

Energy Efficiency Fact Sheet: Bakeries

Shop bakeries typically spend between \$5000 and \$50,000 per year on electricity, with an average cost of around \$10,000 per year. In most cases, energy savings of up to 20% can be realised with little cost and effort, which is the equivalent of increasing annual sales by around \$20,000.

Quick and easy things to do

- 💡 **Minimise oven warm-up time.** Unnecessary energy loss will occur if ovens are switched on earlier than required. Note the time between start up and when the thermostat switches the heat off and use this as a guide.
- 💡 **Check oven and prover door seals regularly.** Oven and prover door seals will deteriorate over time, which will cause heat and steam loss. Replace damaged or worn seals as soon as possible.
- 💡 **Operate ovens at full capacity.** Schedule work so that the oven is as full as possible when turned on. Baking the same quantity of goods in as few loads as possible will save energy.
- 💡 **Ensure a good bakery layout.** Cooling equipment such as refrigerators and freezers should be placed as far away from ovens as possible. Keep an air gap of at least 10-15cm between heating and cooling appliances.
- 💡 **Keep electrical elements clean.** A clean element will radiate heat more efficiently than a dirty one. Establish a regular cleaning cycle that removes food and dust build-up.
- 💡 **Repair and upgrade damaged oven and prover insulation.** Maintain the insulation in oven walls and between the decks. A well insulated oven will also reduce the cooling load of air conditioning. An oven with a solid door rather than a glass window will retain heat longer.
- 💡 **Lubricate moving parts.** Moving parts such as mixers will run more smoothly and efficiently if well-lubricated.

Energy Savers



Reduce oven pre-heat time



Replace damaged seals



Operate oven at full capacity



Keep elements clean



Board oven insulation

Great ideas for longer term savings

- 💡 **Upgrade to an energy efficient oven.** Look for ovens with individual temperature and time controls for each deck. Choosing models with a standby mode will allow temperature to be maintained between loads, while shutting down features that are not needed between loads such as fans and exhausts.
- 💡 **Install variable speed drive motors in the oven hoods.** A variable speed drive with manual adjustment allows exhaust and supply fans to run at different speeds according to the load. Switching variable speed drives to high speed only when necessary will save energy.
- 💡 **Recover waste heat.** A large amount of heat is wasted through oven flues and exhausts. Look for opportunities to use waste heat in place of space heaters or water heaters for provers or sinks.
- 💡 **Upgrade to an energy efficient prover.** Choose provers with multiple cabinets with individual control over temperature and humidity. Smaller loads will then require only part of the prover to be running.
- 💡 **Upgrade electric ovens to gas.** Gas ovens are more economical to run than electric ovens. Ask your gas provider for information on new appliances.
- 💡 **Have an energy audit done.** An energy audit will determine how to use energy efficiency to increase profitability in your business. Register for a free energy audit at 3eproject.org.au.

Did you know?

- 💡 An empty oven can lose around 10 kW through the walls and doors.

“We used to spend over \$9000 per year on the baking ovens. We have gas pipes in our street so we asked the gas company to connect us, then we changed over to gas ovens. Now we save \$4000 per year!”

- **Manish, Auburn**

For further information contact the 3E Project Team on 1800 242 845 or by email at info@3eproject.org.au

Energy Savers



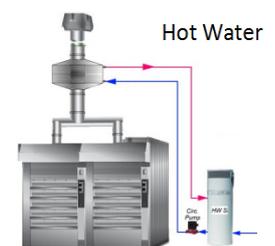
Individual control for each deck



Variable speed drive oven hood fan



Multiple cabinet prover



Heat recovery from oven flues

