



Benefits of Circular Economy in South Australia

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Understanding SA Context





Container deposit legislation since 1970s



Closed last coal fired power station





Elon Musk's Tesla to build giant battery for SA



An artist's impression of the lithium iron battery. Credit: Tesla





Holden Sandman 1970s commercial

SA Weekend

The end of the road for South Australia's auto industry



Project Objectives

- Zero Waste SA - waste minimisation agency has morphed to Green Industries SA.
- Stage government though Green Industries wanted to understand the benefits of potential of the Circular Economy on Jobs and Environment.



Scenarios assessed

BUSINESS AS USUAL

Based on existing trends and implementation of current policy on renewable energy (State Strategic Plan).

EFFICIENT AND RENEWABLE ENERGY

South Australia implements its ambitious Climate Change Strategy 2015-2050.

MATERIAL EFFICIENCY

Products, components and materials are kept at their highest utility/value at all times.

CIRCULAR ECONOMY

The strategies from material efficiency and efficient and renewable energy scenarios are combined to achieve a circular economy.

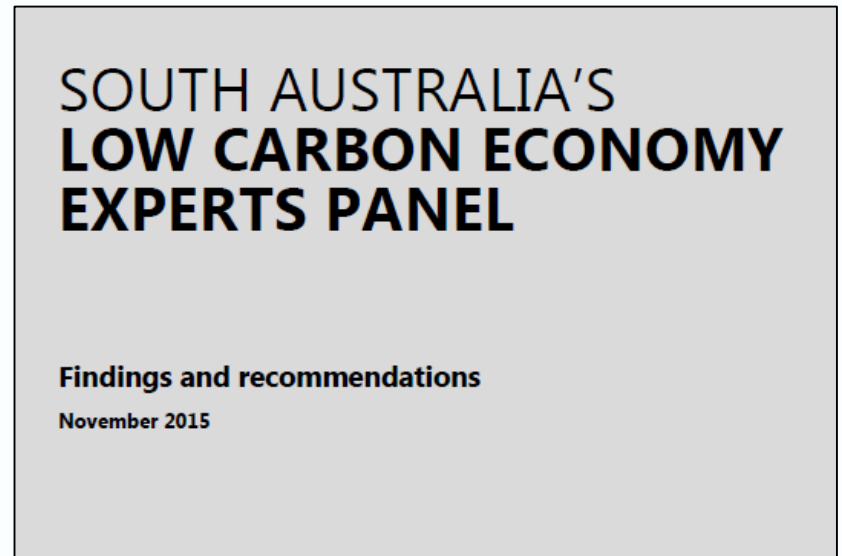


Business as usual

- ▶ Projecting existing baseline trends in South Australia forward to 2030
 - ▶ ABS data, State accounts and Labour force data sets
- ▶ Annual growth rate 2.66%
- ▶ Current State policy on renewable energy is implemented (State Strategic Plan) = 33% more renewables in the energy mix



