



The CO2 Offset Trust

www.CO2OffsetTrust.org

Simple Energy Saving Tips for Rotary Clubs

Money-saving Ideas that will increase your Foundation giving and cut CO2 emissions.

- Save your Club Members Tons of Money with the tips below.
- And when they make a flight, ask them to donate to the CO2 Offset Trust www.CO2OffsetTrust.org to neutralise through a Rotary Club project the damaging carbon dioxide they have emitted into the atmosphere.

The Background:

- **CO2 emitted when fossil fuels burn is creating a blanket around the planet to keep in the warmth and change the climate.** That's the main reason why our weather is becoming so volatile. And CO2 takes at least 100 years to break down, so our grandchildren will curse us if the dire warnings of planetary doom come to pass.
- Read The '**The Weather Makers**', by Tim Flannery, if you want to know the full picture and find out just how serious the problem might become.
- Some Rotarians don't believe the growing evidence about Climate Change, but don't worry.... you don't have to argue with them. Just point out these things:
- **First**, we should all try to become less dependent on overseas oil. The ideas proposed by The CO2 Offset Trust do that.
- **Second**, we can all save money by cutting our use of fossil fuels. Surely no-one can refuse the opportunity to save money?
- **Third**, if the sceptics are wrong, don't they owe it to their grandchildren to do SOMETHING? Ask if every member will complete '**The Pledge**' at the end of this document. If everyone signs up positively, you're setting off with great support.
- If some refuse to sign, don't let it become a big issue. Leave them out of your future energy conservation activities. If some sign up, but with negative 'do not' entries, ensure they are not upset by Club actions, make a bit of fun out of it, and bring in lots of speakers to see if they can be persuaded and educated.

SUMMARY

At last - Governments are now taking action – so what can Rotarians do?

- Offset your unavoidable CO₂ emissions via www.CO2OffsetTrust.org – especially when you or your Club members take a flight.
- Cut **Club member** fossil fuel use – appoint a Club Energy Saver.
- Read our leaflet at www.co2offsettrust.org/pdf/laconventionleaflet.pdf for a summary of Club ideas.
- Invite energy-saving experts to give talks to your Club (look in Yellow Pages or ask your Town Hall for contacts)
- Ask energy suppliers for their strategy on cutting fossil-fuel use
- Devise CO₂ Reduction Projects– ideas from www.CO2OffsetTrust.org, www.carbontrust.co.uk and <http://sierraclub.typepad.com/greenlife/>
- Look to fund overseas projects that replace fossil fuel with human, solar and wind power - e.g. PlayPumps at www.playpumps.org and Water purification by solar power at www.cleanwaternow.nl
- Press your local authority for its strategy on cutting fossil fuel. e.g. New York is switching to hybrid-fuel taxis. What's your big idea?
- Get PR for your Club - devise a Club-assisted program to cut energy-use in a community project
- Pass the word out – Educate the Community by offering prizes for the most imaginative energy-reduction projects
- Encourage Recycling
- Go you your library or bookshop and get some or all of the books we recommend here.
- and so on..... **let us know if you find good new ideas by e.mail to info@co2offsettrust.org**

Appoint a Club 'Energy Saver':

1. **Find a Club member who is willing to explore and follow up the ideas listed below and is prepared to encourage members to take action.**
 - Give the person a suitable title – **Energy Saver**, or **Environment Officer** or whatever seems to fit your Club's style.
 - **The person does not have to be an expert**..... just someone who will co-ordinate your Club's activities, help everyone make energy savings and is enthusiastic about improving the environment.
2. **The savings this person can make in Club members' annual energy use costs could make him or her the most popular member in your Club!**
3. **Look for energy consumption experts in your area.**
 - Make contact with your Rotary District Environment Officer.
 - See if they will speak to the Club on these issues.
 - Ask around for local energy experts, through your town council, Power Company, local newspaper and local contractors.
4. **Consider doing some - possibly ALL – of the ideas set out in this document....**
 - to save your Club members money,
 - to reduce the amount of fossil fuel you are burning,
 - to cut your emissions of CO₂ into the atmosphere.
5. **Let us know what progress your Club makes and send in any new ideas.**
6. **Calculate members' cost savings. Ask them to consider donating half their annual savings to Rotary Foundation.**

