

# GLYNDE, ROBIN HOOD AND GOLDEN FLEECE HOTEL ENERGY EFFICIENCY PROJECTS



# BUSINESS OVERVIEW

- Family owned Hotels – second generation
- Employ approximately 110 people
- 3 very different Hotels in 3 very different suburbs
- Won numerous industry awards

# WHY DID WE EMBARK ON THIS PROGRAM?

- State wide blackout
- 24 hour blackout in 2016 at the Robin Hood – Saturday before Christmas
- Reliability concerns on supply - grid overload in times of high demand
- Cost of electricity – before project over \$350,000 per year
- The desire to be in charge of our own power not be beholden to forces outside of our control.
- Opportunity to upgrade inefficient equipment

# WHAT DID WE DO??

- Engaged energy consultant to do a level 2 audit to identify inefficiencies
- Worked with consultant to create a hybrid energy plant at each Hotel
- This consisted of – solar, generators, lighting upgrades and other projects
- Also coordinated to run parallel with the grid through SAPN
- Reduction in block demand and capacity through our energy retailer
- Invested over \$600,000 in project
- The whole system was designed to reduce stress from the Grid at times of peak demand and allow us to operate in a more efficient and reliable manner.
- Have calculated a pay back of approximately 4 years.

# HOW DOES IT WORK?

- The Hotels have embarked on numerous power saving measures as through the level 2 audit
- The next step is to make further savings from the grid.
- The Hotels are operating on a block demand philosophy of under 100kva.
- When the power demands of the Hotel are to exceed the 100kva demand from the grid the generator operates to keep the peak demand below 100kva. – Power lopping
- Example: - Hotel needs 130KW. Solar is producing 40KW. Then generator does not engage. If solar is only producing 20KW then generator picks up the remaining 10KW.

# OPERATING PHILOSOPHY

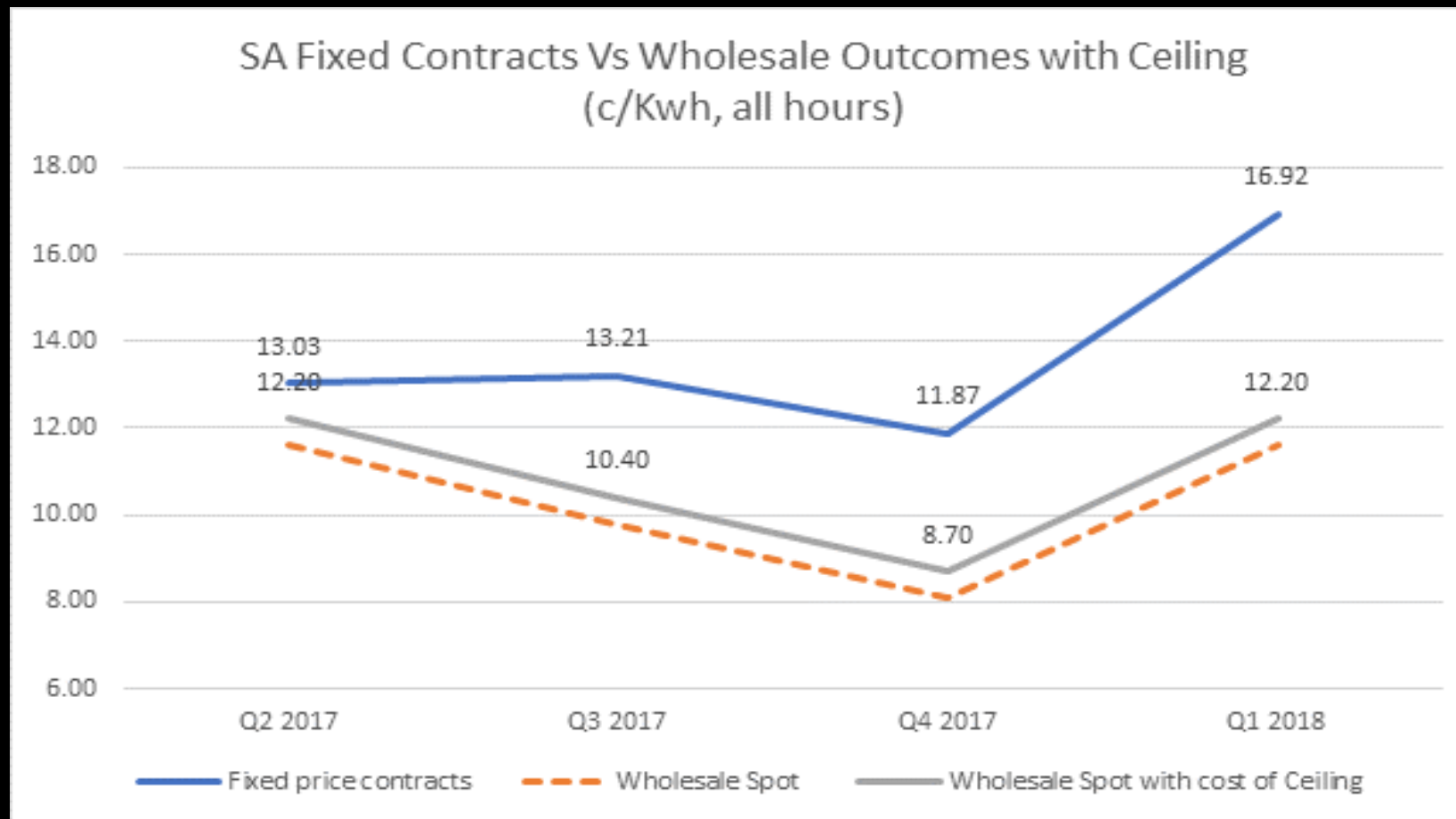
- Grid/Solar - Normal Operating Condition (total building demand below 80 kW) SAPN Network
- Maintains a minimum 14 kW import to contribute to the energy demands of the building
- Generated power from the solar PV inverters contribute towards the supply of the energy requirements for the building for peak lopping; and,
- Runs in parallel with the Network and contributes towards the supply of the energy requirements for the building for peak lopping at high demand; and
- Will NOT export any power to the Network regardless of the building's demand. Diesel Generating Unit(s)



# WHAT NEXT?

- Spot market
- Software to monitor and coordinate generator and grid.
- Extremely volatile
- Can be paid to use electricity
- Generator takes Hotels off grid when the spot market exceeds the cost of running the generator and stays running until pricing normalises
- Batteries – can be recharged during times of low prices and or when being paid to consume.
- Off Grid – an aim. Our system is set up to facilitate this. Just need storage to become more efficient and cost effective.

# AVERAGE SPOT MARKET RATE





LETS DRINK TO THAT!

