

# INTRODUCTION

Farming relies on energy to heat, light and ventilate barns and greenhouses, plant and harvest crops, power electric fencing, fuel equipment, pump and heat water, and much more.

In nearly every energy use are opportunities to improve efficiency and reduce costs. The key is to identify how much you're using in each facet of your operation, where efficiencies are possible, and the most appropriate solutions for your circumstances.

Farming also offers opportunities in renewable energy generation. Conserving or generating energy begins with familiarizing yourself with all the different approaches – what's involved and pros and cons – and which might be feasible in your operation.

This booklet begins where you should too: the farm auditing process. Working with a professional is the best way to map out what your operation uses now, and where you can save.

We also introduce different forms of on-farm generation: solar, wind, geothermal, micro hydropower, biomass, biofuels, and biogas. The focus is farm-scale generation for on-farm use.

Whether it's a large or small investment, always work with reliable industry professionals to ensure you're making the best choices for your circumstances.

**This booklet introduces farm-scale projects for energy efficiency and generation.**



**Barn renovations provide a good opportunity for replacing older equipment, like this ventilation fan, with energy-efficient technology.**

## GETTING STARTED

One energy conservationist has advised: “Invest your first energy dollar in conservation and efficiency. Then invest the money you’ve saved in green energy alternatives.”

Many energy-saving steps have very quick paybacks, making them the best place to start.

### STEP 1

Conduct an energy assessment or audit.



### STEP 2

Follow the energy audit: conserve energy and replace with energy-efficient technology where recommended.



### STEP 3

Explore and integrate green energy technology where feasible.

In energy speak, *conservation* and *efficiency* are not interchangeable.

*Conservation* is wise use. For example, when using the clothes dryer, it’s best to do a full load, not just a few small items.

To continue the dryer analogy, *efficiency* would mean drying similar fabrics together – using energy more efficiently. Or it could mean upgrading to a more efficient dryer that uses less energy.