

**TOSHIBA**

Leading Innovation >>>

# Briefing on Major Projects in the Energy & Infrastructure Segment

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**Representative Executive Officer and  
Corporate Senior Executive Vice President**

**November 27, 2015**

**TOSHIBA CORPORATION**

# Forward-looking Statements

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- This presentation contains forward-looking statements concerning future plans, strategies and performance of Toshiba Group.
- These forward-looking statements are not historical facts, rather they are based on management's assumptions and beliefs in light of the economic, financial and other data currently available.
- Since Toshiba Group promotes business in various market environments in many countries and regions, its activities are subject to a number of risks and uncertainties that, without limitation, relate to economic conditions, worldwide mega-competition in the electronics business, customer demand, foreign currency exchange rates, tax rules, regulations and other factors. Toshiba therefore wishes to caution readers that actual results might differ materially from our expectations.
- Toshiba's fiscal year (FY) runs from April 1 to March 31. 1H refers to the first six months (April-September), 2H refers to the latter six months (October-March); 1Q refers to the first quarter (April-June); 2Q refers to the second quarter (July-September); 3Q refers to the third quarter (October-December); and 4Q refers to the fourth quarter (January-March).
- All figures are consolidated totals for the 12 months, unless otherwise stated.

# Today's Agenda

- **About Westinghouse**
  - **Goodwill Impairment Testing**
  - **Business Outline**
- **Landis+Gyr**  
**(Social Infrastructure Systems Company)**
- **NuGen Project, UK**  
**(Power Systems Company)**
- **Freeport Liquefaction Tolling Agreement**  
**(Power Systems Company)**

# Today's Agenda

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  - **Goodwill Impairment Testing**
  - **Business Outline**
- **Landis+Gyr**  
(Social Infrastructure Systems Company)
- **NuGen Project, UK**  
(Power Systems Company)
- **Freeport Liquefaction Tolling Agreement**  
(Power Systems Company)

# Trends in Consolidated Business Results in the Nuclear Power Business (After Westinghouse Acquisition/Operating Income)

hundred million yen

			FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015/1H	Cumulative
		Fuel	486	1,334	966	1,301	1,314	1,178	1,353	1,261	1,368	801	11,362
		Service	752	1,524	1,681	1,693	1,642	1,737	1,837	2,088	2,132	932	16,019
		Others	-2	-14	-12	-14	-26	-43	-27	-21	-16	-5	-179
	Westinghouse		1,237	2,844	2,635	2,979	2,930	2,872	3,164	3,328	3,485	1,728	27,201
	Other than Westinghouse		1,477	1,474	1,764	2,290	2,403	2,433	2,044	1,750	2,051	916	18,602
	Consolidated Adjustment		0	0	-7	-26	-75	-175	-264	-220	-105	-34	-907
	Fuel, Service		2,714	4,318	4,392	5,243	5,258	5,130	4,944	4,858	5,431	2,610	44,897
	Construction (Westinghouse)		74	294	773	894	1,007	939	793	763	747	325	6,609
	Net Sales			2,788	4,612	5,165	6,137	6,265	6,069	5,737	5,621	6,178	2,935
		Fuel	28	110	38	63	117	69	83	34	129	-7	664
		Service	69	94	125	125	127	121	132	51	168	82	1,094
		Others	-46	-33	-50	-56	-58	-41	-28	-5	-56	-28	-401
	Westinghouse		50	171	113	131	186	150	187	81	242	47	1,358
	(ROS)		4%	6%	4%	4%	6%	5%	6%	2%	7%	3%	5%
	Other than Westinghouse		168	186	229	282	335	297	57	-243	-185	61	1,187
	(ROS)		11%	13%	13%	12%	14%	12%	3%	-14%	-9%	7%	6%
	Fuel, Service		218	357	342	413	521	447	244	-162	57	108	2,545
	(ROS)		8%	8%	8%	8%	10%	9%	5%	-3%	1%	4%	6%
	Construction (Westinghouse)		-36	-63	-9	3	14	5	-97	-196	-86	-40	-505
	(ROS)		-49%	-22%	-1%	0%	1%	1%	-12%	-26%	-11%	-12%	-8%
Operating Income (Loss) (*2)			182	293	333	416	535	452	147	-358	-29	68	2,039
(ROS)			7%	6%	6%	7%	9%	7%	3%	-6%	0%	2%	4%

For Reference: Westinghouse's

Independent Operating Income  
(million US\$)

\$26M \$104M \$129M \$182M \$285M \$237M -\$866M -\$573M \$150M \$36M -\$290M

(\*1) "Automation" until FY2012, "Engineering·Equipment·Large Construction" and "Automation·Field Service" after FY2013 is included in Service in the above figure.

(\*2) There was no impairment effect in consolidated results. The above reference numbers of Westinghouse's independent operating income reflect goodwill impairments shown below

- FY2012 -\$926 million (new construction -\$677 million, automation -\$249 million)
- FY2013 -\$394 million (new construction)

**TOSHIBA** \* All figures are consolidated totals after acquisition of Westinghouse, so FY2006 figure is for the total of 6 months from October 2006.

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# Trends in Consolidated Business Results in the Nuclear Power Business (After Westinghouse Acquisition/EBITDA)

hundred million yen

			FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015/1H	Cumulative
		Fuel	486	1,334	966	1,301	1,314	1,178	1,353	1,261	1,368	801	11,362
		Service	752	1,524	1,681	1,693	1,642	1,737	1,837	2,088	2,132	932	16,019
		Others	-2	-14	-12	-14	-26	-43	-27	-21	-16	-5	-179
		Westinghouse	1,237	2,844	2,635	2,979	2,930	2,872	3,164	3,328	3,485	1,728	27,201
		Other than Westinghouse	1,477	1,474	1,764	2,290	2,403	2,433	2,044	1,750	2,051	916	18,602
		Consolidated Adjustment	0	0	-7	-26	-75	-175	-264	-220	-105	-34	-907
		Fuel, Service	2,714	4,318	4,392	5,243	5,258	5,130	4,944	4,858	5,431	2,610	44,897
		Construction (Westinghouse)	74	294	773	894	1,007	939	793	763	747	325	6,609
Net Sales			2,788	4,612	5,165	6,137	6,265	6,069	5,737	5,621	6,178	2,935	51,506
		Fuel	54	161	82	120	178	136	151	113	203	31	1,228
		Service	95	147	172	176	181	167	183	112	234	114	1,583
		Others	-37	-14	-26	-33	-30	-11	4	46	6	5	-91
		Westinghouse	111	294	228	263	328	293	338	271	443	150	2,720
		(% against Net Sales)	9%	10%	9%	9%	11%	10%	11%	8%	13%	9%	10%
		Other than Westinghouse	180	198	244	304	364	338	102	-219	-165	67	1,413
		(% against Net Sales)	12%	13%	14%	13%	15%	14%	5%	-13%	-8%	7%	8%
		Fuel, Service	291	492	473	567	692	631	440	52	278	217	4,133
		(% against Net Sales)	11%	11%	11%	11%	13%	12%	9%	1%	5%	8%	9%
		Construction (Westinghouse)	-17	-25	25	34	36	25	-75	-170	-59	-25	-250
		(% against Net Sales)	-23%	-8%	3%	4%	4%	3%	-9%	-22%	-8%	-8%	-4%
EBITDA (*3)			274	467	498	601	728	656	365	-118	219	192	3,883
(% against Net Sales)			10%	10%	10%	10%	12%	11%	6%	-2%	4%	7%	8%

