



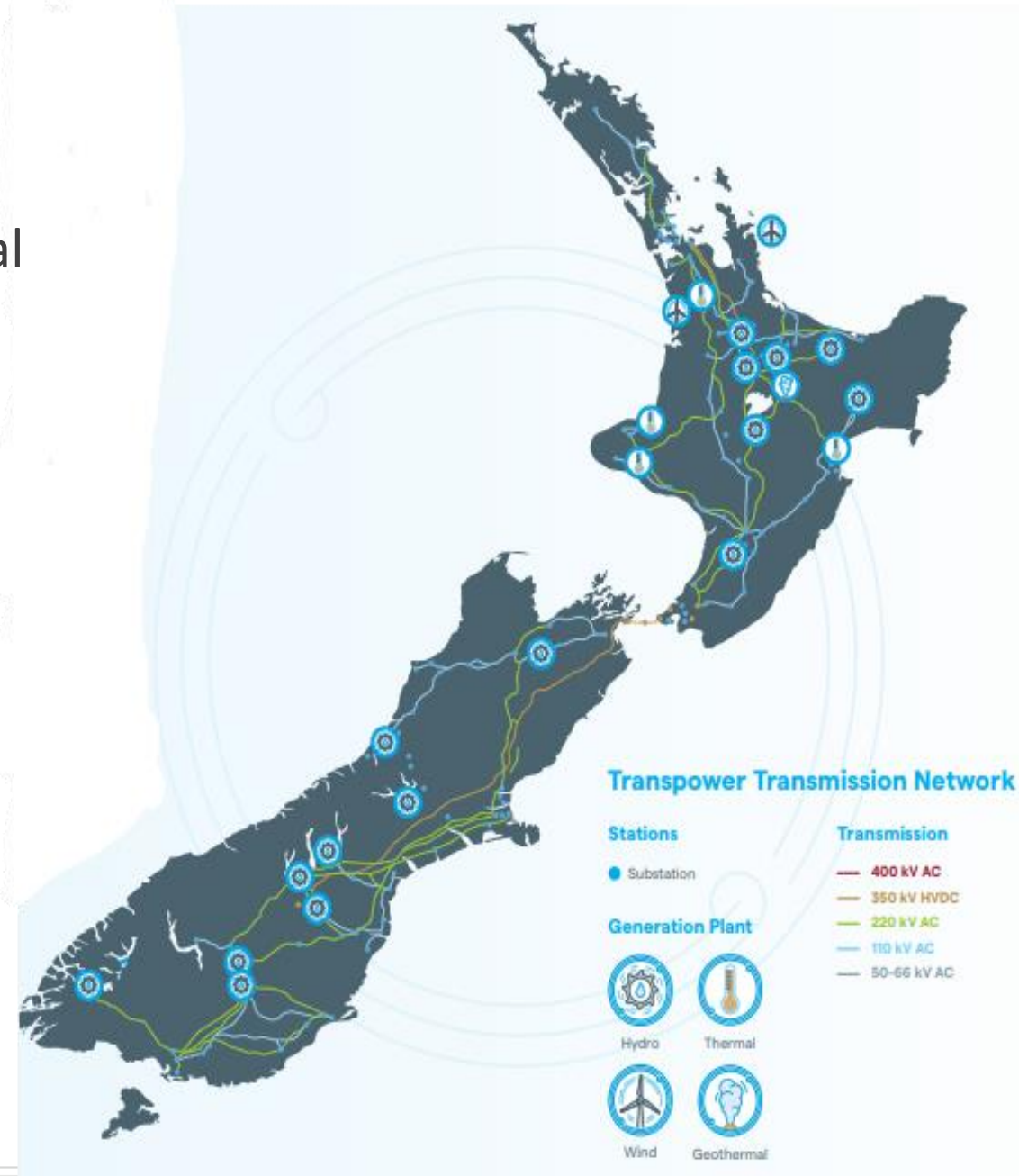
Developing a Waste Strategy for the National Electricity Grid

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Transpower NZ Ltd

Wasteminz Conference
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Transpower – who we are

