

## South Australian Commercial Buildings

Note - The information in the tables below represents the technical assessment and opinions of energy consultant Sustainable Focus and does not necessarily represent the views of the Department of State Development or the Government of South Australia. It is also important to note the data provided is not intended to be exhaustive. Any use of the analysis developed by the consultant should be based on a careful understanding of the key datasets that underlie the analysis. These datasets include:

- Commonwealth Department of Industry and Science 'Commercial Building Baseline Study'
- SA Department of Planning, Transport and Infrastructure, Land Services Group Data
- Property Council of Australia 'July 2012 Office Market Report'
- Commercial Building Disclosure Program 'Register of Rated Buildings'
- Australian Bureau of Statistics 'Business Characteristics Survey'
- SA Power Networks 'Regulatory Proposal 2015-2020 - Appendix 25.2a'



**SA Commercial Buildings – Estimations by Building Type, Floor Area and Number of Sites**

	Floor area '000 m <sup>2</sup>	Number of sites
Schools and preschools	3,268	1,266
Stand-alone offices >1,000m2	2,014	700
Retail centres excluding supermarkets	1,530	60
Hospitals and correctional centres	1,244	105
Hotel and smaller motels and pubs and clubs	694	659
Supermarkets	639	186
Tertiary and Vocational Education and Training	1,283	209
Public buildings, law courts, churches, community halls	254	2,143
Non stand-alone and small offices	1,902	10,000
Retail strip and other shops, cafes, restaurants	2,839	21,000
Light industry	500	3,000
General industry and warehouses	1,500	3,500
Undercover car parks	324	2,172
Common areas in class 2 buildings	438	2,000

**SA Commercial Buildings Lighting Applications - Estimations by Floor Area, Energy use and Upgrade Opportunities**

Lighting application	Floor Area '000 m2*	Lighting energy MWh/yr	Upgrade Opportunities
Carparks	437	24,495	Twin 36W fluoro lamps replaced by T5 luminaire
Low Occupancy Areas Lighting	61	4,148	Twin 36W fluoro lamps replaced by square LED with in-built movement sensor
Halogen downlights	2,088	191,846	35W halogen lamp replaced with 13W LED unit or 8 W LED lamp only
Exit lighting	104	7,041	Old style exit lighting replaced with 4W LED exit lighting
Linear fluorescent – lamp only	10,735	504,781	Twin 36W fluoro lamps replaced by 8W LED tubes or by improved luminaire and single 36W lamp
Highbay lighting	1,494	113,799	400W mercury vapour light replaced with 230W LED equivalent
Outdoor	242	11,237	18W linear fluoro replaced with T5 luminaire
Shoplighters	261	28,522	Replacing 150W metal halide luminaire with a 75W LED equivalent

\*Excludes approx. 3000 m<sup>2</sup> floor area already upgraded

### SA Commercial Buildings – Sustainable Focus Analysis Data Sources and Limitations

Dataset	Information Use	Sustainable Focus assessment of limitations
Commonwealth Department of Industry and Science 'Commercial Buildings Baseline Study'	Floor Area for South Australia by building type.  Energy used in lighting for building types and relating to floor area.	Data is focussed on larger buildings. Does not cover industrial uses. Sample sites used are often from interstate sources and not South Australia. Floor area encapsulates a range of uses within a building. Interpretation of the data requires a careful reading of the associated reports. Numbers of sample sites are not statistically significant and therefore used as a guide in model development. Breakdown will be heavily influenced by air-conditioning energy which varies by climate.
SA Department of Planning Transport and Infrastructure, Land Services Group Data	250,000 non-residential sites with classifications from local government and the Valuer General, resulting in classifications by business type. The dataset includes land area for each site and land value. Capital value included for about half the sites.	The capital improvement value has been used as a proxy for floor area. The reliability of this approach is unclear. It is also unclear if the average floor area for sites with valuations can be extended to sites without valuations. The overlap with other data sources is not readily identified.
Property Council of Australia 'July 2012 Office Market Report'	Supporting data for floor area of buildings in Adelaide Core, Fringe and Frame. Focus on office and retail space.	Data only covers sites greater than 400m <sup>2</sup> . The level of floor space outside of Adelaide and its fringe is unclear.
CBD Program – 'Register of rated buildings'	Supporting data for relative building performance across large building stock.	Data is only captured when buildings are re-leased or sold. Over time this will become a more comprehensive resource.
Australian Bureau of Statistics 'Business Characteristics Survey'	Business numbers can be generated by different Council areas. Significant detail in business types. Can also match to some extent with business size.	The business categories do not match with the Valuer General business descriptions.
SA Power Networks 'Regulatory Proposal 2015-2020 Appendix 25.2a'	Small business electricity use, split into single rate and two rate tariff classes.	SAPN classifies many businesses as small. Each meter is considered a customer although one customer may have multiple meters and some customers run embedded network to feed many businesses within a building.