(\*3) EBITDA = Operating Income + Depreciation Cost

# Past Impairment Test (FY2012)

million US\$

Conducted evaluation with advice from external advisors and discussion with our audit firm

## (Step1)

Compare carrying value (book value) with fair value (market value) for each business

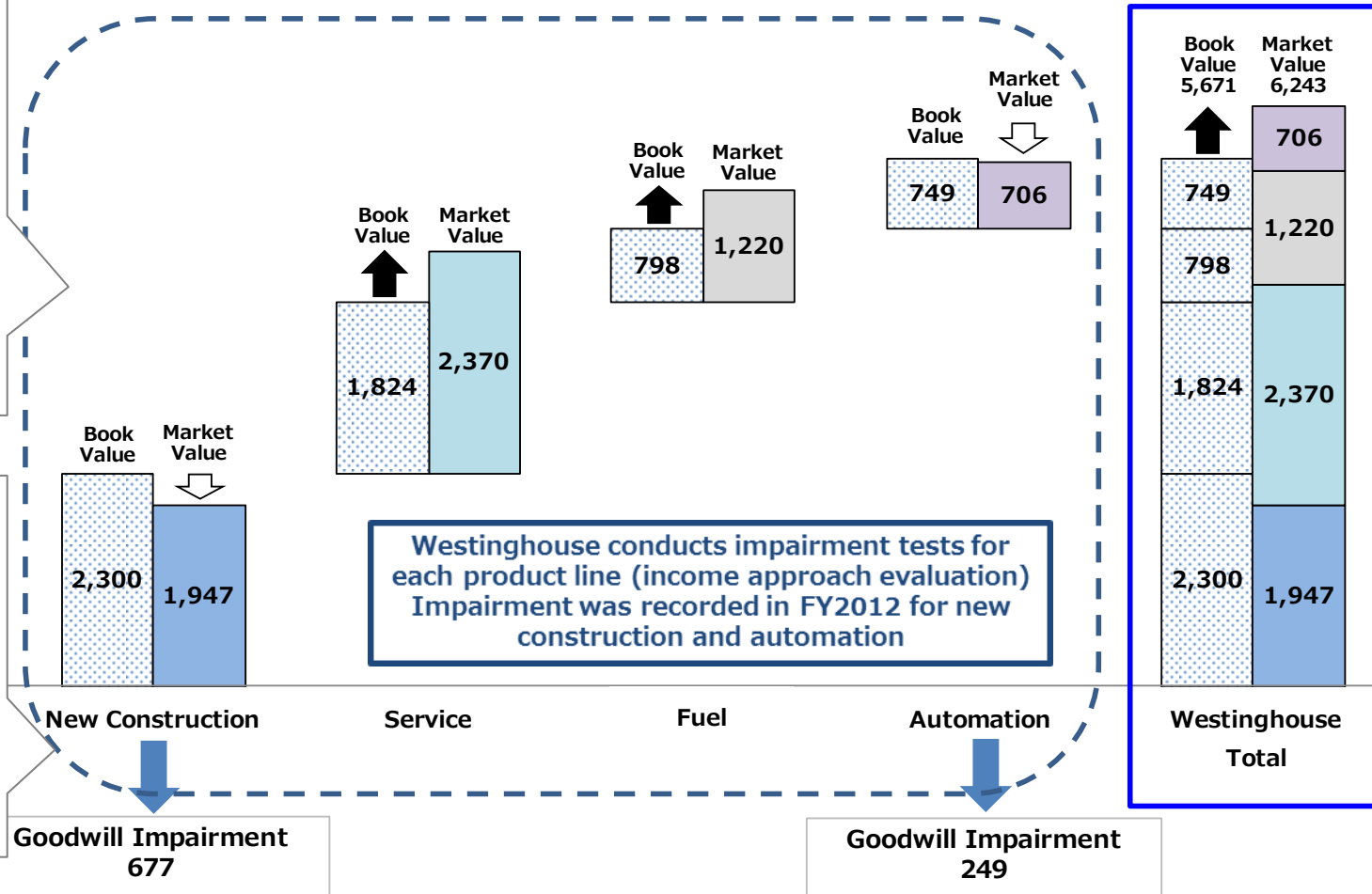
Impairment is considered when market value is lower than book value  
⇒ to (Step 2)

## (Step 2)

Reevaluate the value of goodwill accounted at the acquisition

⇒ Record impairment for the difference with goodwill book value

Carrying Value (Book Value) < Fair Value (Market Value)  
[Income Approach Evaluation] ⇒ No Impairment



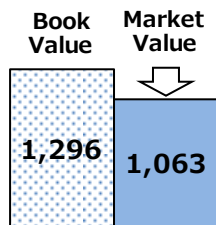
# Past Impairment Test (FY2013)

Conducted evaluation with advice from external advisors and discussion with our audit firm

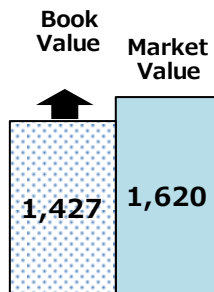
million US\$

Carrying Value (Book Value \*No Impairment as a whole) < Fair Value (Market Value)  
[continue Income Approach Evaluation] ⇒ No Impairment

