

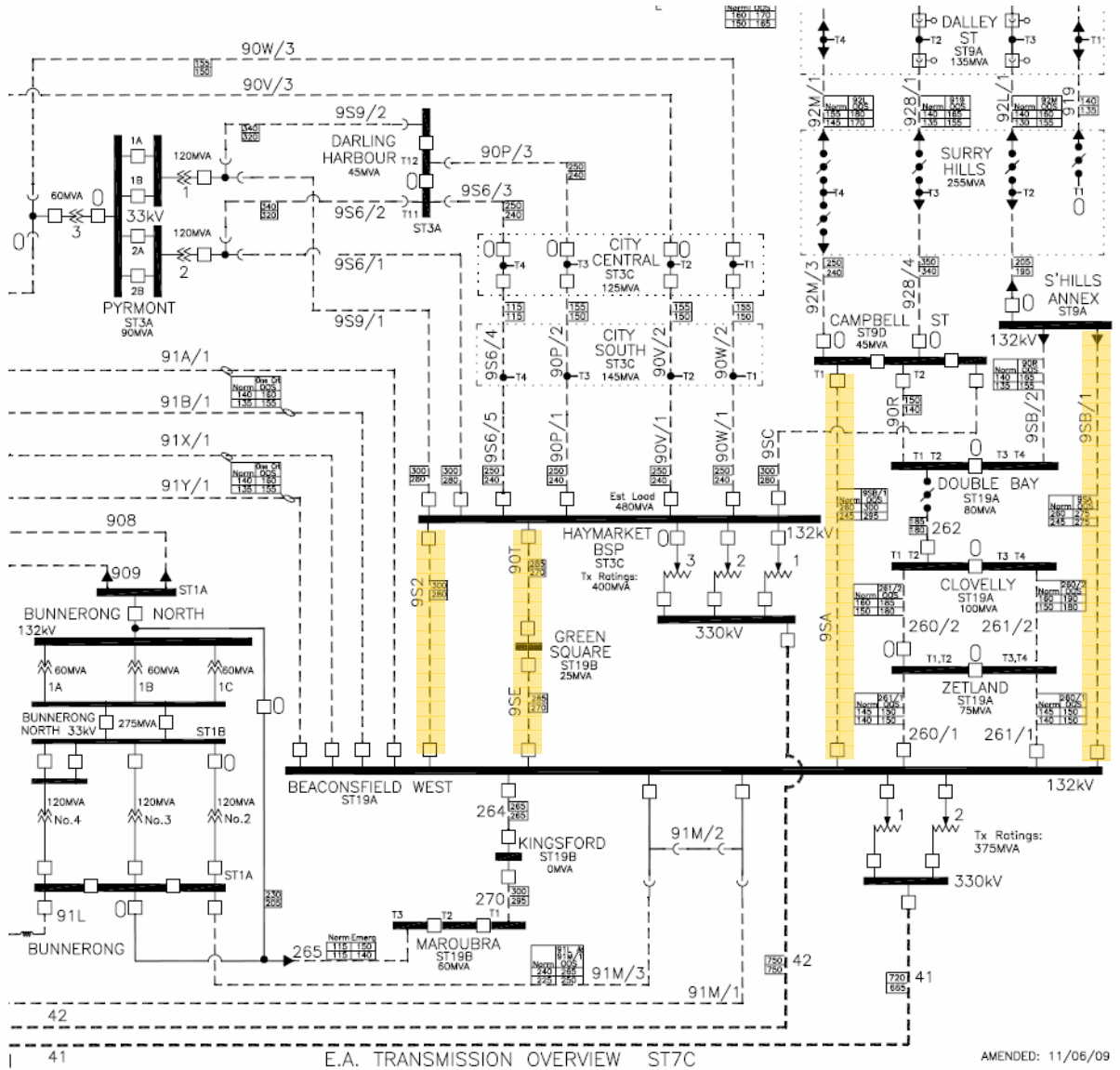
## DEMAND MANAGEMENT SCREENING TEST

### New 132kV feeder from Green Square zone substation to Beaconsfield West Bulk Supply point

#### Current Supply Arrangements

The 132kV system supplying the Sydney Metropolitan Region is provided by a radial 132kV network supplied from Sydney East Bulk Supply Point (BSP) and an interconnected 132kV transmission network linking Beaconsfield West BSP, Haymarket BSP, Sydney North BSP and Sydney South BSP.

The Haymarket/Beaconsfield West load area is a subset of the inner metropolitan transmission area. The feeders under consideration are the 132kV feeders 9S2, 9SE, 90T, 9SA and 9SB/1, which link Haymarket and Beaconsfield West BSPs and supply Green Square zone.



These feeders form a critical part of the interconnected supply for the Sydney Inner Metropolitan Area, especially the CBD and immediate surrounds.

### Supply Capacity and Demand Forecast

The customers supplied by this system are predominantly commercial, as well as some residential. The peak demand period is daytime afternoon in summer.

In the inner metropolitan area we plan for the network to be able to supply forecast demand under specific outage conditions. In this case, the system is designed so that it will be capable of supplying the peak demand with the simultaneous outage of one of the 330kV cables, feeder 41 or 42, and any 132kV feeder or 330/132kV transformer.

With feeder 42 and any one of the 132kV feeders between Haymarket and Beaconsfield West out of service at least one of the remaining 132kV feeders will be loaded over their firm ratings.

The summer ratings of the 132kV feeders under consideration are summarised as follows:

Feeder	From/to	Rating (MVA)
9SA	Campbell St – Beaconsfield West	245
9SE	Green Square – Beaconsfield West	270
9S2	Haymarket – Beaconsfield West	280
9SB/1	Surry Hills Annex – Beaconsfield West	245

Load flow studies conclude that, under the relevant outage conditions, demand would exceed capacity limits by at least 33MVA in summer 2012/13.

### Supply Strategy Option

The preferred supply side solution is to install a new 132kV feeder from Green Square to Beaconsfield West. The estimated cost of this project is \$5.7m.

Commissioning is proposed prior to October 2012. The decision date for this investment is February 2010.

### Required Demand Management Characteristics

If demand in this system could be reduced by at least 33MVA by summer 2012/13, then the proposed project could be deferred by 1 year. The savings from a one year deferral is \$330,000 or \$10/kVA.

The demand reduction requirement is high, and the savings from deferral are very low. It is therefore not considered reasonable to expect that the proposed investment could be cost effectively deferred by implementing demand management options.

## **Recommendation**

Based on this analysis it is not considered reasonable to expect that it would be cost-effective to postpone the proposed supply-side solution by implementing demand management strategies.