

SAY YES TO ENERGY SAVINGS!

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ABSTRACT

The most important goals of sustainable development are to reduce the adverse consequences of the substances that we use and generate. It is a challenge before chemists to develop synthetic methods that are less polluting i.e. to design clean or 'green' chemical transformations. But it is not only the duty of the chemists to develop green methods. The general public should also explore ideas to go green and save green. Keeping in view that there is no planet B, we must have to discover certain ideas to go green and save green. We must save energy. Let us be selfish. Let us save energy to save money. Various ideas to save energy have been discussed in this paper. It is hoped to find a real practical solution for environmental degradation and save energy. Let us go green and save green.

Keywords: *sustainable development, energy, green methods.*

INTRODUCTION

The first principle of the Rio Declaration on Environment and Development states that "Human beings are at the centre of concerns for sustainable development they are entitled to a healthy and productive life in harmony with nature¹", which highlighted the challenge to all of us to define the objectives of sustainable development and to provide scientific, technological and social tools to achieve those objectives. The role of chemistry is essential in ensuring that our next generation of chemicals, materials and energy is sustainable. Worldwide demand for environment-friendly chemical processes and products requires the development of novel and cost-effective approaches for preventing pollution. The most important goals of sustainable development are to reduce the adverse consequences of the substances that we use and generate. It is a challenge before chemists to develop synthetic methods that are less polluting i.e. to design clean or 'green' chemical transformations. But it is not only the duty of the chemists to develop green methods. The general public should also explore ideas to go green and save green. Keeping in view the importance of preserving energy and going green, we must take certain steps to stop climate change to make our lives better. We must save energy. Lets be selfish. Lets save energy to save money. There are certain steps to be taken, some of which are:

1. **Save energy to save money²**- Install [compact fluorescent light bulbs](#); Turn off the lights you don't need, especially when you're leaving a room; use rechargeable batteries. **Turn off computers at night**- By turning off your computer instead of leaving it in sleeping mode, you can save 40 watts of energy. Wash clothes in cold water whenever possible. As much as 85 percent of the energy used to machine-wash clothes goes to heating the water.
2. We should **save water** by taking shorter showers to reduce water use; harvesting rain and bath water; use cold water to wash clothes whenever possible; should not run the water while brushing teeth; and check any water

leaks from faucets or the toilet. Install a [low-flow showerhead](#). They don't cost much, and the water and energy savings can quickly pay back your investment.

3. We should try to consume **less gas**, hence we can save **more money (and better health!)** e.g. [Walk or bicycle](#) to work; use public transportation when possible; don't go for idle driving for too long . Consider telecommuting if you live far from your work. Or move closer. Even if this means paying more rent, it could save you money in the long term.
4. **Eat smart**³- Eat less meat ; eat organic fruits and vegetables; use reusable containers rather than wrapping food in foil; go with fresh produce instead of canned or prepackaged . **Keep your freezer full** - it freezes food more efficiently when the freezer is full. **Include the less used parts of vegetables and foods in your cooking** - add beetroot leaves to a salad, celery leaves to stock. **Use left overs** - you'll have to shop less often and generate less waste.. **Drink thermos coffee** - make your own coffee and take it to work in a reusable stainless steel thermos mug. Avoid buying take-away coffees.
5. **Skip the bottled water**- Use a water filter to purify tap water instead of buying [bottled water](#); for travelling, use a reusable water bottle, preferably aluminum rather than plastic; use cloth bags rather than plastic bags; instead of using facial tissue, carry a handkerchief in your pocket or purse. **Drink water** - avoid the soft drink and you'll save your teeth, waist, savings and reduce waste. Tap water in most places is perfectly safe to drink.
6. **Think before you buy**- Go online to find new or gently used second hand products; check out garage sales, thrift stores, and consignment shops for clothing and other everyday items, wear clothes that don't need to be dry-cleaned; buy in bulk; purchasing in bulk can save packaging material; invest in [high-quality, long-lasting products](#). **Buy food from local growers** - reduce the transport overhead of your food. Wear clothes that don't need to be dry-cleaned. This saves money and cuts down on toxic chemical use.
7. **Borrow instead of buying**- [Borrow from libraries](#) instead of buying personal books and movies; share power tools and other appliances.
8. **Keep electronics out of the trash**- Keep your cell phones, [computers](#), and other electronics as long as possible; Donate or recycle them responsibly when the time comes; [Recycle your cell phone](#); ask your local government to [set up an electronics recycling](#) and hazardous waste collection event.
9. **Plant trees**-Afforestation purifies air ; provides food, shade and shelter; prevents soil erosion⁴. Decorate with plants to absorb indoor pollution; [plant drought-tolerant native plants](#) in your garden. Use [sustainable building materials](#) - use wood products from sustainable managed plantations for building and when buying furniture. There is no need to cut down large areas of old-growth forests, when sustainable plantations provide an ongoing supply of wood, as cut trees are replanted. **Make your own compost** - great fertiliser for the garden. **Save seeds from vegetables and fruits** - share cuttings and seeds around your neighbourhood, family and friends.
10. **Go digital and save**- Use the internet to find recipes - swap favourite recipes with friends and family, instead of buying cookbooks. Use a digital camera - saves on printing photos and storing them. **Read e-books (electronic books)** .
11. **Alternative modes of energy**- Consider solar panels, wind , water or any other renewable source of energy⁵.

