MAV STEP Program – 2014/15

Renewal Demand Calculation

This year in the STEP program we are asking Councils to undertake a more comprehensive analysis when calculating renewal demand, renewal funding and renewal gap.

We have used simple approaches in the past however as our asset knowledge grows we can become more sophisticated in our approach. Some Councils are already following these methods whilst others have an opportunity to improve their asset modelling outcomes.

Renewal Funding

Asset renewal funding is allocated in the forward estimates through the SRP and LTFP. These allocations usually correspond to the forward capital works program.

When entering renewal funding into the asset renewal modelling tool, each of the forward years renewal funding should equal the amount allocated for renewal in the LTFP.

Too often we see the funding for year one carried forward in equal amounts.

Renewal Demand

Council's asset renewal demand varies over time dependent on its asset condition and degradation rate. There are variations of two renewal demand modelling techniques in use within Councils.

Method 1

This technique can allow a predetermined percentage of assets to remain above their intervention level over time thereby allowing Council to increase renewal funding to "catch up" with out the Council showing a large backlog or renewal gap.

A variation of this technique is to use the model to predict the future condition of the assets based on allocated funding and asset deterioration rates. This allows a Council to better understand the service implications of funding decisions it makes.

Using this method it is most important that Councils understand the relationship between maintenance expenditure (effort) and asset renewal as assets already over intervention will have a higher maintenance need than those under the intervention level.

Method 2

This second technique assumes that each asset must be renewed the moment it reaches its intervention level. This method shows the asset renewal backlog in absolute terms and the associated costs to renew. It tends to show a large renewal gap or backlog in the early years if the assets are in poor condition.

Both methods should calculate the same Average Annual Asset Consumption. They will however produce different renewal demand profiles.

Both methods of calculation are considered legitimate however Method 1 is more in line with how Councils manage their assets on a day to day basis. Management decisions around the funding and resource allocation of asset maintenance and renewal are critical to the sustainability of the asset portfolio.

Renewal Modelling Software

(This is for commentary rather than a recommendation for any particular software)

Integrated asset management software which includes predictive modelling capability will generally have capacity to model under Method 1 (examples include SMEC and Assetic although others may have this capacity).

The STEP program has used the Moloney modelling software for benchmarking purposes for some time. This network based forecasting model has capacity to model under Method 1 or Method 2 although Councils have traditionally used Method 2 as it has been more straightforward to use.

2014/15 STEP Program

This year we are encouraging those Councils who use the Moloney model for renewal forecasting to move to Method 1 when calculating their renewal demand and renewal gap. This will produce results which better reflect day to day practice and align them with the renewal forecasting results from other asset management systems currently on the market.

We believe that Councils now have a good understanding of their assets and moving to this more sophisticated approach will produce improved advice to the Council.

In moving to Method 1 we must still remain focused on closing the asset renewal gap.

Peter Moloney has previously provided training to Councils on both Method 1 and Method 2 and can provide support again if required.

Asset renewal modelling improvement examples

Issues

Renewal funding entered as same funding allocation for all years – actual funding should vary in accordance with LTFP allocations
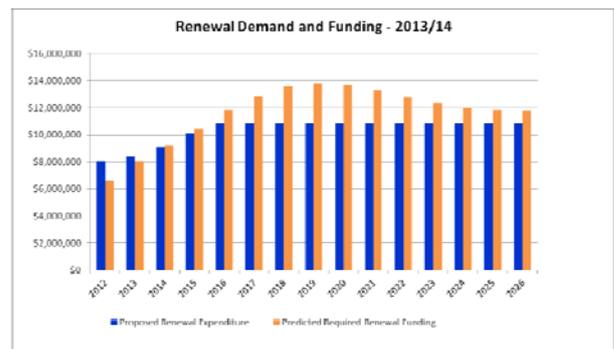
Large backlog in first 3~4 years – Council unlikely to fund in short term but will endeavour to address over medium term.
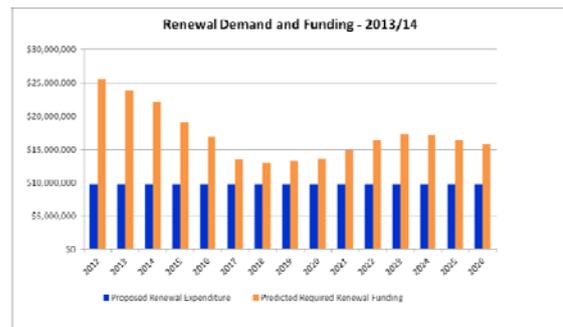
Positives

Renewal funding entered in accordance with LTFP

Early renewal demand distributed over a number of years

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