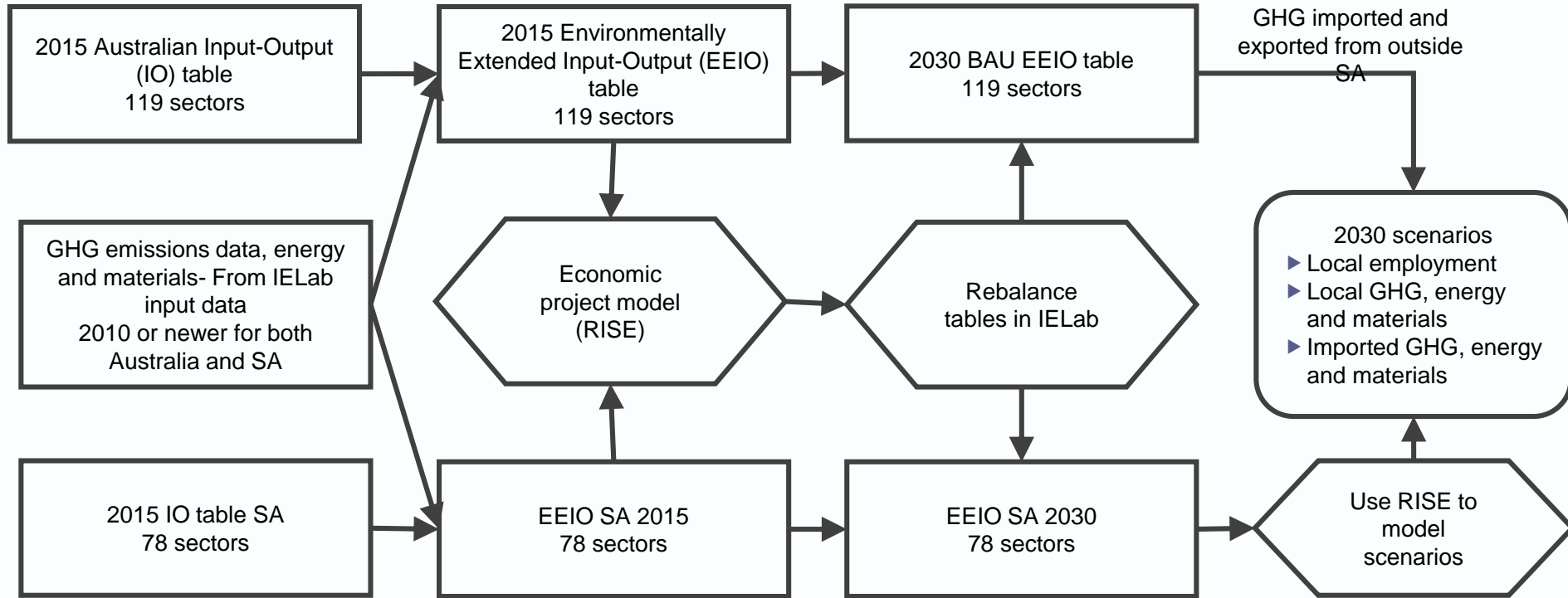
Efficient and renewable energy



Circular Economy



Model



What does the report say? -Results



25,700

ADDITIONAL JOBS GENERATED
IN A MORE CIRCULAR ECONOMY

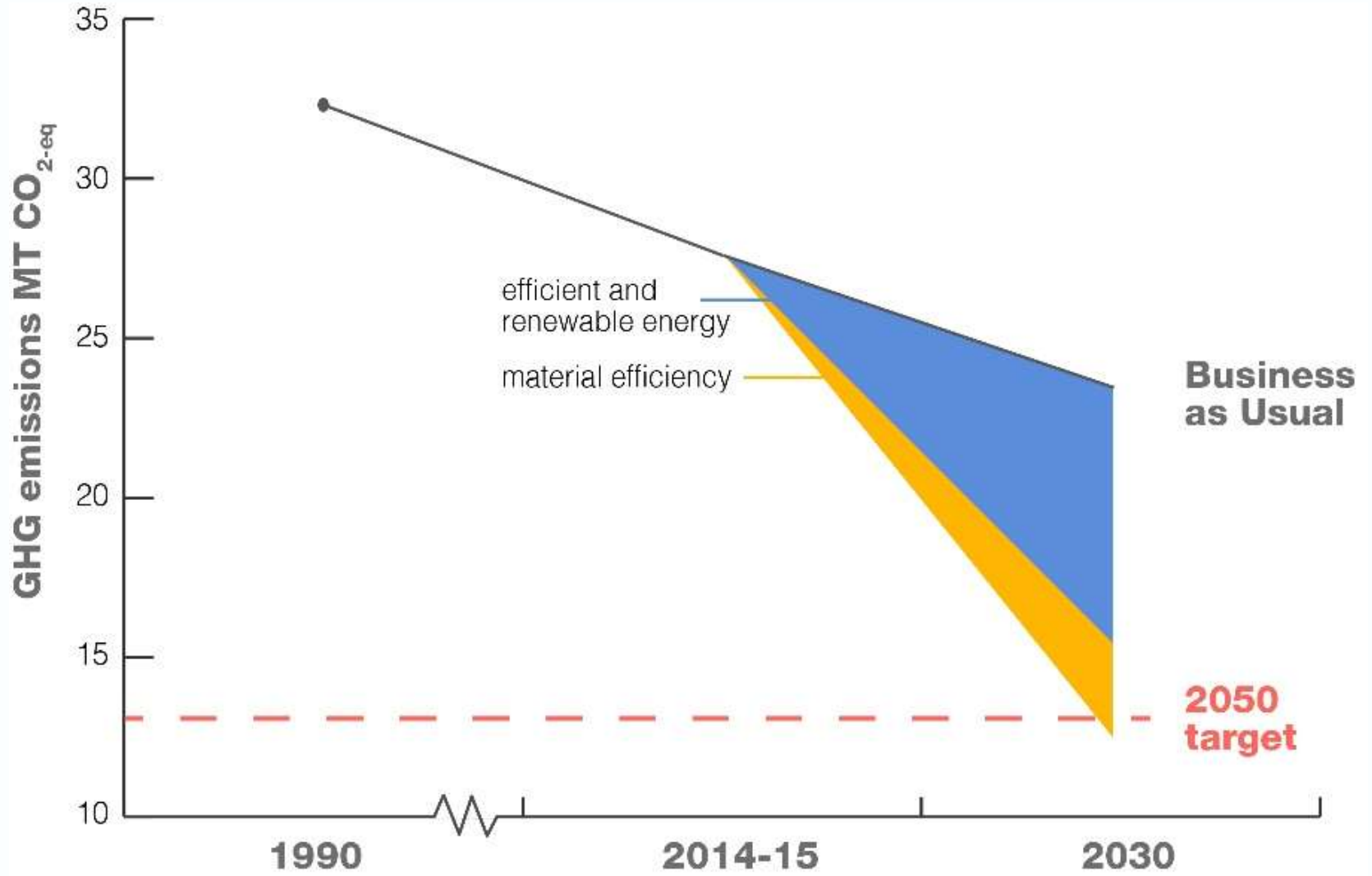
21,000

JOBS FROM KEEPING MATERIALS
IN CIRCULATION

4,700

JOBS FROM EFFICIENT AND
RENEWABLE ENERGY STRATEGIES





	2014-2015	BUSINESS AS USUAL 2030	EFFICIENT AND RENEWABLE ENERGY	MATERIAL EFFICIENCY	CIRCULAR ECONOMY
JOBS (Full Time Equivalent)	701,600	818,100	822,800	839,200	843,800
		+116,500 (16.6%) compared to 2014-15	+4,700 (0.6%) compared to BAU	+21,000 (2.6%) compared to BAU	+25,700 (3.1%) compared to BAU
CONSUMPTION GHG EMISSIONS (Million Tonnes of CO2-eq)	29.7	28.4	22.5	26.7	20.7
		-1.3 (-4.0%) compared to 2014-15	-6.0 (-21.0%) compared to BAU	-1.8 (-6.1%) compared to BAU	-7.7 (-27.2%) compared to BAU
TERRITORIAL ENERGY USE (Peta Joules)	330	428	352	418	342
		+97 (29.4%) compared to 2014-15	-76 (-17.7%) compared to BAU	-10 (-2.3%) compared to BAU	-86 (-20.1%) compared to BAU



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Creating value

HOME | VISION | CIRCULAR ECONOMY DEFINED | BACKGROUND

'The circular economy will be part of our everyday life' - Lindsay - Trident Plastics



THE POTENTIAL BENEFITS OF A CIRCULAR ECONOMY

'It's about being smart about what we want to do in the future' - Kat - Rawtec

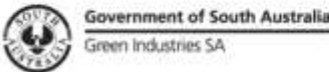
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Creating value

HC

Powering the change to a circular economy



15-16 November 2017
Tonsley Innovation District, Adelaide, South Australia

Business, government, and academia come together in an exchange of ideas on achieving the cocular economy.

Join the discourse and hear of ground-breaking projects and research at the cutting edge.