Measure Members' Energy Consumption:

7. The three most powerful things you can do to cut energy use are **MEASURE, MEASURE, MEASURE.**
 - Understanding how you use electricity, home heating fuel and the miles you travel is the most powerful tool in your armoury.
 - It allows you to make effective decisions about reducing energy costs and cutting emissions of carbon dioxide.
 - **However it isn't easy getting Club members to do this.** The best way is to ask them to estimate approximately what they spend annually on electricity, gas, heating oil and filling up the cars with fuel. Then tell them what percentage they might save. 10% is not unreasonable. This might get their attention and co-operation!
8. In the Developed World, energy consumption is approximately split into -
 - one third for electricity production
 - one third for heating/cooling
 - one third for transportation.
9. These approximate figures are mirrored for domestic consumption - so **one third of the CO₂ emitted is from domestic power use. And there are BIG savings to be made by making this more efficient.**
10. You can do something about this without much difficulty, as long as you **MEASURE.**

11. Get as many members as possible to MEASURE their annual energy use.

- Ask them to check their bills from electricity, gas or heating oil suppliers on a regular basis.
- Help them, encourage them, get speakers in to advise them.
- Campaign for suppliers to produce their bills in a form that allows easy comparison – say with the same period last quarter and last year.
- If they can't find the time to check their own costs, ask them to bring in their energy bills and get someone to log them.
- Compare costs per square foot of occupied space.
- Make it competitive, on a per-square-foot basis.
- Explain that reducing annual household energy bills can make substantial cash savings.
- Aim to cut electricity, oil, natural gas and motoring fuel usage by some target figures.

12. Calculate the cost savings of members. Invite them to donate 50% to Rotary Foundation.

Cut Domestic Energy Costs:

13. Approximately one third of domestic cost and emissions come from heating water.

- Do you really need to have piping hot water all day, every day?
- Consider setting a timer to switch off overnight and when you are away from home.
- Do not leave your home totally unheated during freezing conditions; have a low temperature cut-in fitted on your heating system.

14. And to REALLY cut your cost, the sun will heat water for nothing.....!

- Consider the availability of solar water heating panels in your area.
- Ask a specialist to visit the Club and give a talk.
- Calculate the cost-benefits of adding solar water heating to the homes of members.

15. Find out about Energy Star appliances.

- Inform members about the most energy-efficient replacement domestic appliances for their home.
- New energy-efficient appliances like washing machines and refrigerators use around 50% less energy than old ones. Some are even better than this.
- Consider the cost-effectiveness of replacing the main domestic energy users, such as refrigerators, freezers, washing machines, natural gas or oil-fired central heating furnaces and air-conditioning units.
- Is it better to continue with the old inefficient units, or replace them with modern low-energy equipment?
- Ditch that old stand-by fridge or freezer that is only used for 'emergencies'. It uses far too much electricity to justify keeping.
- Fill appliances as full as possible – the washing machine is more efficient with a full load and the refrigerator works better when sensibly full. (not overfull)
- Check if any modernisation grants, or tax relief plans, are available for replacement appliances.

16. Use Energy Wisely:

- A laptop computer is 90% more efficient in energy usage terms than a desktop
- Recycle those inkjet printer cartridges. Find a local re-filling supplier for your Rotary Club. See if your Club can have a discount by recommending them.
- Less than one-fifth of obsolete computers are reused or recycled. Find a responsible recycler for your old PC or Mac - for example, in the US, go to www.computertakeback.com Elsewhere put 'recycle electronic' into Google to find who will take your old computers and T.V.'s.