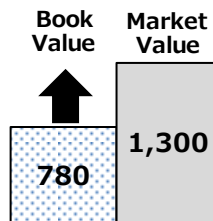
Westinghouse conducts impairment tests for each product line (combine income approach and market approach  
\*considering delay risk of new orders)  
Impairment was recorded in FY2013 for new construction



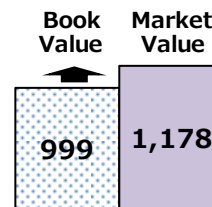
New Construction



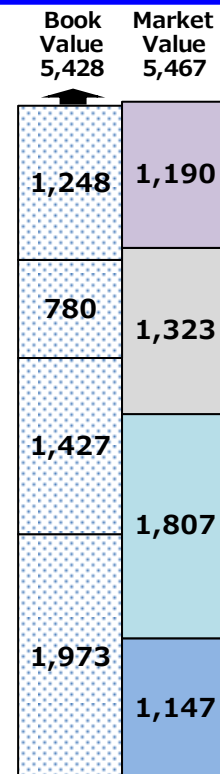
Engineering Equipment  
Large Construction



Fuel



Automation  
Field Service



Westinghouse  
Total

Goodwill Impairment  
394

Reason not combining market approach in Westinghouse total evaluation

Although fluctuating factors were found, such as delays in orders for new construction, it was unnecessary to conduct market approach evaluation, as stable fuel and service businesses are the main sources of income as a whole, and the volatility in its cash flow plan is not high.



# Reinforcement of Global Business System

## Integrate Nuclear Energy Systems & Services Div. and WEC Div.

- Respond quickly to changes in business environment and absorb customer needs
- Integrate products and services to maximize synergies more than ever

- Integrate global business strategies (increase order opportunities and wins)
- Pursue efficient business operation (mutual utilization and integration of resources and know-how)

Share  
Construction  
Knowledge



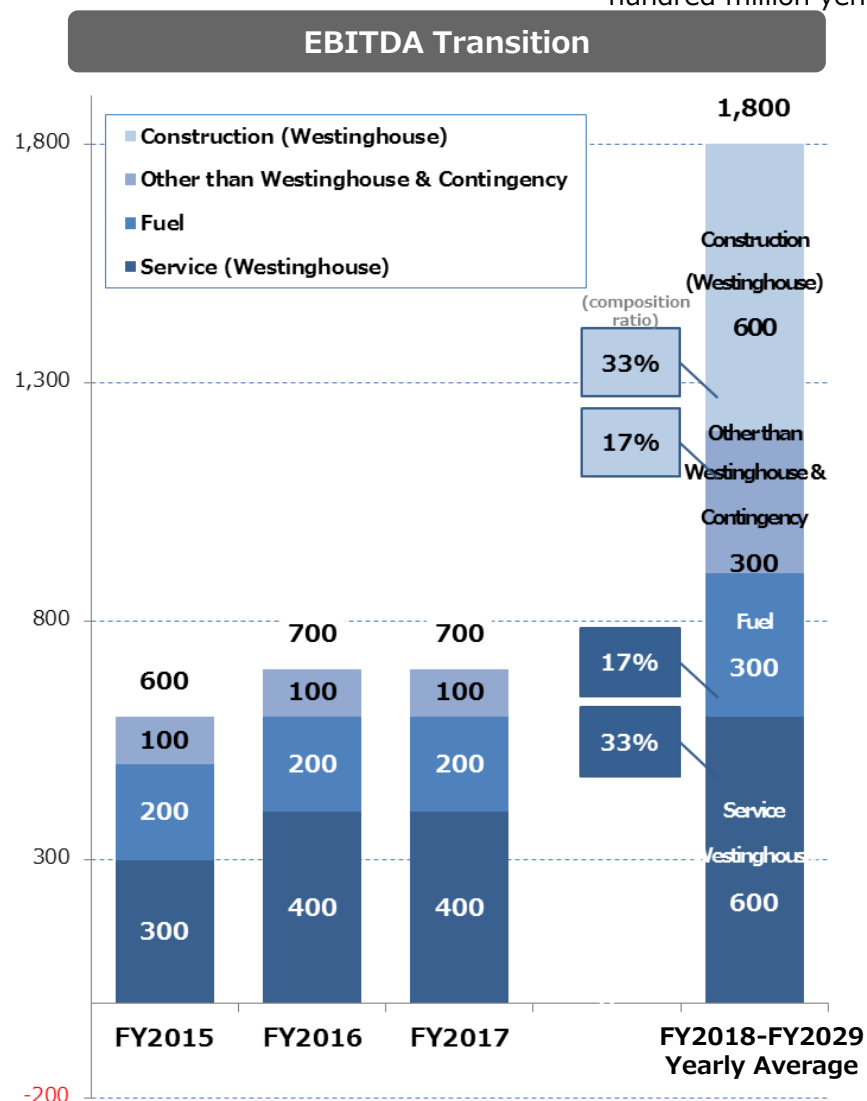
Cooperation in  
Manufacturing



# Nuclear Power Business Plan (FY2014 Consolidated Impairment Test)

hundred million yen

	FY2015	FY2016	FY2017	FY2018- Yearly Average	%
Fuel	1,500	1,500	1,500	1,600	11%
Service	2,500	2,600	2,500	4,400	31%
Others	0	0	-200	0	0%
Westinghouse	4,000	4,100	3,800	6,000	43%
Other than Westinghouse	1,900	2,100	2,100	2,600	19%
Consolidated Adjustment	0	-100	-100	-500	-4%
Fuel, Service	5,900	6,100	5,800	8,100	58%
Construction (Westinghouse)	700	400	600	5,900	42%
<b>Net Sales</b>	<b>6,600</b>	<b>6,500</b>	<b>6,400</b>	<b>14,000</b>	<b>100%</b>
Fuel	200	200	200	200	13%
Service	300	300	300	600	40%
Others	-100	-100	-100	-100	-7%
Westinghouse	400	400	400	700	47%
(ROS)	10%	10%	11%	12%	
Other than Westinghouse	100	200	200	200	13%
(ROS)	5%	10%	10%	8%	
Contingency and others	-100	-100	-100	0	0%
Fuel, Service	400	500	500	900	60%
(ROS)	7%	8%	9%	11%	
Construction (Westinghouse)	-100	-100	0	600	40%
(ROS)	-14%	-25%	0%	10%	
<b>Operating Income (Loss)</b>	<b>300</b>	<b>400</b>	<b>500</b>	<b>1,500</b>	<b>100%</b>
<b>(ROS)</b>	<b>5%</b>	<b>6%</b>	<b>8%</b>	<b>11%</b>	
Fuel	200	200	200	300	17%
Service	400	400	400	600	33%
Others	-100	0	0	0	0%
Westinghouse	500	600	600	900	50%
Other than Westinghouse	200	200	200	300	17%
Contingency and others	-100	-100	-100	0	0%
Fuel, service	600	700	700	1,200	67%
Construction (Westinghouse)	0	0	0	600	33%
<b>EBITDA</b>	<b>600</b>	<b>700</b>	<b>700</b>	<b>1,800</b>	<b>100%</b>