Powering the change is the first Australasian conference entirely dedicated to the challenges of implementing the circular economy.

Many studies have demonstrated the benefits of making our economies more circular. The World Economic Forum puts the potential economic benefit at \$1 trillion USD annually worldwide.* So how do we get there?

Leading organisations are already implementing pilot projects, policy measures, and cutting-edge research to transform discourse into reality.

Many more are unsure where to start.

Sector characterisation

- Primary: use natural resources as the main resource e.g. agriculture, forestry, fisheries, mining, water
- Manufacturing:
- M1: value-add natural resources into intermediate goods
- M2: produce consumer (i.e. final demand) goods, long-lived
- M3: produce consumer (i.e. final demand) goods, short-lived e.g. food, energy
- Tertiary: services



25% improvement in *material efficiency*

- Is equivalent of 2% p.a.
- All sectors, including final demand sectors (households etc. but not exports), purchase 25% less from P sector goods (except energy) and M1 sector.
- These 'savings' are spent by all sectors on the following industries: installation/maintenance, construction, R&D, engineering-service



50% less virgin material use

- M1 and M2 sectors purchase 50% less materials from P sectors that produce long-lived commodities (e.g. forestry, mining)
- These savings are spent by these sectors on materials from the recycling sector (50%) and M1 and M2 sectors (50%)



X2 product-lifetime of long-lived goods

- M2 sales to intermediate and final users (except exports) are reduced by 50%
- These savings are re-allocated to installation/maintenance, recycling/repair, household goods repair sectors

