

## User Tips:

1. Shortcuts for users' convenience:

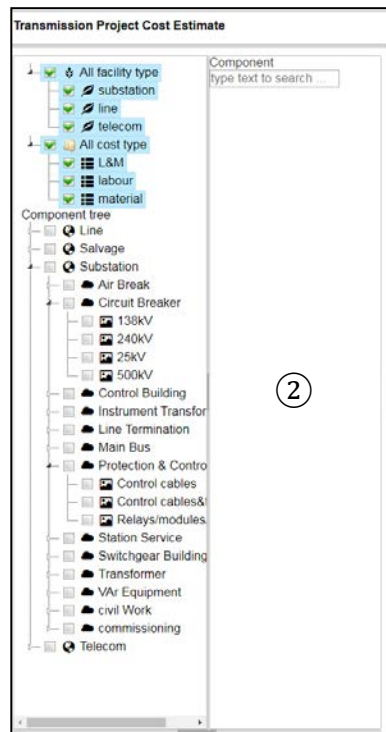
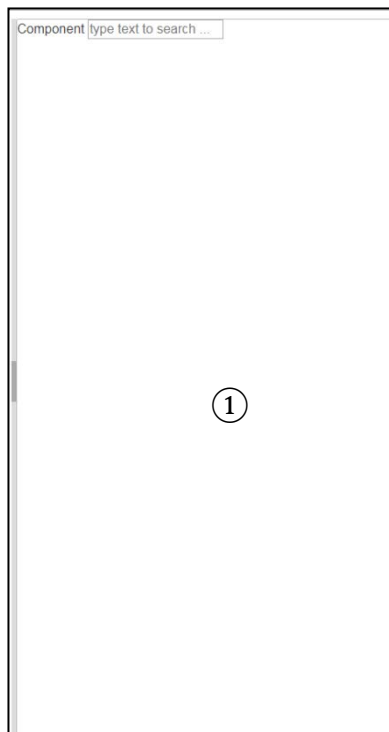
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**Shortcuts:** [Alt] + toggle component, hierarchies, message, title pane; add / delete component(s); Save, refresh, output table;

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Example:

1. [Alt]+h to hide hierarchies
2. [Alt]+h again to show hierarchies



## 2. Move cursor on the proposed cost item for user's guide:

Transmission Project Cost Estimate

Shortcuts: [Alt] + toggle Component, hierarchies, message, title pane; add / delete component(s); Save, refresh, Output

Component (type text to search ...)

facility project scenario SLDs ...

... In-out-P1567-sub In-out-P1567-sub, 240kV

User Guide:  
new relay or module, 4 per new transformer; 3 per new line termination; 2 per bus; 2 per group of CB, e.g. 2 for 240kV and 2 for 138kV;  
Unit Price: \$0553 each  
Cost Type: L&M  
--- click to toggle

■	Air Break 240kV 1050kV New	\$515,319	\$515,319	\$1,030,638
■	Line Termination 240kV  1050kV New	\$526,092	\$526,092	\$1,052,184
■	Main Bus 240kV  4000A New	\$42,750	\$42,750	\$85,500
■	Control Building 4mx14m pre-fab New	\$224,273	\$224,273	\$448,546

## 3. Technical support:

WEPROG prodhpts01/Tpp/ Online HTML Editor

Shortcuts: [Alt] + toggle Component, hierarchies, message, title pane; add / delete component(s); Save, refresh, Output table; [E-Mail](#) for question or feedback ...

facility project scenario SLDs ...

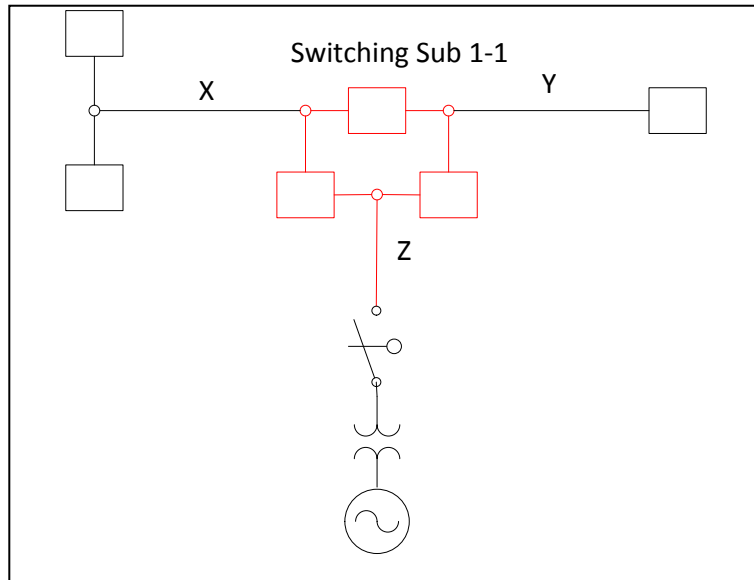
... In-out-P1567-sub In-out-P1567-sub, 240kV export csv refresh