# Latest Impairment Test (FY2014)

Conducted evaluation with advice from external advisors and discussion with our audit firm

© Base Date of Impairment Test : October 1, 2014 (both Toshiba and Westinghouse)

billion US\$

Toshiba
Global Nuclear Power Business

Westinghouse			
Fuel	Engineering Equipment Large Construction	Automation Field Service	New Construction

[Order Base : 64 units/15 years]

	\$1.5bn	\$1.2bn	\$1.0bn
\$0.6bn	\$1.3bn	\$0.9bn	\$0.8bn
Pass (qualitative)	Pass	Pass	Pass

Fair Value
Carrying Value
Evaluation Result

- Method for evaluating fair value for each product line: combination of income approach and market approach (Toshiba uses income approach only from the past)
- Fuel product line did not conduct quantitative evaluation as the consideration of impairment is confirmed to be unnecessary by qualitative evaluation.

Fair Value (invested capital base)
Carrying Value (invested capital base)
Evaluation Result
Goodwill Balance

<b>More than 810.0 billion yen</b> Upper limit of discount rate is 9.0%
<b>About 730.0 billion yen</b> [Acquisition Amount: \$5.4bn]
<b>Pass</b>
<b>323.5 billion yen</b> (as of Sept. 2014)

	Toshiba Consolidated	Westinghouse
Orders for 15 years	46 Units (14% market share)	64 Units (20% market share)
Permanent Growth Rate	0%	2.5%

■ Using the base number stressed as conservative above, it is evaluated by income approach as volatility of its cash flow plan is not high as a whole.

- The above consolidated fair value and carrying value is expressed in invested capital base where about 430.0 billion (the same amount) of interest-bearing debt is added.

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- **About Westinghouse**

- Goodwill Impairment Testing
- **Business Outline**

- Landis+Gyr

(Social Infrastructure Systems Company)

- NuGen Project, UK

(Power Systems Company)

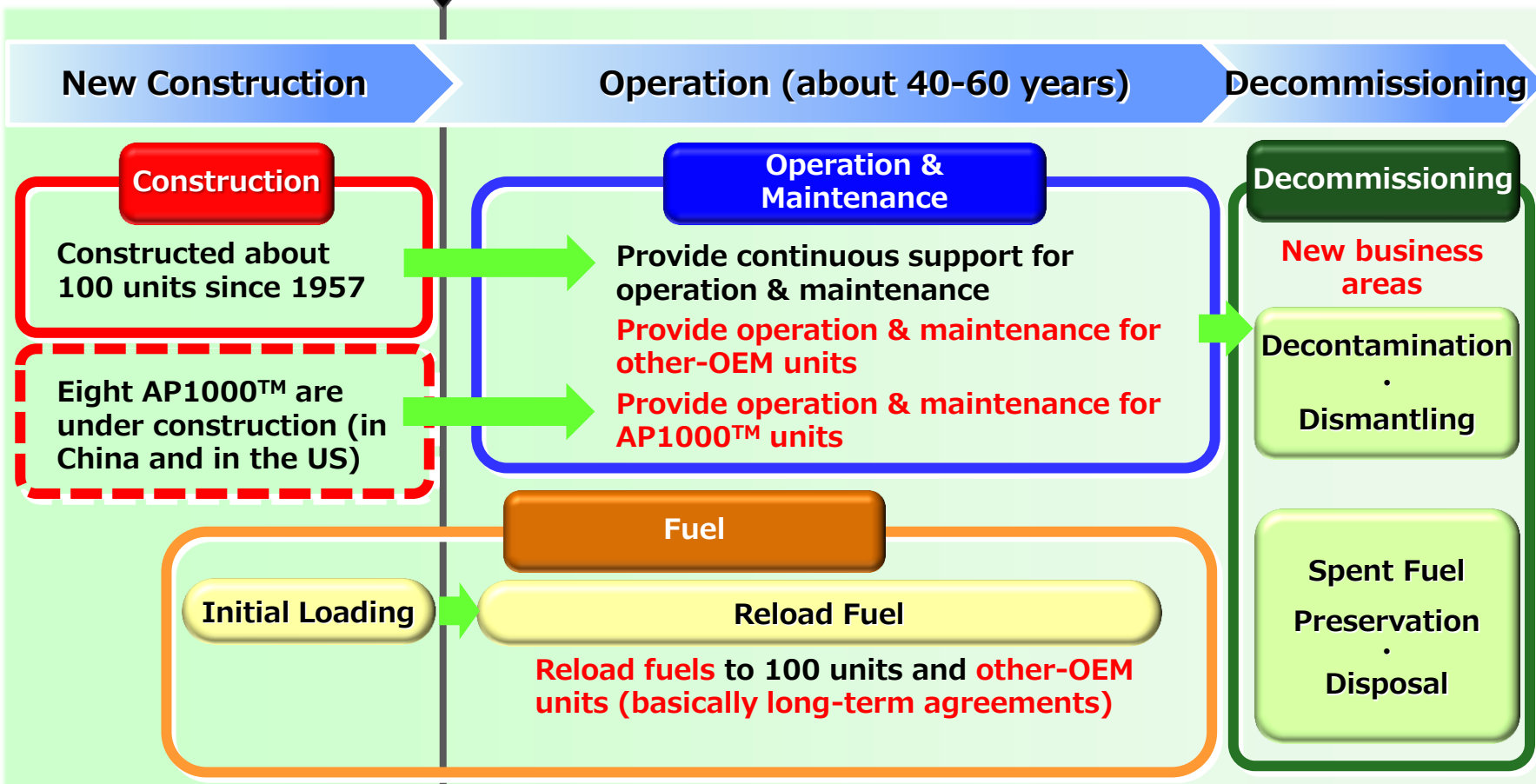
- Freeport Liquefaction Tolling Agreement

