

**Contents**

- Why Structured Energy Management
- Bill Analysis & Procurement
- Identification of energy using equipment
- **Identification of opportunities**
- Planning energy management
- Best practice, guides, help
- Grants, finance, tax breaks
- Evaluation of products and services

1

---

---

---

---

---

---

---

---

**Register of Opportunities**

- **All your ideas** for action
- Detail (if possible)
- Maybe now, maybe later
- Some capital investment
- Some no / low cost

2

---

---

---

---

---

---

---

---

**Sources of Opportunities?**

Where do I need the Light?  
Can I avoid need for lighting using day-light etc?  
What light fitting would be most effective? Desk or high level?  
What light Source would be most effective and efficient? CFL/ LED  
Can I use controls to minimise the time/light output? E.g PIR/ lux

Do I really need energy to deliver this energy service?  
Is there another way of delivering the output that requires using less or no energy?  
Can I use a less energy intensive alternative?  
What is the minimum specification required?

Replaces bulbs at end of life  
Cleaning fittings  
PIR Controls  
Source efficiency  
Light fitting  
Maximise Day-light

3

---

---

---

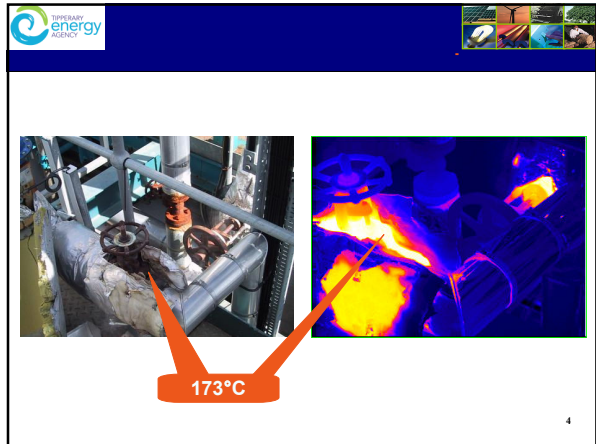
---

---

---

---

---



---

---

---

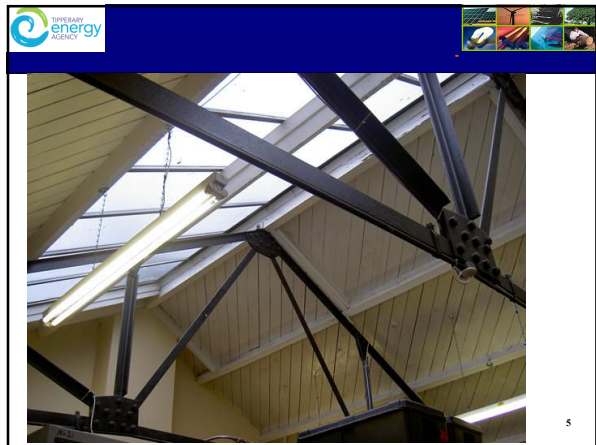
---

---

---

---

---



---

---

---

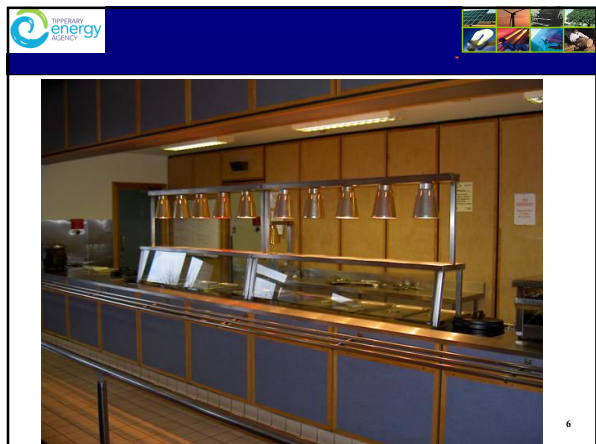
---

---

---

---

---



---

---

---

---

---

---

---

---



---

---

---

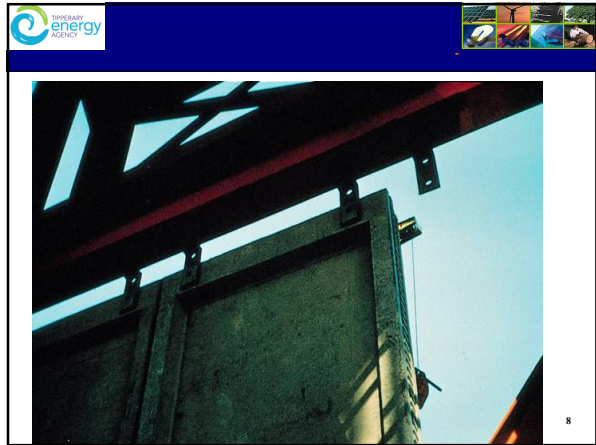
---

---

---

---

---



---

---

---

---

---

---

---

---



---

---

---

---

---

---

---

---

## Operation



- Operate what you have already...well
  - Do you know if your systems are operating at optimum performance?
  - How do you find out?
- Checklists
  - Daily – Operations Personnel
  - Weekly – Supervisory Personnel



10

---

---

---

---

---

---

---

---

## Operation & Maintenance



- For every Significant Energy User:
  - **Written** procedure to ensure it is operated correctly
  - Training for staff(s)
  - Training for Maintenance person(s)
  - Monitor performance



11

---

---

---

---

---

---

---

---

## Procurement



- Rules for buying:
  - Significant Energy Users
  - Projects that will ↑ your bill by X
- Policy / Guidelines / Procedures
- Energy consumption criteria
- Labeling
- **Life cycle costs**