- Owner and operator of New Zealand's national electricity transmission system
- We connect electricity generators to major electricity users and the local distribution networks
- Around 180 substations, more than 11,000 kilometres of lines



Transpower's Sustainability Strategy

- Approved by the Board in May 2020
- Focus embedding sustainability into our operations
- 15 KPIs, (including development of our Waste Strategy) across three challenge areas:

Climate Change



Environmental Stewardship



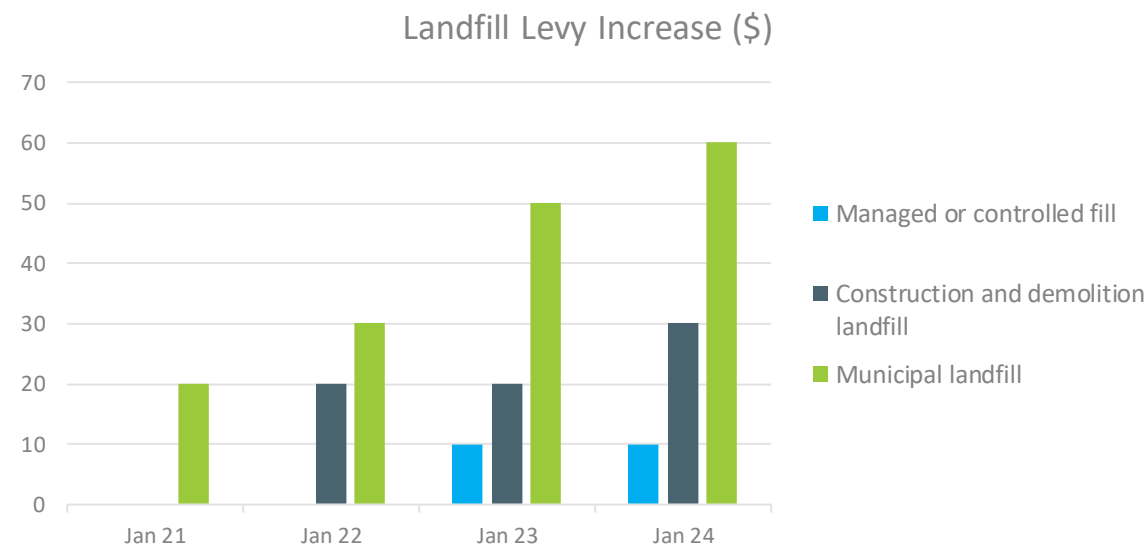
Sustainable Business



Waste Strategy

Our Context

- Shift signalled by the Government's Waste Strategy and supporting legislation
- Electrification will drive further grid development
- Major refurbishment programme – aging assets
- We have significant volumes of waste to manage
- Long lived, recyclable assets
- Decommissioned high value assets of potential interest to others in the sector
- Most of wastes are managed for us by our service providers



Waste Strategy

Vision - to operate as close to a zero-waste organisation as possible

Goal 1	Goal 2	Goal 3
Setting up for a Circular Economy	Moving waste up the hierarchy	Embedding in the business

Target - A 30% reduction in the proportion of waste sent to disposal from 2022/23 levels by 2030



Waste Initiative Examples

Goal 1 – Setting up for a Circular Economy

- Developed our Sustainability by Design Standard with resource and waste reduction as key focus areas
- Asset management - moved from age based to condition-based asset replacement which typically extends asset life
- Demand side management, (paying power users to reduce use during peak demand) delays the need to build new assets



Goal 2 – Moving Waste up the Hierarchy

- Service providers – setting waste management expectations within new contracts. Includes waste reporting, and annual sustainability plans
- Contracts include KPI's related to achieving sustainability outcomes

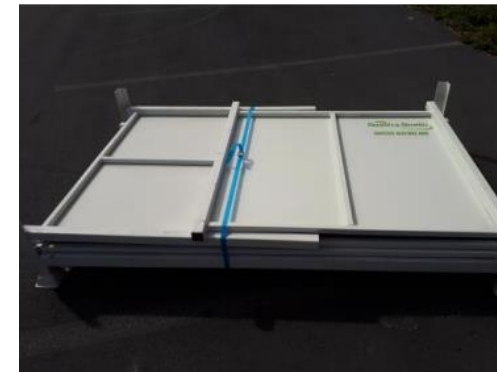


Goal 2 – cont.