(Power Systems Company)

# Westinghouse's Business Areas

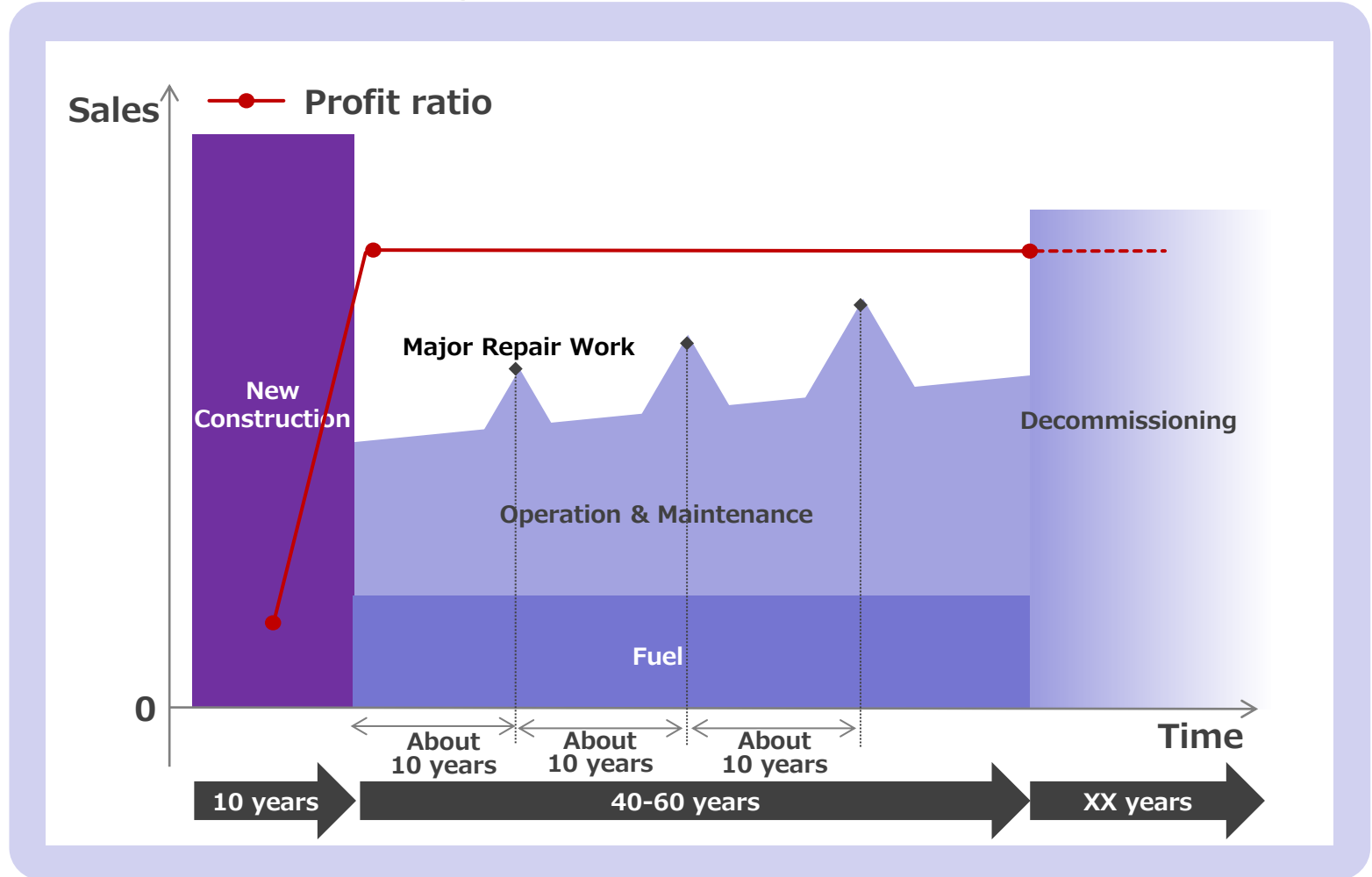
## Expanding Business Through the Plant Lifecycle

Commercial Operation



# Revenue Model of Westinghouse's Nuclear Power Plants (Image)

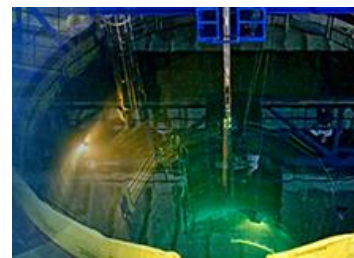
Make a profit through the lifecycle



## Execute **160-200 Projects Per Year**

### ■ Outage Services

- ◆ Inspection of equipment & facilities, replacement of consumables & broken parts, weld repair, etc.
- ◆ Support fuel loading work



Fuel loading work

### ■ Major Equipment Replacement

- ◆ Reactor Vessel Head, SG (Steam Generator), Turbine, Generator, Condenser, etc.



Transportation of replacement SG

### ■ I&C System Replacement

- ◆ Replace analog system with digital system, replace broken instruments, etc.

### ■ Responding to Regulatory Requirement Changes • Post-Fukushima Changes

- ◆ Safety enhancement, installation of filter vents, installation of specific serious accident dealing facilities, etc.



Westinghouse Service Center  
Waltz Mill, Pennsylvania, USA



Repair equipment,  
installation

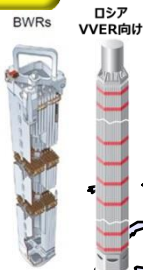


# Fuel Business

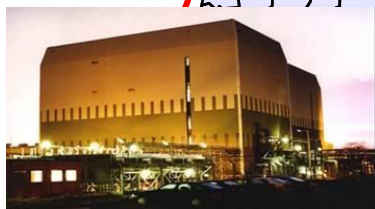
Annual sales: 160.0 billion yen scale  
(business plan term average)

## Global Stable Supply of High Quality, Low Leakage Fuels

**Vasteras, Sweden**  
(Fuel Fabrication)



**Columbia, USA**  
(Fuel Fabrication)



**Springfield, UK**  
(Fuel Reconversion,  
Fabrication)

英国AGR向け



Share of Fuels for Light-  
Water Reactor  
(by NAC Fuel Trac Data  
FY13-FY15)

