

#### 4.4.4 Generation Dropping

## Generation Dropping Documentation

**Table 1**  
**Incremental Equipment Deterioration / Replacement or Overhaul**

<b>Equipment</b>	<b>% Life Reduction/Drop</b>	<b>Cost of Major Overhaul</b>	<b>Cost/Drop</b>
500kV Circuit Breaker	0.04%	\$500,000	\$200
(50% of Replacement)			
Main Power Transformer	0.015%	\$5,706,900	\$856
(Equal to Replacement)			
Generator (Re-winding)	0.27%	\$12,700,000	\$34,290
Turbine(Refurbished)	0.24%	\$1,000,000	\$2,400
500 kV Cable(Replacement)	0.055%	\$2,850,000	\$1,568
		Total:	\$39,314

Note: the text in parentheses in the preceding and following tables indicates the work identified as necessary to correct the assumed deterioration and/or failure of equipment.

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**Table 2  
Incremental Routine O&M Costs**

<b>Equipment</b>	<b>% Increase O&amp;M/Drop</b>	<b>Annual O&amp;M Cost</b>	<b>Cost/ Drop</b>
500kV Circuit Breaker	0.04%	\$4,941	\$2
(50% of Replacement)			
Main Power Transformer	0.015%	\$57,069	\$9
(Equal to Replacement)			
Generator (Re- winding)	0.27%	\$450,000	\$1,215
Turbine(Refurbished)	0.24%	\$450,000	\$1,080
500 kV Cable(Replacement)	0.055%	\$213,469	\$117
		Total:	\$2,423

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**Table 3**  
**Incremental Value of Lost Revenue during Replacement or Overhaul**

<b>Equipment</b>	<b>Probability</b>	<b>Months Downtime</b>	<b>Downtime Cost</b>	<b>Cost/Drop</b>
500kV Circuit Breaker (50% of Replacement)	0.04%	0	\$0	\$0
Main Power Transformer (Equal to Replacement)	0.018%	1	\$1,750,000	\$315
Generator (Re-winding)	0.27%	18	\$31,500,000	\$85,050
Turbine(Refurbished)	0.24%	16	\$28,000,000	\$67,200
500 kV Cable(Replacement)	0.055%	1	\$1,750,000	\$963
			Total:	\$153,528