



ARIA PROFESSIONAL SERVICES PTY LTD

ABN 34 066 671 850
129, 80 The Pines, Elanora, QLD 4221
Ph (07) 5533 0355 Fax (07) 5533 0266 Mob (0412) 257 520
Email : rick@ariaps.com.au
Web : www.ariaps.com.au

Barriers to Implementing Demand Side Management in Gold Coast Accommodation Facilities

Date :

Organisation Name :

Person Interviewed :

Position :

Interviewer :

1.0 BUILDING SYNOPSIS

- 1.1 No. of beds :
- 1.2 No. of levels :
- 1.3 Age of building :
- 1.4 Are guest rooms air conditioned ?
- 1.5 If so, what type ?
- 1.6 What type of hot water plant do you have ?
- 1.7 Is there a heated swimming pool ?
- 1.8 Have you investigated re scheduling of any non essential loads to avoid peak demand charges ?
- 1.9 If so, which loads ?
- 1.9 Has an energy audit been conducted in the last three years ?

2.0 MANAGEMENT REGIME AND DECISION MAKING

- 2.1 Who owns the building ?
- 2.2 Who pays the electricity bills ?

- 2.3 Who makes investment decisions around capital expenditure ?
- 2.4 What return on investment is expected ?
- 2.5 Describe the decision making process and what values (apart from economic ones) drive it.
- 2.6 What are the biggest barriers to an investment decision **being able to be made** and how could they be resolved ?
- 2.7 What are the biggest barriers to an investment decision **being made** and how could they be resolved ?
- 2.8 Would your organization be interesting in paying for an energy audit service ?
- 2.9 Would you say that turn over of individual apartments constitutes a barrier to investment in long term demand side management ?
- 2.10 What needs to be offered to Body Corporates to speed up / increase investment in DSM ?
- 2.11 What needs to be offered to private owners to speed up / increase investment in DSM ?

3.0 ON – SITE GENERATION

If you have an on-site generator :

- 3.1 What is the type of generator? (e.g. Diesel, Gas, Co-generation, Combined Heat and Power)
- 3.2 What is kW or kVA rating of the generator? (Maybe obtained from generator nameplate.)
- 3.3 What was the year of generator installation? (Maybe obtained from generator nameplate.)
- 3.4 Is the generator serviced? How often?
- 3.5 Are synchronising controls provided for exercising/testing of generator?
- 3.6 Would you consider operating the generator during peak times? The evening peak is approximately 2 to 3 hours duration and occurs approximately 40 to 50 times per annum). *The minimum generator upgrade cost is typically in the order of \$60k in the absence of network technical constraints.*
- 3.7 What are your main concerns with operating your generator during peak times?
- 3.8 What is the fault current withstand rating (in kA) of your main electrical switchboard(s)?

- 3.9 Does your main electrical switchroom or adjacent rooms have any spare physical space for additional electrical cubicle(s) (approx. 600mm wide x 900 mm deep)?

If no generator on-site :

- 3.10 Have you considered installing an on-site generator to provide electricity for operation of lifts, emergency lighting, fire water pumps and other essential services in the event of a power blackout? Cost typically in the order of \$400k for a 1000kVA diesel generator set and fuel system.
- 3.11 Do you have a location which may be suitable for the generator and day fuel tank (if diesel driven)? (Approximate space requirement may be 3m Length x 2m Wide x 2m High for a 220kVA generator set or 6m L x 3m Wide x 3m High for a 1000kVA generator set)
- 3.12 If installed, would you consider operating the generator during peak times? (The evening peak is approximately 2 to 3 hours duration and occurs approximately 40 to 50 times per annum).
- 3.13 What would be your main concerns with operating the generator during peak times?
- 3.14 What is the fault current withstand rating (in kA) of your main electrical switchboard(s)?
- 3.15 Does your building have a separate essential services switchboard or electrical bus? This will affect the minimum size of generator required for effective standby (emergency) operation.

4.0 ENERGY EFFICIENCY AND LOAD SWITCHING

- 4.1 Do you know if the DSM investments made to date have been worthwhile ?
- 4.3 What energy efficiency or load switching initiatives do you currently have under consideration ?
- 4.4 How are you evaluating these ? (internally or via third party)
- 4.5 What would make evaluation easier ?

5.0 POWER FACTOR CORRECTION

Power Factor Correction is a proven cost effective method of kVA demand reduction implemented widely in NSW. A peak demand reduction of 15% to 20% may be achieved.

- 5.1 Do you have any power factor correction (or capacitors) installed at present?
- 5.2 Would you consider installing power factor correction equipment in your main switch room in order to reduce your electricity peak demand/bill? Cost is approximately \$60-70/kVAr e.g. \$10,000 for a 150kVAr unit.

- 5.3 What are your main concerns with power factor correction?
- 5.4 Do you have data on your maximum electricity demand in kVA ?
- 5.5 Do you have data on the power factor of your electricity demand ?
- 5.6 Do you have available physical space in your electrical switchroom or adjacent rooms for the installation of a power factor correction cubicle (approx. 600mm wide x 900 mm deep x 2200mm high)?

6.0 ROLE OF ELECTRICITY RETAILER

- 6.1 Who is responsible for the negotiation of electricity purchase contracts ?
- 6.2 What information do you require from your retailer to define the service and negotiate the contract ?
- 6.3 Would the offering of a DSM service as a part of the contract be considered an important part of the decision making process, or just the promise of cost savings ?
- 6.4 What information do retailers normally request to negotiate a contract, and are you able to provide it ?
- 6.5 Do you understand the what factors impact the total of your power bill ?
- 6.6 How for example would you go about reducing peak demand charges ?
- 6.7 What information on your current power bill do you find most useful ?
- 6.8 Rate the importance of the following information :
 - occurrence and duration of peak and associated charge ?
 - breakdown of where and when energy is being used ?
 - comparison with other months / years ?
 - tips on reducing energy costs ?
 - sources of additional information ?
 - access to period to date energy bills ?

7.0 INFORMATION AND EDUCATION

- 7.1 Where do you get your information of energy use and supply from?
- 7.2 Are you aware of the connection between your energy use and impact on the network, and how that impacts the end cost to you ?
- 7.3 If you could address something relating to energy in your building tomorrow what would it be ?
- 7.4 How do you keep up to date with DSM technology ?
- 7.5 What technology that you are aware of interests you the most and holds the greatest promise for the future ?