- Adjust the settings on your computers to go to 'stand-by', NOT 'screen-saver', to save energy. (Control Panel – Display – Power Options)
 - Switch lighting to low-energy bulbs, known as compact fluorescents. An Eco-energy bulb lasts ten times longer than a standard 100 watt bulb. Using U.S. based statistics, this saves approximately US\$44 over the lifetime of each bulb. In addition, if every American household substituted just one Eco-energy light bulb for a 60-watt bulb, the energy saved would power a city of 1.5 million people!
 - Visit the following web address for everything you need to know about low energy light bulbs and their benefits for your wallet and the environment.
<http://www.audubonmagazine.org/audubonliving/audubonliving0711.html>
 - Switch off lights when not in use. Contrary to popular belief, low energy bulbs do NOT need more electricity to switch them on.
 - Set heating systems to at least four-hour periods at the same temperature. Changing thermostats up and down is very energy wasteful.
17. **Use free heat!** Even in cold climates, homes can be weaned off fossil fuels with a remodel that integrates passive solar techniques. A sunroom, double-paned south-facing windows, and overhangs can create a bright, efficient abode. The Northeast Sustainable Energy Association provides good resources at nesea.org/buildings/passive.
18. **Consider the effectiveness of heating & cooling systems used by your Club members.**
- Check how often members have domestic equipment serviced and what the additional energy costs will be for the un-serviced units.
 - Point out that carbon monoxide poisoning may result from non-serviced equipment.
 - Suggest that the coils of the refrigerator should be kept clean.
 - Ask if any insulation techniques have been used.
19. **Invite an expert to talk about improving the insulation** of homes, both for keeping heat in and keeping cold out. And for keeping cold in if you have air-conditioning operating. See if special installation rates can be negotiated to test and insulate the homes of Club members.
20. **Arrange a speaker who knows about modern building standards**, to explain the latest thinking in carbon-neutral house construction and if you can incorporate any of the ideas at home.
21. **Arrange a speaker who is qualified in carrying out Energy Audits.** Ask if a member's home could be audited free, to show the Club the benefits from this process.
22. **Investigate the purchase of plug-in electricity measurement meters**, like a 'Kill-a-watt' meter, which will check the consumption of any appliance. Investigate how much energy is consumed by leaving TV's and other appliances on standby and inform your members what this is costing them.
23. **Regularly calculate the cost savings. Ask if members will donate 50% to Rotary Foundation.**

Cut Motoring Costs:

24. **Include annual miles driven in your measurement program.**
- See what annual mileage each member, using his or her family cars, clocks up.
 - Ask if they are willing to set mileage reduction targets for them and their family.
 - Check car-fuel consumption and investigate ways to improve miles-per-gallon.
 - Encourage drivers to REGULARLY check their tire pressures. Under-inflated tires are both dangerous AND use up excessive amounts of fuel due to higher rolling resistance.

- Encourage “Car Sharing Plans”.
- Discuss fuel-efficient cars and hybrids
- Invite experts to talk to the Club.

25. **When they cannot avoid a long journey. perhaps an airline flight or long car journey.... encourage Club members to donate to the CO₂ Offset Trust**

26. **Ask members to donate 50% of their Annual Energy Savings to Rotary Foundation.**

27. **Maximise this amount by competition for the award of “Club Energy Champion”**

Think about Food...!

28. Food contributes massively to the CO₂ emitted into the atmosphere and livestock create a beefy portion of all greenhouse-gas emissions: 18% according to the United Nations. Could the answer be as simple as two slices of bread and a slathering of peanut butter and jelly? Perhaps. Compared with a burger, this classic American sandwich saves as much as 2.5 pounds of carbon dioxide, 280 gallons of water, and 50 square feet of land -- even more if you wash it down with a glass of soy milk (as long as the soy didn't come from deforested areas of the Amazon). "You don't have to change your whole diet to change the world," says the *'Peanut Butter and Jelly Campaign'*. www.pbjcampaign.org "Just start with lunch."

Look out for misleading Advertising

29. With the 'Green Trend' becoming fashionable, more companies are jumping on the bandwagon. In theory that's wonderful, as more people are becoming conscious of the Climate Change issue. But false claims are unfair to the public, so look out for those that might be misleading and consider challenging them.

