



## TEEP Energy Audit

### Case Study

#### SKOTEL ALPINE RESORT

**For no capital outlay, simply a change in the way they run their business, Skotel Alpine Resort can save on their energy costs. The Skotel is one of several tourism businesses to be audited as part of TEEP 2009. Importantly, the audit also identified Skotel could save an additional \$13,000 annually if they change their existing energy pricing plan and resolve incorrect charging from their lines company.**

The Skotel Alpine Resort is nestled on the edge of the Whakapapa Village. This mountain retreat features a friendly restaurant and bar, spa pool/sauna, lounge and conference facilities, and offers a comfortable base for visitors to explore Tongariro National Park or hold corporate events.

The resort, a TIA member, has several different types of accommodation within the main building complex. These include twin or triple rooms in the backpackers' wing, and "superior" and standard rooms in the hotel wing. There are also five small self-contained chalets located just below the main building.

#### Energy Use

The Skotel uses electricity for its energy needs. Its energy bill for 2008 was \$119,295. Heating (hot water and space) accounts for about 75% of total energy use.

The audit found that there is room for improvement in the site's overall energy efficiency.

The savings identified are primarily associated with reducing the wastage of energy in unoccupied areas, improving the efficiency of the site's lighting and restricting the flow rate of showers to standard levels. Positively, the majority of lighting is fluorescent and the newly renovated backpackers' bathrooms have low-flow shower heads, reducing both water use and the energy required for water heating.

A number of issues relating to Skotel's energy bill were also identified. Changing to a more appropriate energy pricing plan could save Skotel \$9102 annually. Ensuring that possible incorrect supply charges are resolved could result in annual cost savings of \$3879 and a significant rebate, depending on how long the incorrect charging has been going on.



## Cost, Savings and Payback Time

A total of \$18,344\* in cost savings was identified with payback in less than three years, with 72% of savings able to be achieved immediately at no financial cost. \*Excludes energy tariff changes.

### Immediate payback

- Implement room heating policies to minimise waste heat energy and encourage guest involvement in energy conservation; switch the sauna off until half an hour before required use; instruct staff to turn off PCs when they go home or leave them unattended for more than one hour; remove or disconnect the fluorescent tubes where lighting is not required; turn off rowing machines and arcade games overnight.

**Total Cost: \$0**

**Total Annual Cost Saving: \$13,202**

### Payback in less than one year

- Replace existing lighting with more efficient options; install flow restriction devices in showers in selected rooms.
- Carry out recommended measures to improve the control of lighting on the site.

**Total Cost: \$1888**

**Total Annual Cost Saving: \$4865**

### Payback in less than three years

- Repair deteriorating hot water tank insulation.

**Total Cost: \$784**

**Total Annual Cost Saving: \$277**

“The audit was definitely worthwhile and has given us good ideas for saving power,” says Skotel owner John Strevens. “It was very helpful to get an outsider to come in and give us the once-over.” We have done quite a few of the easy things recommended in the audit first, such as changing the light bulbs and putting limiters in the showers.

He noted, however, that the audit was undertaken at the beginning of winter when there were few guests but the outside temperature was cold.



“To achieve the savings estimated in the audit would result in casual guests being shown to very cold rooms and would also require additional house-keeping and reception costs to manage the process.”

Mr Strevens says good savings could be made, but not to the extent estimated in the audit report without compromising guest comfort.

“A very important aspect to us was that the audit revealed possible overcharging by our lines company which we are following up. This is particularly relevant, given that line charges have risen much faster than energy charges in the last three years.”

The Tourism Energy Efficiency Programme (TEEP) was originally developed as a regional pilot in 2008. After a successful first year it was extended into a national programme for 2009.

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