Westinghouse  
30%

Westinghouse  
Reactors  
(24%)

Europe,  
Other-OEM  
Reactors  
(6%)

Secure stable share, mainly in  
the US, and expand supply to  
Europe and other-OEMs





# Construction of AP1000™ Reactors



**Sanmen & Haiyang, China  
(4 units)**

**First Unit Schedule**  
 Shipment of RCP: October, 2015  
 Fuel Loading: 2016



**Vogtle, USA (2 units)**

**Commercial Operation**  
 Original: 2016/2017  
 Revised: 2019/2020



**VC Summer, USA (2 units)**

**Commercial Operation**  
 Original: 2016/2019  
 Revised: 2019/2020

**Major milestones  
towards  
commercial  
operation**

**Scope of  
Westinghouse's  
contributions**

**Engineering  
Supply Major  
Equipment**

**Engineering, Supply Major Equipment,  
Procurement**

**Scope of  
contributions by  
others**

**Civil Construction  
and Procurement by  
Chinese Companies**

**Civil Construction and Procurement  
(currently by CB&I)**

Acquire CB&I subsidiary (S&W) to incorporate civil construction (before closing, released on October 28)









**Consolidate Management of Project  
(Risk Management)**

\*RCP : Reactor Coolant Pump

# Worldwide AP1000™ Sales Promotions

(\*) Number of units is based on WNA database by country. There are about 400 units planned worldwide.

<b>【UK】</b> <b>13 Units</b>		<b>【Saudi Arabia】</b> <b>16 Units</b>		<b>【Kazakhstan】</b> <b>1 Unit</b>		<b>【Canada】</b> <b>3 Units</b>	
<b>【Poland】</b> <b>2 Units</b>		<b>【Turkey】</b> <b>12 Units</b>		<b>【Indonesia】</b> <b>2 Unit</b>		<b>【US】</b> <b>18 Units + 4 orders</b>	
<b>【Bulgaria】</b> <b>1 Unit</b>				<b>【India】</b> <b>35 Units</b>		<b>【Mexico】</b> <b>3 Units</b>	
<b>【Czech】</b> <b>4 Units</b>				<b>【Vietnam】</b> <b>8 Units</b>		<b>【Brazil】</b> <b>8 Units</b>	
<b>【Slovakia】</b> <b>2 Units</b>				<b>【China】</b> <b>135 Units + 4 orders</b>			
<b>【Slovenia】</b> <b>1 Unit</b>							

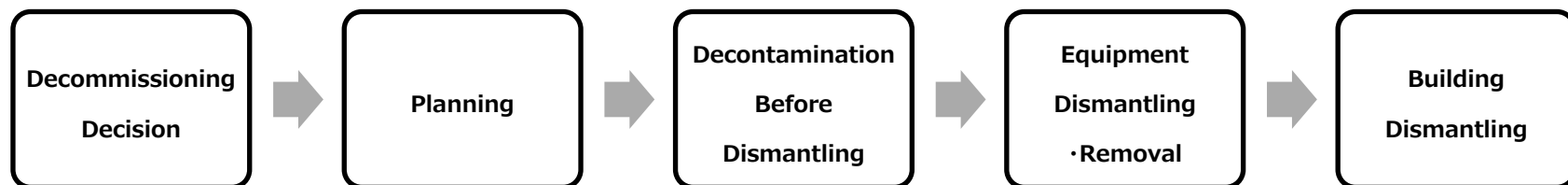
**Targeting 64 orders from among  
construction plans for more than 400 units**

# Decommissioning and Dismantle Business (New Business Area)

Annual sales: 30.0 billion yen scale  
(business plan term average)

## • Outline of the business

- Provide total project management and individual technologies from planning to building dismantling



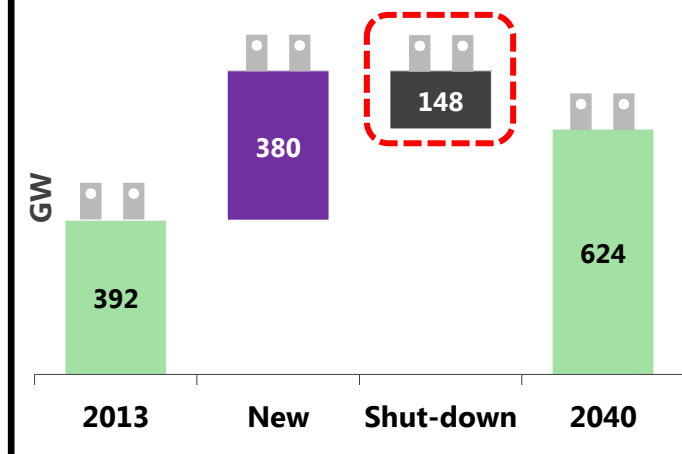
## • Have received orders and conducted decommissioning business mainly in Europe

(Sales: 10.0 billion yen scale)

- Dismantling works for Zorita, Spain (2013)
- Decontaminating Equipment at Sellafield, UK (2014)
- RVI and RPV segmentation for Neckar #1 and Phillipsburg #1, Germany (2015)

RVI: Reactor Vessel Internals  
RPV: Reactor Pressure Vessel

Nuclear power generation capacity forecast



Source : IEA World Energy Outlook 2014

## Major Future Business Opportunities

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# Landis+Gyr - Business Areas

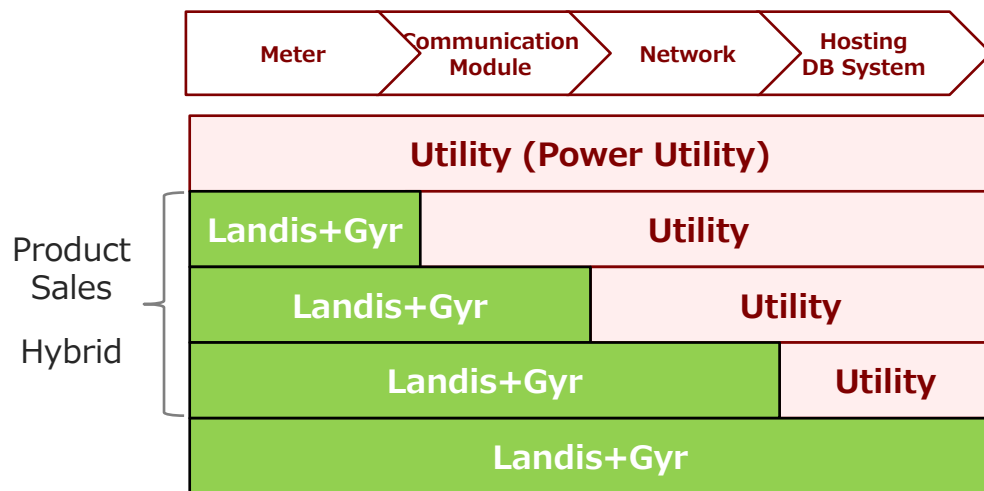
Promote Peripheral Solution Businesses,  
from Sale of Smart Electricity and Gas Meters

Landis+Gyr manufactures and sells smart meters in the global market (headquarters at Switzerland). It has over 8,000 customers in more than 30 countries.

