

1 Q. Sunnyside Replacement Equipment: Recognizing that this project has two principal
2 components (to replace the T1 transformer and the equipment damaged by the T1
3 transformer fire and to install a new 230kV transformer breaker and breaker failure
4 protection), please provide a list of major equipment replaced because of the fire
5 and another list of major equipment installed for the new breaker and breaker
6 failure protection.

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9 A. Below is a list of the major equipment that was replaced as a result of the fire on
10 transformer T1 at the Sunnyside Terminal Station:

- 11 • 1 - 75/100/125 MVA, 230/138kV transformer (T1);
- 12 • 1 - 75kVA station service transformer;
- 13 • 1 - 138kV breaker (B2T1);
- 14 • 3 - Free standing 138kV current transformers;
- 15 • 1 - 230kV disconnect switch (B1T1-1);
- 16 • 1 - Station service transfer switch;
- 17 • 14 - 230kV station post insulators;
- 18 • Power and control wiring for above equipment; and
- 19 • Concrete foundations.

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21 In 2014, the 230kV breaker fail scheme was updated to include breaker fail
22 initiation of 230kV breakers B1L03 and B1L02 in the event of a transformer lockout
23 on T1.

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25 The old air blast circuit breakers B1L03 and B2T1 were replaced with new SF6
26 breakers. These old breakers had only one trip coil and hence the breaker fail
27 scheme for these breakers only operated this one trip coil. With the installation of

1 SF6 breakers, the breaker fail protection was revised to trip the redundant trip coils
2 in each breaker.

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4 In addition, trip coil monitoring was added to B1L03 and B2T1 providing ECC with an
5 alarm if any trip coil has failed. The application of the retrip functionality of B1L02
6 and B1L03 was removed from the 138kV breaker fail scheme.

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8 The new T1 230kV high side breaker B1T1 is scheduled to be installed in 2015. This
9 will result in wiring modifications to the existing 230kV breaker fail scheme initiated
10 by T1. It will also include wiring modifications to the existing T1 transformer
11 protection. The new breaker will include new control switches and indicating lights
12 for local and remote operation.