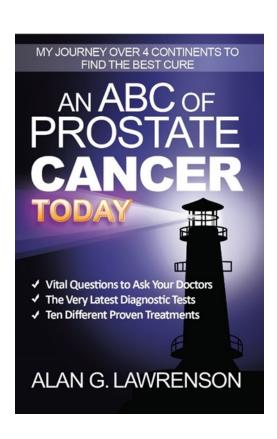
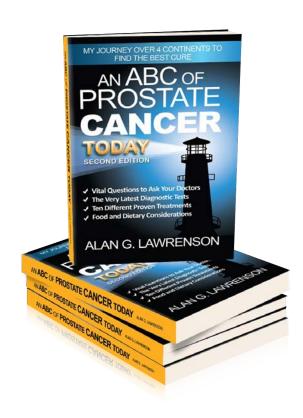
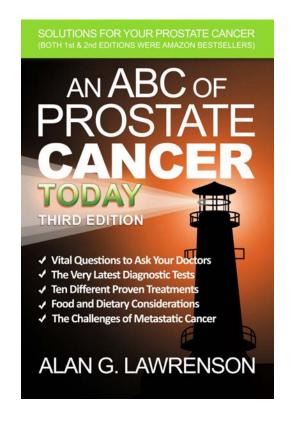


## THREE PREVIOUS BESTSELLERS







#### Dan W, Australia's top energy bureaucrat, said:

"To ensure Australian consumers continue to have access to reliable electricity supplies, it's critical that planned investments in transmission, generation and storage projects are urgently delivered."

### Prof Bruce M, researcher, said the VNI West and WR Link:

"Will be the biggest single expense in the Victorian transmission system in more than 50 years and the biggest mistake in transmission planning in living memory."

### Why You Should Buy This Book?

- Each chapter is a story in itself. Its 495 pages are packed with essential information.
- Find out how your future energy needs will be impacted.
- It's written in an easily understood manner.
- Key statements are referenced to their source.



Alan G. Lawrenson



**CAN WE KEEP THE LIGHTS ON?** 

# AUSTRALIA'S LOOMING ENERGY **CRISIS**

1 H (Copper 1.008 Copper 63.543 Cobatt 58.933 Cobatt 58.933 Cobatt 58.933 Cobatt 58.933 Cobatt 58.693 Cobatt 58.69

AUSTRALIA'S LOOMING

ENERG

CRISIS



**ALAN G. LAWRENSON** 

## Contents

Chapter 1.	Are we Facing an Energy Crisis in Australia?	Chapter 13. A Hydrogen Economy
Chapter 2.	Climate Change and a Net Zero World	Chapter 14. Biomass and Biofuels
Chapter 3.	Australia's 43% Reduction in GHG by 2030	Chapter 15. Critical Minerals Wanted?
Chapter 4.	The Present Energy Grid and How it Works	Chapter 16. A Brief History of Nuclear Energy
Chapter 5.	The Role of Coal in the Energy Market	Chapter 17. Nuclear Power Generation Today
Chapter 6.	The Role of Gas in the Energy Market	Chapter 18. Nuclear Safety Considerations
Chapter 7.	Hydro and Pumped Hydro Generation	Chapter 19. Large Scale Nuclear Reactors
Chapter 8.	The Electric Vehicle Market	Chapter 20. Small Modular Reactors
Chapter 9.	Battery Technology and Recycling	Chapter 21. Uranium Mining and Processing
Chapter 10	Energy Storage, Transmission & Distrib.	Chapter 22. Can We Keep the Lights On?
Chapter 11.	Solar Now, By 2030 and Beyond	Chapter 23. Finding a Better Way?
Chapter 12.	Wind Now, By 2030 and Beyond	Chapter 24. Final Thoughts and Actions

## Critical Minerals Criticality Analysis in 2030

Element	Mining Criticality %	Processing Criticality	Comments
Lithium	Minus 10 to 15	Sufficient	Sodium-ion or silicon battery might fill this shortfall
Copper	Minus 15 to 20	Sufficient	New large mines under development will help
Cobalt	Deficit 28-30	New Western refineries	Deficit depends on Indonesian pig iron nickel
Nickel	Sufficient	New Western refineries	New Australian and Indonesian mines are key
Manganese	Minus 8 to 47	New Australian Process	Euro Manganese claim 390kt deficit. McKinsey say -8%.
Graphite	Minus 25 to 33	Need many refineries	High CO <sub>2</sub> output synthetic graphite may fill the gap
REEs	Minus 15	Need 4 new refineries	Supply tightness until ARU, ILU, HAS and others start up

### The Book Queries:

- Will Toyota's Solid State Batteries Curb the Lithium Demand from 2026 ?
- Can we Install 600 Million Solar Panels by 2050?
- Who will Win the Poles & Wires Battle?
- How to build Nuclear Plants on Time & On Budget