Reduce Community Energy Costs:

30. **Consider what grants are available** to pay for energy surveys to be done on key community buildings.

- Ask about grants to improve the insulation standards of low-income homes in your community.
- Contact Energy Supply Company's to enquire about incentives/offers for the above.
- Enquire about tax breaks or grants for installations.
- Find qualified local people who can carry out Energy Audits. See if they will do this at a special rate for your Club. Do some test audits. Share the results with your Club.
- Ask banks if they have special rates for loans to improve home insulation to reduce energy costs and purchase energy efficient cars.
- Circulate this information to Club members.

31. **Consider pressure for -**

- Your town to have a low-energy-use policy
- Local businesses to use low energy lighting.
- Local DIY retailers to promote sale of low energy products, inc. light bulbs.
- Local retail businesses to reduce their heating costs, by having their stores slightly cooler in winter and slightly warmer in summer.
- Campaign for local taxis and buses to be converted to Hybrid engines, clean diesel or biofuel. Check out the San Francisco and New York City taxi benefits from going hybrid at <http://www.theautochannel.com/news/2006/04/20/004462.html>

32. **Do you know of public places where the temperature seems wrong?** Too hot or too cold? Department Store? Movie Theatre? Ask why they don't do something about it. See if they will co-operate on a survey of their energy costs, with the aim of reducing them.
33. **Talk to local schools.** Ask if they would like an energy audit, which your Club might consider paying for. After all, money saved by cutting their energy bills benefits by lowering local taxes!
34. **Ask your favourite Sports Team** – what is the Club doing to reduce the Carbon Footprint of themselves, and especially their supporters attending games? Lift-sharing? Sponsored public transport? Pledges by supporters? Check out the UK's 'Carbon FootyPrint' website at www.carbonfootyprint.com for some interesting ideas.
35. **The little things really add up** Encourage members to re-use plastic bags at the supermarket. When 1 ton of plastic bags is reused or recycled, the energy equivalent of 11 barrels of oil are saved. Keep a few bags handy in the car or in a pocket and re-use them. Better still, invest in the brilliant idea our mother's used all the time ... **string bags**. They hold TONS of stuff, are VERY flexible and TINY to carry around in pocket or bag. In the UK try www.turtlebags.co.uk for really good tried and tested ones. Not cheap, but last for years.
36. **Ask what plans your town has for reducing car usage.**
- Contact your town council to see what car-reduction plans they are promoting
 - Invite someone to talk to your Club
 - Campaign for improved walking and cycling facilities.
 - Find out about public transport options and make everyone aware of where they can get information.
 - Some UK towns have a 'Whiz-Go' project for renting cars on a short-term basis - for example, to go shopping. (Check the Whiz-Go project at <http://www.whizzgo.co.uk/> to see if your town is included)
 - Investigate the prospects for a formal car-sharing arrangement.
 - Press for all local mass transport to be converted to clean fuels

Energy Suppliers:

37. **Talk to local electricity suppliers** to see if they offer a 'low carbon' option (Electricity generated from green sources, like wind and hydro-electricity)
- Ask Club members if they will consider switching to this option.
 - If your supplier does not have this option, lobby for them to get one.
 - Promote information to Club members on Green Energy availability
 - Check the sources of fuel used by local energy suppliers – often printed on their monthly statement. e.g. nPower in the UK invoices stated in November 2007 *'Between April 2006 and March 2007, the electricity we supplied came from – Coal 44%, Gas 37%, Nuclear 13%, Renewable 3% (biomass, wind, hydro and solar power), Other sources 3%'*
 - Electricity produced from coal creates by far the most CO₂

Awards and Encouragement:

38. Provide an annual **Environment Award** to a Club member – the **Club Energy Champion** - for achieving the best result. Provide small awards (an 'Energy Saving Champion' coffee mug, for example) for everyone who meets a saving standard of, say, 10% annual savings.
39. **Remember to ask them to donate 50% of their savings to Rotary Foundation!**