We must go with **The 3Rs rule** i.e.

■ **Reduce! Reuse! Recycle!**

Reduce the amount of things you use so you have less to throw away.

Reuse what you already have.

Recycle what you use wherever possible⁶.

For instance, Reuse paper that is printed on one side - great for notepaper, crafting, wrapping, etc. **Reuse office supplies** - like folders, manilla folders, plastic pockets, etc. Re-cover old folders instead of buying new ones if children want a change. **Donate old computers and parts** - some companies give those computers to needy community groups. **Repair things that are old or broken** - clothes, shoes, belts, bags, furniture, other items can often be repaired cheaper than the cost of a replacement. **Use worn out clothes to make rags** - or use them in crafts like patchwork quilts, bags or [rag rugs](#). **Use fabric, knitted cloth** - instead of disposable ones.

CONCLUSION

The greatest challenge is to incorporate the green chemistry in industrial, laboratory and day to day processes in order to control environmental pollution and hence ocean pollution. Many successful efforts have been made but still a lot has to be done. We have to develop but the development has to be sustainable. The spot light should be on utilization and not on exploitation. The resources available to us are finite and there is also a limit to the growth of living organisms. Thus resources are to be used in wise manner. Sustainable development aims at utilization of resources not only by the present but also by the future generations in a manner that utilization (and not exploitation) is balanced. Utilisation of resources for development is always associated with some negative impacts. Thus efforts are to be made to contain or minimize them. The future has to be planned with visions, creativity and fantasy, including really new approaches and the exploration of the unknown.

References

1. Rio Declaration on Environment and Development, *Rio de Janeiro, Brazil*, June 3-14, **1992**.
2. R. Young, R. Neal Elliot, and M. Kushler, Saving Money and Reducing Risk: How Energy Efficiency Enhances the Benefits of the Natural Gas Boom, *ACEEE*, **2012**.
3. H.Truby, K.A. Baxter, P.M. Barrett, The Eat Smart Study: A randomized controlled trial of a reduced carbohydrate versus a low fat diet for weight loss in obese adolescents, *BMC Public Health*, 10(1), 464, **2010**.
4. W. Elmendorf, The Importance of Trees and Nature in Community: A Review of the Relative Literature, *Arboriculture & Urban Forestry*, 34(3), **2008**.
5. L. Li, B.P.Y. Loo, Alternative and Transitional Energy Sources for urban Transportation, *Current Sustainable/Renewable Energy Reports* 1(1), 19, **2014**.
6. T. Bhaskar, The Role of 3R in Achieving Smart Cities: The Case of India, *Seventh Regional 3R Forum in Asia and the Pacific*. 2-4 November **2016**, Adelaide, SA, Australia.