

# ENERGY CONSERVATION

## For Farms

*Getting Started Guide*



# Farm Energy Consumption

It's important to assess your current energy expenses before you make any changes. Answer the following questions to see what energy improvements can do for you.

## A look at your energy expenses

			Example
Total 12-month electricity expenses:	\$ _____	per year	\$31,000/yr
Total 12-month diesel expenses:	\$ _____	per year	\$43,000/yr
Total 12-month heating fuel expenses:	\$ _____	per year	\$26,000/yr
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Total annual energy expenses:	\$ _____	per year	\$100,000/yr

**Tip:** Don't want to add up all those bills?  
Just call your utility provider and ask for the total.

## What if you could save 10%?

$$10\% \text{ Savings} = \frac{\text{Annual Energy Expenses}}{10} = \$ \text{_____} \text{ per year}$$

**FYI:** Many energy efficiency projects save 25% - 75% of the current system's energy use.

**GREAT!**

**Now what?**

*Keep reading to see how you can  
capture those savings!*

# How can I reduce my **ENERGY COSTS?**

## **REDUCE**

First, look to reduce energy. Reducing the amount of energy you use is the easiest way to save on energy costs. You can reduce energy use with control changes or more efficient equipment.

## **REUSE**

Reusing energy you have already paid for is the next best thing. Heat recovery methods are a very common example.


## **RECYCLE**

Recycling energy is becoming increasingly common and a smart investment. Recycled energy is typically called renewable energy. Just like recycling paper into cardboard boxes, farms can use anaerobic digesters, solar panels, and many other devices to turn one type of energy into another.

*Want an expert to give specific suggestions for your farm? Take a look at the next page.*

# **HOW DO I KNOW**

which option is right for me?



**Maybe an  
ENERGY  
AUDIT?**

Keeping reading to find out what's included in an Energy Audit.

# What's included in a basic **ENERGY AUDIT?**

1

Analysis of current energy use

2

Evaluation of current equipment & operations

3

Recommendations for improvement with estimates of savings, cost, and payback

4

A report that documents all the above

Can I get one for  
**FREE?**

# MAYBE...

Here are the top 3 options for getting an energy assessment for your farm.



AgEMP

Contact NRCS about their Ag Energy Management Plan



REAP

Ask USDA Rural Development about the Rural Energy for American Program



Utility  
Incentive

See if your utility company has an incentive program



Should I get an  
**ENERGY  
AUDIT?**



**Matthew R. Hein, M.S., P.E.**

Just call  
605.695.8582  
for a **FREE**  
Consultation

**Talk to your local NRCS or USDA office  
about their energy efficiency programs.**

**If you answer 'yes' to any of the following, you  
should consider an energy audit.**

- Is your 10% savings (see page 1) over \$5,000?
- Do you have incandescent or high-intensity lighting in your barn or shop?
- Do you have more than 10 ventilation fans?
- Are you a dairy operation?
- Do you like saving money or care for the environment?

Is it worth it

???

# Farm Energy Audit Results\*

Project	Savings	Incentive	
LED Barn Lighting	\$3,400 /year	\$5,700	4.6 year payback
Grain Dryer	\$32,700 /year	\$32,000	53% energy savings
Barn Ventilation	\$4,300 /year	\$2,100	11 months
Tower Grain Dryer	\$7,500	\$53,200	34% energy savings

\* Results of energy audits are estimates.

## What are our customers saying?

### Overall Satisfaction



... great communication and people skills.

Very thorough!

Matt Hein is very knowledgeable ...

**NOW  
WHAT?**

# CONTACT...



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OR

## USDA Rural Development

1-800-670-6553  
<http://www.rurdev.usda.gov/contactus.html>

OR

**Natural Resource Conservation Service**  
[Find your local field office](#)