40. Consider **talking to local schools** to see what they are doing about Climate Change and whether your Club can offer incentives such as prizes, funds for materials or other assistance.
41. **Plant Trees** remove the damaging global warming gas CO₂ from the atmosphere by planting trees. As an example of the benefits of trees - the U.S.A. is the world's highest generator per capita of CO₂, with each person generating approximately 2.3 tons of CO₂ annually. A healthy tree stores about 13 pounds of carbon annually - or 2.6 tons per acre per year. An acre of trees absorbs enough CO₂ over one year to equal the amount produced by driving a car 26,000 miles.
42. **The U.S. Forest Service** estimates that all the forests in the United States combined sequestered (absorbed) a net of approximately 309 million tons of carbon per year from 1952 to 1992, offsetting approximately 25% of U.S. human-caused emissions of carbon during that period. **So trees really do matter!**
43. **Go to the CO₂ Offset Trust Website** at www.CO2OffsetTrust.org and plant some Rotary trees to reduce your Carbon Footprint on our planet.
44. Or **plant trees in memory of someone** – go to the USA site for the Arbor Day Foundation at <http://www.arborday.org/> and dedicate trees to someone you love.

Town Projects:

45. **If you want to be REALLY ambitious**, consider the actions of two towns - Woking in the UK, and the citizens of Schönau, a small town in the southwest of Germany, in the Black Forest with about 2500 inhabitants.
46. **Woking Borough Council** is tackling issues such as global warming and depletion of natural resources locally. From an environmental perspective Woking claims to be the most energy efficient local authority in the UK. For details of their activities, click on <http://www.woking.gov.uk/environment/Greeninitiatives>
47. **Schoenau** offers an example of direct citizen action on power supply. Details can be found at the following Websites.

<http://www.ews-schoenau.de/Informationen/International/english1.asp>

<http://www.smh.com.au/news/national/future-perfect/2005/09/26/1127586800250.html>

48. Read books on the subject. Examples include:

- **'You Can Prevent Global Warming (and save money)'**, by Jeffrey Langholz and Kelly Turner. US based book with thousands of practical ideas to reduce energy costs and lower CO₂ emissions.
- **'The Weather Makers'**, by Tim Flannery, (excellent and very readable explanation of the reasons for Climate Change)
- **'The Suicidal Planet: How to Prevent Global Climate Catastrophe'**, by Mayer Hillman et al. (Well-explained possible method to tackle the challenge)
- **For children (and adults who like an easy read) – 'The Down-to-Earth Guide to Global Warming'**. US book by Laurie David and Cambria Gordon.
- **'How to live a Low-Carbon Life – the individual's guide to stopping climate change'**, by Chris Goodall. UK-based book with chapters on a wide range of energy-saving measures.

- **'State of Fear'** by Michael Crichton. ISBN 0-00-718160-4. A novel described as 'a gripping read as the plot unfolds' and 'unable to put it down'. It contains much Environmental and Climate Change Information, linked to the relevant references.

49. Invite some of the experts who have made presentations to your Club to **join Rotary!**

50. The Environment Pledge..... Try this out on your sceptics?



The Environment Pledge:

To my grandchildren and/or future generations:

I,(name), **of the Rotary Club of**
 want you to know that I (**do/do not**)* believe that my generation has been
 burning excessive fossil fuels.

I (**do/do not**)* intend to make changes in my lifestyle to reduce my use of
 fossil fuels and CO₂ emissions, because I (**do/do not**)* believe it will help
 your prospects for a better life.



Signed.....

*delete as appropriate

www.CO2OffsetTrust.org

AND FINALLY SEND US you ideas and experiences on energy saving,
 so we can pass them on to others.

Many thanks for reading this, which was compiled by The CO₂ Offset Trust in UK Districts
 1220 and 1270, with help from RECS 7260, The New York Suffolk County Environment
 Group.



The CO2 Offset Trust is a Rotary Club-to-Club project formed by Founding Member Clubs:

**Sheffield D1270, UK
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Tempe South D5510 USA
Bretby D1220 UK
Margaret River D9460 Australia
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