Facility ... component item	Material	Labor	SubTotal	Unit Cost	Unit	Adjusted Unit Cost	Qty	Note
facility	\$2,632,664	\$2,632,664	\$5,265,328					
Substation	\$2,632,664	\$2,632,664	\$5,265,328					
■ Circuit Breaker 240kV 1050kV New	\$1,324,230	\$1,324,230	\$2,648,460	\$441,410	each	\$441,410	6	
■ Air Break 240kV 1050kV New	\$515,319	\$515,319	\$1,030,638	\$73,617	each	\$73,617	14	
■ Line Termination 240kV  1050kV New	\$526,092	\$526,092	\$1,052,184	\$526,092	each	\$526,092	2	
■ Main Bus 240kV  4000A New	\$42,750	\$42,750	\$85,500	\$21,375	each	\$21,375	4	
■ Control Building 4mx14m pre-fab New	\$224,273	\$224,273	\$448,546	\$448,546	each	\$448,546	1	

1-7 of 7

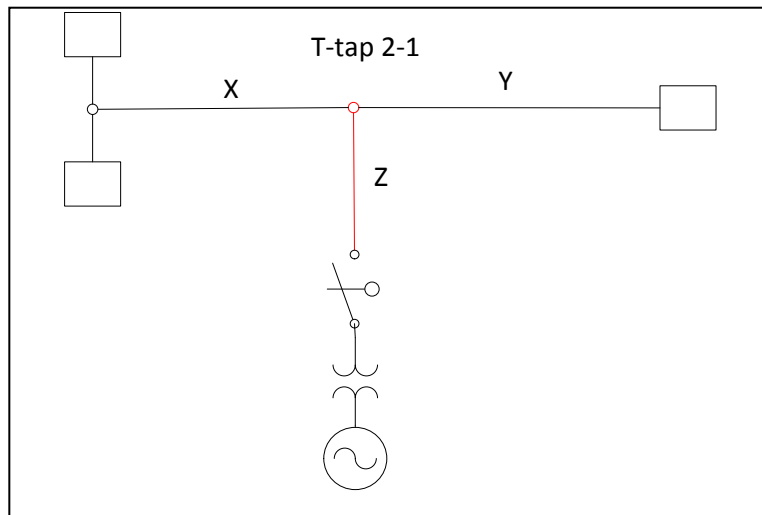
## 4. Sample projects:

The following SLDs are typical connection alternatives proposed in historical projects:



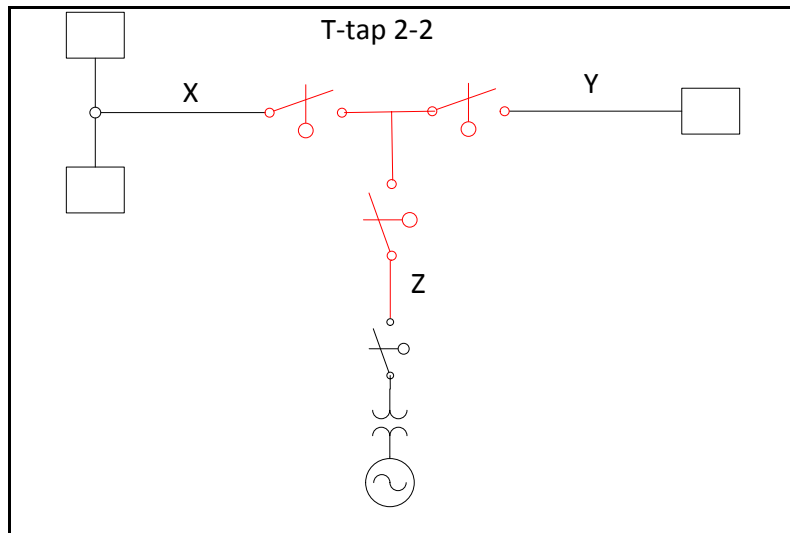
Assumption:

1.  $Z=1\text{km}$
2. Ring bus station with 3 breakers
3. 240kV system



Assumption:

1.  $Z=1\text{km}$
2. 138kV system, no disconnect switches



Assumption:

1.  $Z=1\text{km}$
2. 138kV system, 3-way disconnect switches