



**R**ecycling and  
**E**nvironmental  
**A**ction  
**P**lanning  
**S**ociety

# Greening Your Office

...one tip at a time!

We care about the environment and we know you do too. Your office is a great place to make little changes that make a big difference. Here are some ideas to help you do just that. Provided monthly by R.E.A.P.S., we hope they inspire you to create change!

## GREEN TIP #63:

July 2015

## Torrefaction for the Coffee Lover

You probably didn't know that a cup of coffee contains a renewable energy secret. Its name is torrefaction. What is torrefaction, you may ask? Well it is just a fancy name for a coffee bean roasting process in which biomass is heated to 280°C in an environment without oxygen. This increases the mass by removing volatiles and breaking down the complex parts so carbon energy is more easily used. It pretty much says roasting biofuel like coffee beans can boost energy production yield.

Sky is the limit for the benefits of torrefaction. The dry pellets greatly reduce the cost and environmental footprint of shipping biomass fuels. The increased energy density allows it to co-feed the biomass in plants designed for the higher energy content of coal: the product has better fuel characteristics than the original biomass. In addition, the process makes the biomass resistant to water absorption, meaning that power plants can store the materials outside without it reeking or ruining the feedstock.

During the torrefaction process, a combustible gas is released, which is used to provide heat to the process.

As for our coffee, torrefaction makes the beans brittle and gives them their distinctive flavor. Companies like La Colombe Torrefaction use this energy-efficient process and produce coffee that is recognized worldwide for its quality.



This process can also be coupled with burning coal resulting, in higher energy output and reduced greenhouse gas emissions. When buying coffee, make sure the company gets it from a sustainable source and the processing is environmentally friendly. Just think, by buying coffee from a company that uses torrefaction for their coffee beans, you can save the world. One cup at a time.

Do you have any questions or suggestions? Call or email us at [green\\_solutions@reaps.org](mailto:green_solutions@reaps.org)!