Glass Insulator recycling

Moving landfilled glass insulators up the hierarchy

- Is the glass suitable for recycling?
- Is it practicable to process for recycling?
(completed insulator recycling trials)
- Entering a contract to serve Transpower nationally
- Recycle routes include in the manufacture of glass wool insulation
- Recycling costs lower than current landfill disposal costs
- Affects approx. 127T p.a. for 30 years



Goal 2 – cont.

Regional Initiatives

- Surplus concrete poles sold to Network Tasman
- Decommissioned 66kV Circuit Breakers from Linton sold to Firstlight now in their Gisborne Substation.
- Working with councils on use of concrete poles in flood defences.

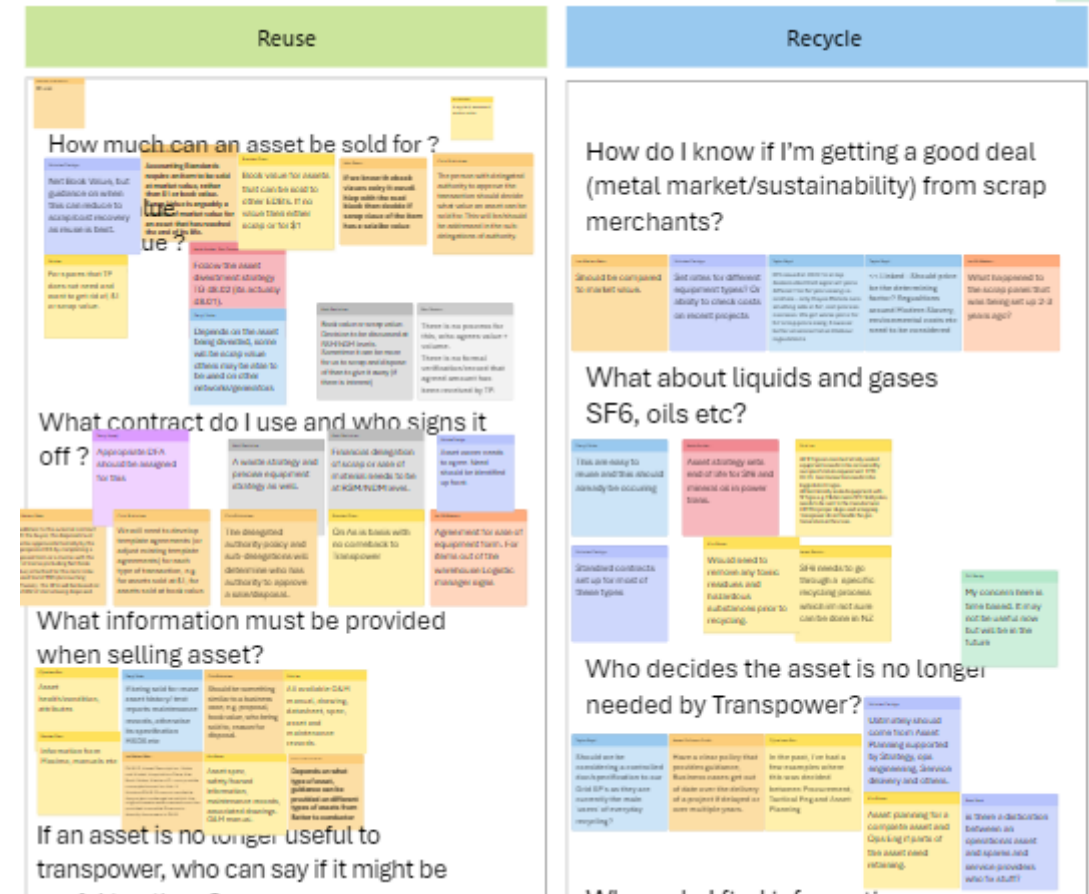


Goal 2 – Cont.

