



The Energy Pyramid: Solutions from the Ground Up

With today's sky-rocketing energy and fuel prices, the agricultural sector is increasingly interested in investing in new ways to save energy and fuel (and thus money) on their farms. What many do not know is that there are several steps to saving energy and fuel. From simple, every day actions to large investments into the future, working your way through the steps can mean immediate savings. The Energy Pyramid is an effective guide to saving our natural resources, one step at a time.

The energy pyramid was designed by EnSave in 2007 as an illustration to help others understand the process of using energy efficiently. EnSave developed this tool as a result of its 17 years' experience designing and implementing energy efficiency programs for farms. In today's world, renewable energy is presented as the only way to help not only the agricultural sector but America in general curb our dependence on foreign oil. The reality is renewable energy is the ultimate goal, not the starting point.

Instead of leaping straight to the end, following the energy pyramid from the ground up lessens our dependence on foreign oil, while allowing both the agricultural sector and society in general to not feel overwhelmed by the size of the ultimate goal. The energy pyramid shows us that by building on a solid foundation designed to support the ultimate goal, renewable energy becomes a logical conclusion and not an impossible dream.

The ground step on the energy pyramid is the simplest: Energy Analysis. Take a look at equipment currently in use. Does it have a regular maintenance schedule? Is it in good working order? Is equipment being run even when not in use? It is very difficult to save energy and money if equipment is not properly maintained or is overtaxed.

The second step on the pyramid is Energy Conservation. Simple behavioral changes can make a long lasting (and immediate) impact on the amount of fuel and electricity used. Simply by turning off unneeded lights, fans, and equipment, and adjusting the thermostat, savings can be achieved.

Energy Efficiency is the third step on the energy pyramid. By taking the human element out of the process (such as installing automatic timers), it is ensured that the lights will be turned off, and the fans will only come on when needed. Upgrading to equipment that is energy efficient (such as Energy Star[®] washers or NEMA Premium[®] motors) requires an initial investment, but the quality and longevity of the equipment is usually worth it.

The fourth step in the pyramid is Time-of-Use Management. This is the second to last step, and where dedication to changing behavior impacts not only the farm's bills but the greater community as well. By running as much equipment as possible during off-peak hours, demand charges will decrease, often significantly. Not only will the farm benefit from smaller bills, but

the community at large will benefit as well. Less usage during peak hours means that that power stations will not have to struggle to meet needs, and will emit less pollution in its attempts to keep up with the demand.

At the top of the energy pyramid is the ultimate goal: Renewable Energy. Simply put, renewable energy is manufactured from naturally replenishing sources, such as solar and wind power, hydroelectricity, and bio-fuels like methane derived from manure or landfill gases, and corn-based ethanol. Conversion to renewable resources can be a costly investment, but in the long run the payback could be huge.

The future of America's agriculture, and America itself, requires that we lessen our dependence on foreign oil and look to ourselves to meet our energy needs. Each one of us has the power to do this. Whenever unused lights are shut off or heaters are set at 65 instead of 74, a difference is made. By building on these simple steps, renewable energy becomes a viable, obtainable goal.

If you are interested in any aspect of the energy pyramid, or would like an energy analysis performed on your farm or food processing facility, please contact EnSave, Inc. at (800) 732-1399 or visit them online at www.ensave.com.