## ■ Sale of electricity and gas meters



## ■ Advanced Solution Service (Asset Holders)



# Landis+Gyr – Trend in Business Results

## Past Results

Has been recording a stable surplus since the acquisition

## Future Plan

Plan developed by Landis+Gyr based on market forecasts

North America: The solution business will expand in advanced market introducing smart meters

Europe: The UK, French and German markets are growing, in line with EU Directive

(Already introduced in North Europe and Italy)

\*EU Directive requests 80% introduction of electricity smart meters by 2020

Asia: Sales expansion with cheaper models suited to the Southeast Asian and Indian markets

hundred million yen

	FY2011 Actual	FY2012 Actual	FY2013 Actual	FY2014 Actual	4 years Cumulative Actual	FY2015 Plan	FY2016 Plan	FY2017 Plan	FY2018 Plan
Net Sales	815	1,373	1,536	1,664	5,388	1,600	1,700	2,000	2,400
Operating Income	44	48	72	74	238	80	90	170	280
(%)	5%	3%	5%	4%	4%	5%	6%	8%	11%
EBITDA	69	177	186	195	627	200	220	280	390
(%)	8%	13%	12%	12%	12%	13%	13%	14%	16%

# Landis+Gyr – Impairment Testing

- Acquired in July 2011, and Goodwill recorded at \$1,412 million.
- Impairment testing is conducted every year, in discussion with our audit firm
- Every year, fair value is well above the carrying value, with no sign of impairment

million US\$

**Acquisition Amount** **\$2,300**

**Goodwill Balance (End of FY2014)** **\$1,412**

## Evaluation Result of Each FY

	FY2012 Impairment Decision	FY2013 Impairment Decision	FY2014 Impairment Decision
Fair Value	\$2,731	\$2,645	\$2,602
Carrying Value	\$2,311	\$2,188	\$2,058
Evaluation Result	Pass	Pass	Pass

### FY2014 Impairment Evaluation Result

Discount Rate	8.9%
Permanent Growth Rate	2.6%

**Toshiba will disclose impairment evaluation results for Westinghouse (both consolidated and each of product lines) and Landis+Gyr in a timely and appropriate manner at such opportunities as the disclosure of consolidated business results.**



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# NuGen Project, UK

## Project Outline and Progress Since Acquisition

- June 2014, Toshiba acquired a 60% stake in NuGen (ENGIE retained a 40% stake).
- The plan is to build 3 AP1000 units at the Moorside project site in West Cumbria in the Northwest of England.
- July 2015, NuGen concludes site suitability investigations and land contract was signed with the UK's Nuclear Decommissioning Authority (NDA).
- July 2015, completed DCO (\*) Stage 1, one of the necessary licenses for construction.