Developing guidance on management of end-of-life assets

Workshops clarified areas of current uncertainty, e.g.:

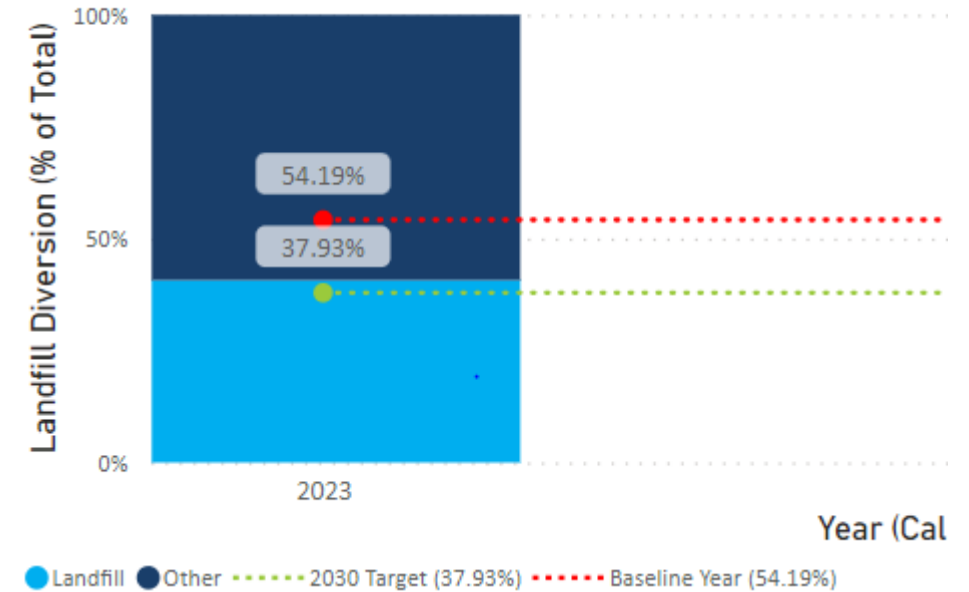
- How we confirm an asset is fit and available for reuse by others?
- How much can an asset be sold for – e.g. \$1, scrap value, book value?
- Guide considers the waste hierarchy
- Assists with good decisions and outcomes
- Captures what we do well and seeks improvements
- Specific asset and material advice on a supporting web-page



