				2	1	22	total

Causal agents (small) of fatal accidents in electric utility service in 1999-2021

Causal (S) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Causal (S) agents
engine																									engine
power transmission mechanism																									power transmission mechanism
circular sawing machine																									circular sawing machine
band sawing machine																									band sawing machine
wood planer machine																									wood planer machine
hollow chisel mortiser, wood borer																									hollow chisel mortiser, wood borer
chamfering machine, router, woodworking milling machine																									chamfering machine, router, woodworking milling machine
chain saw																									chain saw
other woodworking machines																									other woodworking machines

leveling, transporting or loading machine																									leveling, transporting or loading machine
excavating machine																									excavating machine
foundation work machine																									foundation work machine
hardening machine																									hardening machine
demolition machine																									demolition machine
vehicle for high lift work																									vehicle for high lift work
other construction machines																									other construction machines
lathe																									lathe
drill press, milling machine																									drill press, milling machine
grinding machine, buffing machine																									grinding machine, buffing machine
power press																									power press
forging pressure hammer																									forging pressure hammer
shearing machine																									shearing machine
other metal manufacturing machines																									other metal manufacturing machines

centrifugal machine																									centrifugal machine
mixer, grinder																									mixer, grinder
roll machine (except printingroll machine)																									roll machine (except printingroll machine)
injection molding machine																									injection molding machine
food manufacturing machine																									food manufacturing machine
printing machine																									printing machine
industrial robot																									industrial robot
other general power machines																									other general power machines
felling machine																									felling machine
mobile logging machine																									mobile logging machine
skyline yarding machine																									skyline yarding machine
other mobile silviculture machine																									other mobile silviculture machine
crane																									crane
mobile crane																									mobile crane
derrick crane																									derrick crane
elevator, lift																									elevator, lift

cargo lifting appliance																									cargo lifting appliance
gondola																									gondola
lumberyard equipment, logging cableway																									lumberyard equipment, logging cableway
simple skyline yarding equipment																									simple skyline yarding equipment
other powered crane																									other powered crane
truck																									truck
forklift																									forklift
railway equipment																									railway equipment
conveyor																									conveyor
loader																									loader
straddle carrier																									straddle carrier
rough terrain hauler																									rough terrain hauler
other powered conveying machines																									other powered conveying machines
cars, bus, motorcycle	1	1						1																3	cars, bus, motorcycle
railway vehicle																									railway vehicle
other vehicles																									other vehicles
boiler																									boiler

pressure vessel																									pressure vessel
other pressure vessels																									other pressure vessels
chemical facilities																									chemical facilities
gas welding equipment																									gas welding equipment
arc welding equipment																									arc welding equipment
other welding equipment																									other welding equipment
kiln, caldron																									kiln, caldron
industrial dryer																									industrial dryer
other kiln, caldron																									other kiln, caldron
transmission						1							1		1									3	transmission
electric power facilities																									electric power facilities
other electrical equipment																									other electrical equipment
human power cranes																									human power cranes
human power hauling equipment																									human power hauling equipment
human power machine																									human power machine

hand tool																									hand tool
ladder												1												1	ladder
slinging tool																									slinging tool
other tools																									other tools
other equipment, facilities																									other equipment, facilities
scaffolding																									scaffolding
timbering																									timbering
stairs, landing stage																									stairs, landing stage
opening																									opening
roof, beam, haze, crossbeam, principal rafter																									roof, beam, haze, crossbeam, principal rafter
working platform, boot board																									working platform, boot board
passage																						1		1	passage
building, establishment									1															1	building, establishment
other temporary buildings, establishments																									other temporary buildings, establishments
explosive substance																									explosive substance
inflammable substance																									inflammable substance

inflammable gas																									inflammable gas
harmful substance																									harmful substance
radiation																									radiation
other hazards, harmful substances																									other hazards, harmful substances
metal material																									metal material
lumber, bamboo																									lumber, bamboo
stone, sand, substance																									stone, sand, substance
other materials																									other materials
load								1																1	load
machine/equipment as load																									machine/equipment as load
natural ground, rock																									natural ground, rock
standing tree															1							1		2	standing tree
water								1					3											4	water
abnormal environment																									abnormal environment
high/cold temperature environment																	1							1	high/cold temperature environment
other environments		1																						1	other environments
other causal agent																									other causal agent

no causal agent												1	1					1						3	no causal agent
unclassifiable																							1	1	unclassifiable
total	1	2				1		3	1			2	5		2		1	1				2	1	22	total

Workers age of fatal accidents in electric utility service in 1999-2021

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Age
19 years old or less																									19 years old or less
20-29		2				1							2		1									6	20-29
30-39								1																1	30-39
40-49	1														1			1						3	40-49
50-59								2	1			2	3				1					2	1	12	50-59
60 years old or more																									60 years old or more
total	1	2				1		3	1			2	5		2		1	1				2	1	22	total

Workers' number of workplace of fatal accidents in electric utility service in 1999-2021

Workers scale	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Workers scale
9 workers or less		1													1									2	9 workers or less
10-29												1												1	10-29
30-49								1	1								1							3	30-49
50-99		1																				1	1	3	50-99

100-299	1					1		1					3		1							1		8	100-299
300 workers or more								1				1	2					1						5	300 workers or more
total	1	2				1		3	1			2	5		2		1	1				2	1	22	total

Month of fatal accidents in electric utility service in 1999-2021

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Month
January															1							1		2	January
February								1					1		1									3	February
March													3											3	March
April												1						1						2	April
May																							1	1	May
June																									June
July	1																					1		2	July
August									1								1							2	August
September								2																2	September
October		1				1																		2	October
November																									November
December		1										1	1											3	December
total	1	2				1		3	1			2	5		2		1	1				2	1	22	total

Prefecture of fatal accidents in electric utility service in 1999-2021

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Prefecture
Hokkaido																									Hokkaido
Aomori																									Aomori
Iwate																									Iwate
Miyagi																									Miyagi
Akita																									Akita
Yamagata		1																						1	Yamagata
Fukushima													3											3	Fukushima
Ibaraki																									Ibaraki
Tochigi																									Tochigi
Gunma									1															1	Gunma
Saitama																									Saitama
Chiba																									Chiba
Tokyo																									Tokyo
Kanagawa	1																							1	Kanagawa
Niigata															1									1	Niigata
Toyama																							1	1	Toyama
Ishikawa																									Ishikawa
Fukui													1					1						2	Fukui
Yamanashi																									Yamanashi
Nagano																									Nagano
Gifu																									Gifu

Shizuoka																						1		1	Shizuoka
Aichi								3																3	Aichi
Mie																									Mie
Shiga																									Shiga
Kyoto																									Kyoto
Osaka																									Osaka
Hyogo																									Hyogo
Nara																									Nara
Wakayama																									Wakayama
Tottori																									Tottori
Shimane																									Shimane
Okayama																									Okayama
Hiroshima												1	1									1		3	Hiroshima
Yamaguchi																									Yamaguchi
Tokushima		1																						1	Tokushima
Kagawa																									Kagawa
Ehime												1			1		1							3	Ehime
Kochi						1																		1	Kochi
Fukuoka																									Fukuoka
Saga																									Saga
Nagasaki																									Nagasaki
Kumamoto																									Kumamoto
Oita																									Oita

Miyazaki																									Miyazaki
Kagoshima																									Kagoshima
Okinawa																									Okinawa
total	1	2				1		3	1			2	5		2		1	1				2	1	22	total

Data sources: https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.htm (MHLW, Japan)

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