Moorside Project Site



Land Contract signed with NDA



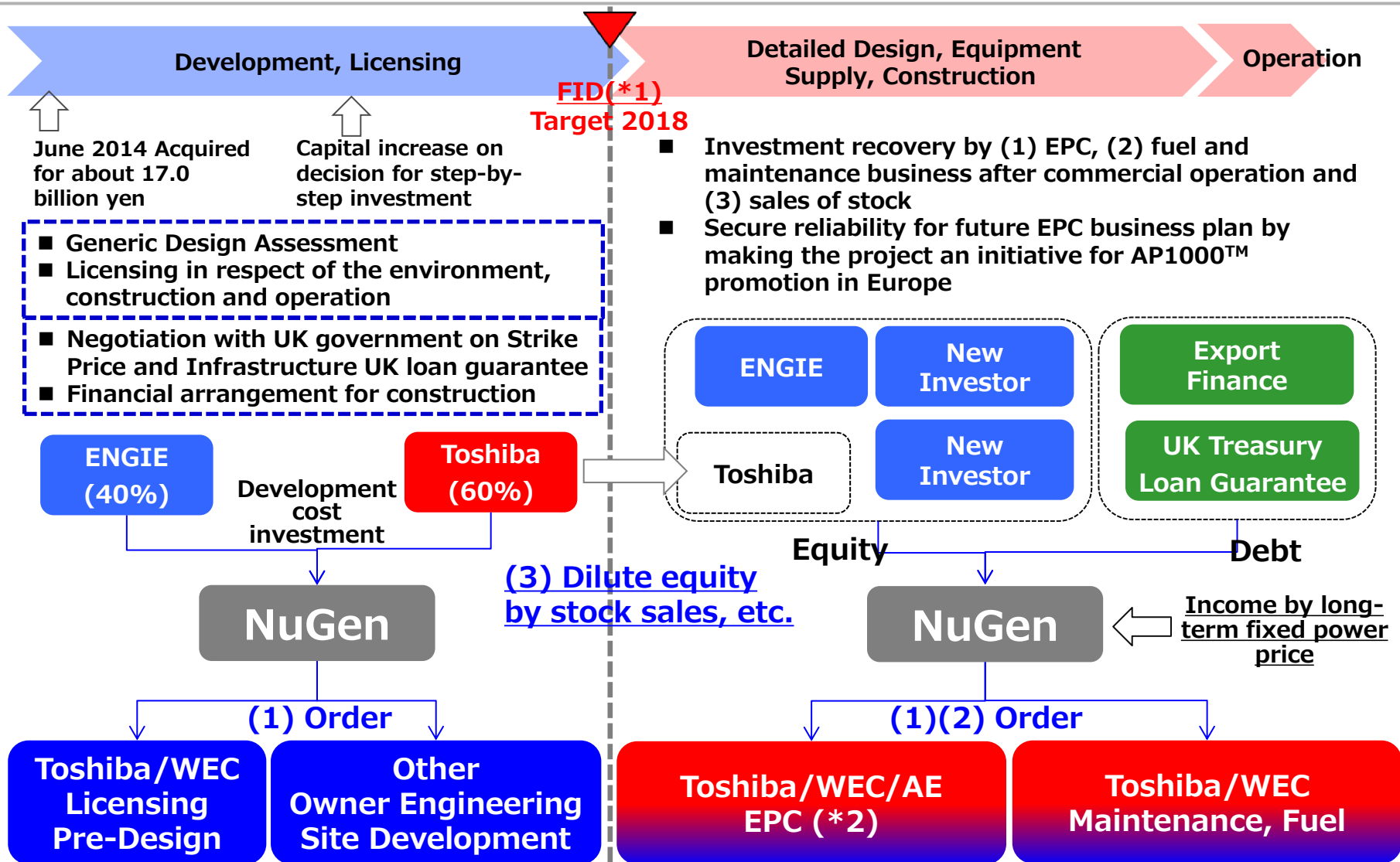
DCO Stage 1

## Nuclear Power Circumstances in UK

- UK government strongly supports nuclear power as a means to secure low-carbon power, and has introduced policies such as long-term fixed power prices and government loan guarantee.
- Moorside, the planned construction site, is adjacent to the Sellafield nuclear complex; the area has a strong relationship the nuclear business and has high expectations for construction of new plants.

\*DCO: Development Consent Order

# NuGen Project, UK



\*1 FID: Final Investment Decision

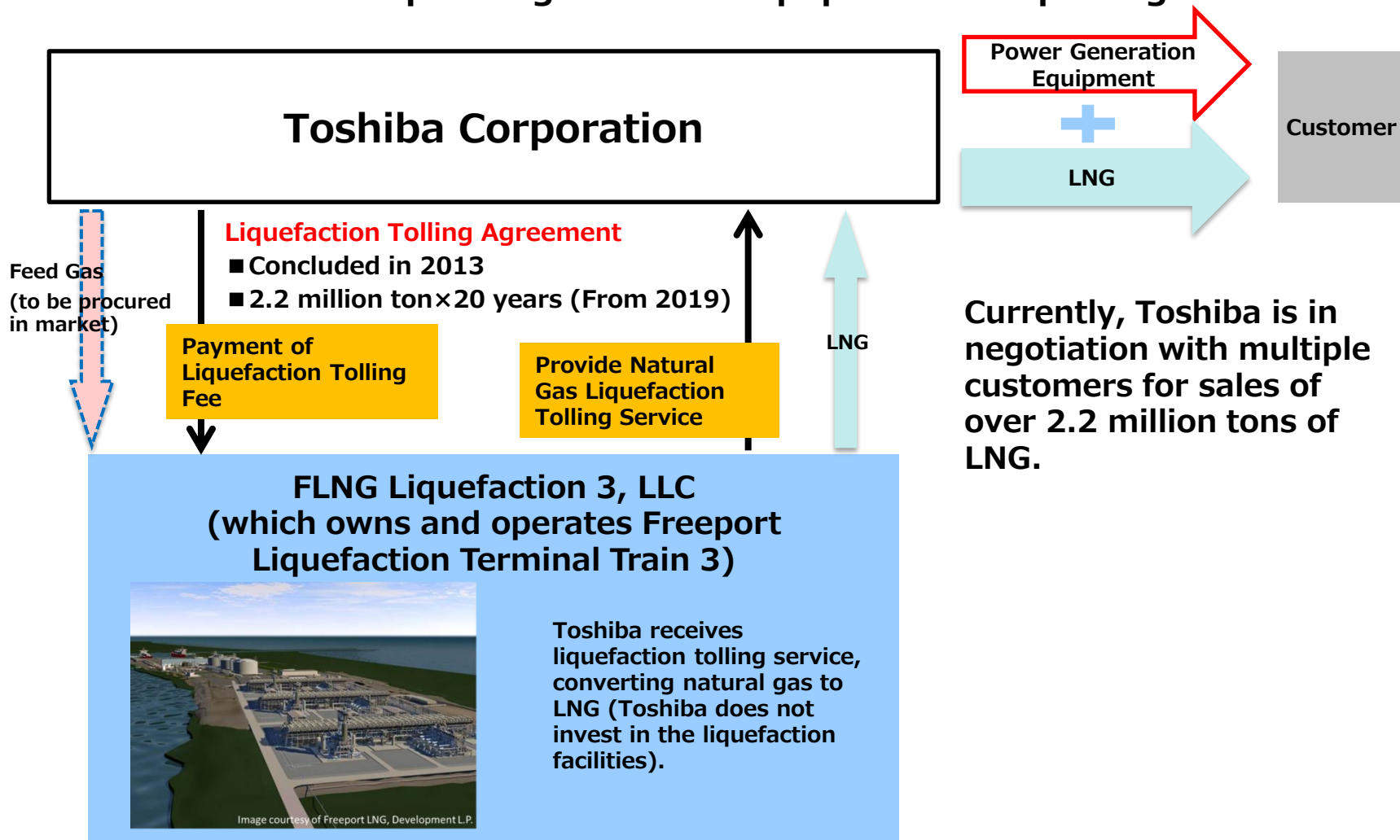
\*2 EPC: Engineering, Procurement, Construction

# Today's Agenda

- About Westinghouse
  - Goodwill Impairment Testing
  - Business Outline
- Landis+Gyr  
(Social Infrastructure Systems Company)
- NuGen Project, UK  
(Power Systems Company)
- **Freeport Liquefaction Tolling Agreement**  
**(Power Systems Company)**

# Freeport Liquefaction Tolling Agreement

**Business Objective:** Long-term sales of Liquefied Natural Gas (LNG) and power generation equipment as a package



# **TOSHIBA**

**Leading Innovation >>>**

# **Appendix.**

## **Goodwill Impairment Testing (US GAAP)**

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- **Step 1: Compare fair value with carrying value for the business concerned. If carrying value is lower than fair value, consider impairment. Go to Step 2.**
- **Step 2: Presume the business concerned has been acquired at fair value, and measure its assets and liabilities at fair value, in the same manner as accounting goodwill at acquisition. Goodwill fair value is the difference between fair value of the net assets excluding goodwill and the fair value of the business as a whole.**
- **Conduct impairment for the difference between the goodwill fair value and goodwill carrying value.**