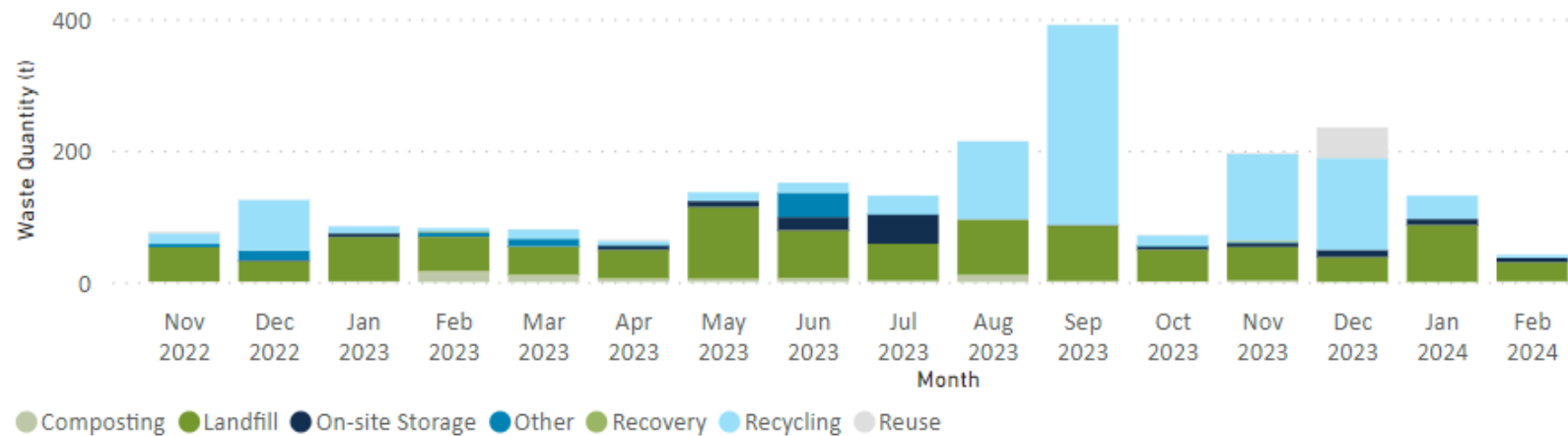
Goal 3 – Embedding in the Business

- Communications plan to keep staff and service providers engaged and informed
- All service providers and Transpower offices and warehouses reporting waste data monthly
- Power BI tool tracks waste data trends and movement towards targets

Movement of waste towards attainment of the target (%)



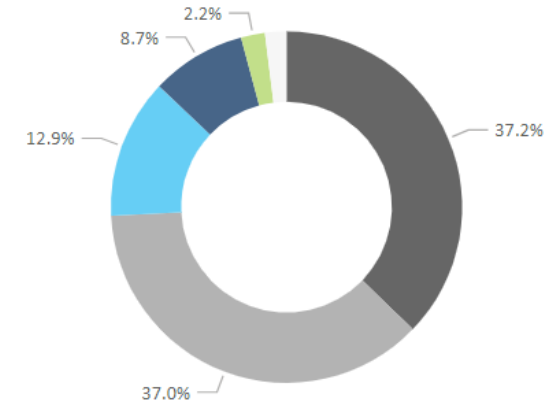
Waste Quantity (t) by Waste Sub-Type (Month)



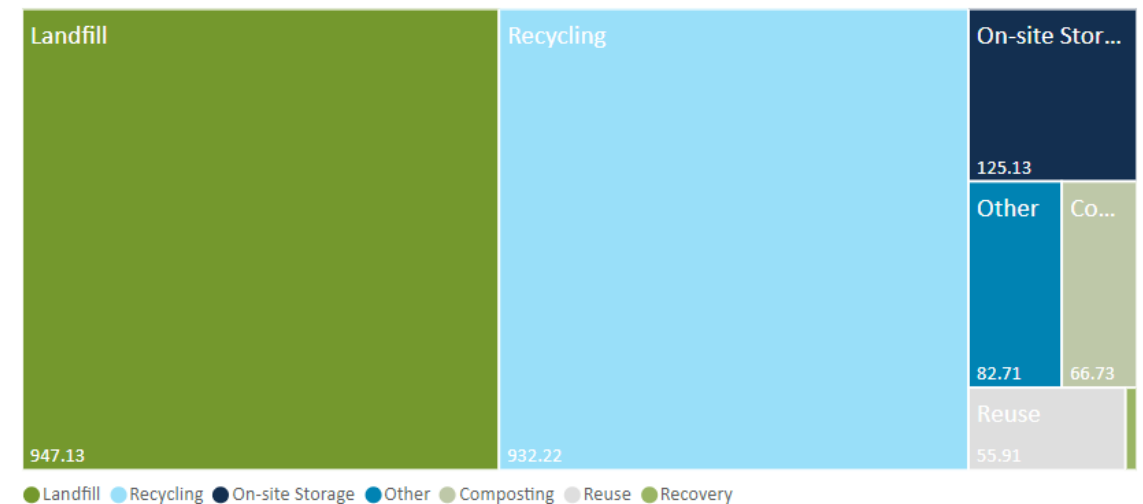
Goal 3 – cont.


- Reporting now fully automated between data input by waste producers and availability of graphics for various audiences
- Data helps inform the waste management improvement activities
- Further developing QA/QC

Summary of Waste Quantity (t) (Last 18 Months)



Summary of Waste Quantity (t) by Waste Sub-Type (Last 18 Months)





**Thank you &
any Questions**

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