

SA POWER NETWORKS



Switching from plastic wrapping pallets and steel bins to using reusable tubs

A case study for using procurement practices to transition to a circular economy.

SA Power Networks (SAPN), South Australia's sole electricity distributor, is committed to environmental sustainability. As part of this commitment, in July 2020, SAPN's Angle Park depot changed its operations to reduce plastic waste and promote environmental stewardship.

The transition

The change involved replacing the steel bins and pallets used to transport equipment and materials between depots, which required plastic wrapping for weatherproofing, with reusable rigid plastic tubs with lids.

Wrapping the bins and pallets used ~13,800m of soft plastic each month, at a cost of ~\$2,760. It resulted in significant plastic waste generation (~17.3 tonnes per year) and costs associated with:

- staff time to wrap and unwrap bins/pallets (~5 min per bin, 10 to 20 bins per day)
- disposal/recycling of the waste plastic wrap.

Some of the plastic waste generated from unwrapping the steel bins was recycled, however most ended up in waste bins due to the limited availability of soft plastic recycling services, particularly at SAPN's regional depots [see photo to the right].



Benefits and outcomes

SAPN began the transition by replacing 80 steel bins at a cost of \$520 per tub and reducing plastic wrapping of pallets. The trial reduced plastic wrapping use by ~4,700m (~50kg) per month, equivalent to a cost saving of approximately \$270. This equates to a reduction of ~56,400m (~0.59 tonnes) in plastic wrap used and ~\$3,240 in costs per year. The new system also reduces packing time to around 4 minutes per use.

The initial investment for a single reusable tub is paid back after around 61 uses (based on an estimated cost of \$8.50 to plastic wrap each steel bin and pallets). This is without considering the savings from the reduction in disposal/recycling costs for spent plastic wrap or the staff resourcing needed to wrap and unwrap bins/pallets.

Working with suppliers

SAPN selected Nally Mega Bins as the supplier for the weatherproof and reusable plastic tubs. The tubs are:

- lighter than the steel bins.
- stackable, increasing transport efficiencies (see photo below)
- 100% recycled at the end of their life
- available with 10-year outdoor weathering and 3-year wear and tear warranties.



Next steps for SAPN

After the trial's success, SAPN continued with the initiative and to date has replaced 650 steel bins with reusable tubs. There are also plans to potentially order 250 more reusable tubs, to complete the transition. Plastic wrapping of pallets has also substantially reduced.

A future opportunity for SAPN is to work with Nally Mega Bins to supply the reusable tubs on a 'product as a service model' basis. For example, this may involve SAPN leasing the tubs on a monthly/yearly basis, and returning them when no longer needed, or their end of life for reuse/recycling. This model reduces the upfront cost for SAPN (or other organisations procuring the reusable tubs) and makes the supplier responsible for the product at the end of its life.

Conclusion

The transition tangibly showcases SAPN's dedication to environmental sustainability. It not only reduces plastic waste and associated costs, but also improves operational efficiency, and demonstrates the benefits of switching single-use materials to reusable products. The initiative from SAPN provides a simple, yet effective, example for other organisations to follow in the pursuit of a circular economy.

About this case study

This case study was prepared by Rawtec for Green Industries SA. It is part of a series of case studies aimed at empowering businesses and organisations to make changes to their procurement practices to transition to a Circular Economy.

Acknowledgements

We would like to express our gratitude to SA Power Networks for sharing their insights and data, which formed the basis of this case study.