Electricity Transmission Regulatory Reset

2008/09 – 2013/14

Appendix B

VENCorp Availability Incentive Scheme

SP AusNet
A member of Singapore Power Group

VENCorp Availability Incentive Scheme

The Network Agreement with VENCorp provides for rebates to be paid to VENCorp when network elements are not available for service. The scheme presents SP AusNet with substantial financial exposure directly related to the performance of its network.

The principal objectives for the scheme are to encourage:

- SP AusNet to seek plant outages at times when the expected cost to wholesale electricity market participants of an outage is minimal;
- asset management practices which assist in ensuring that the actual cost borne by market participants due to unavailability of transmission assets is minimised; and
- asset management practices which assist in ensuring that over the long run benchmark performance standards are achieved.

Basic Principles Of Operation

Network element outages are unavoidable. They are necessary, and planned, to conduct maintenance and construction activities. Unplanned outages also occur, largely at random, and resulting from a variety of causes including plant failure (e.g. an internal transformer fault) and consequential damage (eg, storm damage to transmission lines).

For the scheme to operate, the following process is required:

- SP AusNet is compensated via its regulated revenue for the expected rebate value associated with outages. The annual value is included as a component of the Company's opex forecasts;
- At the time of billing of revenue from VENCorp, the actual rebate value associated and the actual outages that have occurred is netted out from the gross revenue amount.

The annual cost of outages is the estimated cost of rebates that SP AusNet will pay to VENCorp in a year under the revised scheme. SP AusNet's financial exposure is in relation to the variance from predicted availability that may occur.

SP AusNet is penalised most severely if its work plans are significantly during peak period and also faces a severe potential penalty if its network is not in a state of readiness for the critical peak loading period.

SP AusNet's annual rebate payment liability in association with the scheme is capped, therefore, outages on a catastrophic scale not envisaged by the network planning criteria are not covered by the scheme.

To ensure that the scheme satisfies "incentive" objectives and can be reasonably costed, the terms agreed between VENCorp and SP AusNet incorporate liability limitations and rebate payment capping. SP AusNet's total liability under the current scheme is capped at $12.0 million per annum (real 2003/04 dollars). A value of around $6 million (real 2003 / 04 dollars) is targeted and included in SP AusNet's revenue forecasts. There is also a cap per event of $1 million (real 2003 / 04 dollars).

Outages required by third parties, such as connected customers, are currently excluded from the scheme.

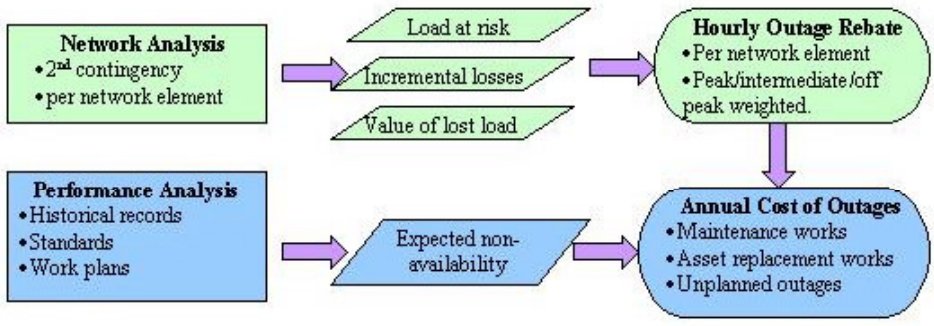
Calculation of Expected Annual Value

The network availability incentive scheme puts an explicit value on individual asset availability. The rate to be applied for an individual transmission system element is intended to reflect the criticality of its outage, and the time period in which the outage occurs.

Calculation of the expected value involved several elements:

- The peak period during which network availability is most critical was assigned (coinciding with the summer peak). An intermediate period (coinciding with the winter peak) was similarly assigned, and the residual period of the year, having lowest criticality was assigned as off-peak period. The peak period and intermediate period include both a seasonal and period of day dimension;
- For the outage of each network element, the In order to define the rates for the revised scheme, VENCorp undertook detailed network analysis to determine the "cost" of the outage to network users for the event of a second contingency event occurring (typically a random co-incident outage on a supporting network element) was determined through network analysis, considering the typical loading conditions relevant to the peak, intermediate and off-peak periods. For each network element, two potential impacts were considered in the analysis:
  - *Loss of load to customers (costed at VoLL); and*
  - *Loss of generator access to market (costed at marginal cost of generator rescheduling);*
- The incremental losses resulting from the outage of the network element was also costed, and added to the second contingency impact costs, on a per hour basis, to arrive at the total rebate rate for each network element; and
- The expected level of outages in a year was derived from benchmark standards, statistical plant failure rates, historical records and work plans. The product of the rebate rates and expected level of outages determines expected annual value of the scheme.

The process is summarised in the following diagram.



The calculation of the rebate rates can be seen to be reflective of the potential impact faced by network users whenever SP AusNet removes a network element from service. The signals presented to SP AusNet are not arbitrary, but are based on the results of comprehensive network analysis and individually targeted to each network element.