12

---

---

---

---

---

---

---

---



## Where I would start



- Switching off when not in use, or needlessly used. – 10% can be saved easily.
- Lighting upgrades – huge opportunity
- Heating management and boiler efficiency
- Building fabric upgrades in places of high occupancy or internal temp.
- Variable speed drives Only when coupled to proper controls

13

---

---

---

---

---

---

---

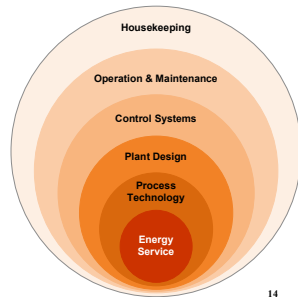
---



## Opportunities: Best Practice



- Best Practice opportunities
- Guides
- Energy Service concept
- Sample calculations
- Info & tips



14

---

---

---

---

---

---

---

---



## Contents



- Why Structured Energy Management
- Bill Analysis & Procurement
- Identification of energy using equipment
- Identification of opportunities
- **Planning energy management**
- Best practice, guides, help
- Grants, finance, tax breaks
- Evaluation of products and services

15

---

---

---



---

---

---

---

---

 **Planning Energy Management** 

- Many business succeed in reducing energy
- Key concept here is to plan and manage Energy
- Start with identifying users, then savings.
- Have a register of ideas
- Decide which to implement, and which to wait.
- Resources available should match requirements

16

---

---

---



---

---


---

---

---

 **Energy Programme Plan** 

- Things you're actually going to do!
  - Signed by manager
- Keep it manageable
- Mix: technical / organisational / people
- Match available time/ resources



```

graph LR
    A[Consumption  
Main Users  
Bills] --> B[Register of Opportunities]
    B --> C[Energy Programme Plan]
    C --> D[€€€ Savings]
  
```

17

---

---

---

---

---

---

---

---

 **Contents** 

- Why Structured Energy Management
- Bill Analysis & Procurement
- Identification of energy using equipment
- Identification of opportunities
- Planning energy management
- **Best practice, guides, help support**
- Grants, finance, tax breaks
- Evaluation of products and services

18

---

---

---

---

---

---

---

---

**energy** **SEAI** **Best Practice guides**

- NEVER be stuck for information on energy saving!
- Best practice guides available widely
- Almost every industry has commissioned guide/ study/ case study
- Written for the industry
- Ireland, UK, US

19

---

---

---

---

---

---

---

---

---

---

**energy** **SEAI**

Home | About Us | Contact Us | Careers | Sitemap

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Playing a leading role in transforming Ireland into a society based on sustainable energy structures, technologies and practices.

Your Home | Your Building | Your Business | Renewables | Schools | Grants | Publications | News & Events | Downloads

You are here: Home > Your Business > Quick Wins

Public Sector Programme  
Large Energy Users  
SEAI's services for SMEs  
Quick Wins

Quick Wins for Lighting  
Quick Wins for Motors and Drives  
Quick Wins for Refrigeration  
Quick Wins for Heating  
Quick Wins for Building Management Systems (BMS)  
Quick Wins for Variable Speed Drives (VSD)  
Quick Wins for Manufacturing  
Quick Wins for Retail  
Quick Wins for Hospitality and Tourism  
Quick Wins for Education  
Quick Wins for Healthcare  
Quick Wins for Sports and Culture  
Quick Wins for Offices  
Quick Wins for C&P

**Quick Wins**  
Choose your sector for a top ten list of quick wins which are easy to implement and will start to save you money straight away

**Quick Wins by Sector**

- Manufacturing
- Retail
- Hospitality & Tourism
- Education
- Healthcare
- Sports & Culture
- Transport
- Offices

**Quick Wins by Technology**

- Quick Wins for Lighting
- Quick Wins for Motors & Drives
- Quick Wins for Compressed Air
- Quick Wins for Refrigeration
- Quick Wins for Heating
- Quick Wins for Building Management Systems
- Quick Wins for Variable Speed Drives

more

---

---

---

---

---

---

---

---

---

---

**Quick wins for Retail**

Significant energy savings can be made in shops and stores by making small changes to routine operation and maintenance actions. A 20% cut in energy costs represents the same bottom line benefit as a 5% increase in sales.

- Go through your energy bills with your supplier so you understand any penalty charges and how they can be reduced or avoided and consider any guidance or suggestions for reducing your bills
- Check that lights are switched off when not required, and appropriate lighting levels for different tasks e.g. reduce lighting levels up to 5 minutes before store opening
- Ensure all light switches are labelled with a note on when they should be switched on and off
- Ensure display lighting is focussed on displays and not used for general store illumination
- Make sure that air curtains, heating and ventilation equipment are clear of obstructions and are switched off out of trading hours
- Note if customers complain if it is too hot or too cold or comment on store conditions/ equipment and adjust settings or rectify
- If possible, load refrigerated cabinets in the evening/night for the following day to take advantage of night rate electricity to chill products
- For non-perishable goods stored in refrigerated cabinets or vending machines, e.g. soft drinks, ensure that units are switched off outside of opening hours
- For replacement equipment choose items listed on SEAI's Accelerated Capital Allowance list

---

---

---

---

---

---

---

---

---

---

 **SEAI: Guides** 

- Lighting in retail, office, manufacturing, hospitality, education, healthcare etc.
- Refrigeration
- Motors, pumps and drives
- Transport
- Energy awareness
- Lots more!
- [www.seai.ie/yourbusiness](http://www.seai.ie/yourbusiness)

22

---

---

---

---

---

---

---

---

 **UK** 

- 30 years worth of publications
- Free to download
- Technically advanced and detailed
- Widely used in energy industry
- [Carbontrust.org.uk](http://Carbontrust.org.uk)
- [energysavingtrust.org.uk](http://energysavingtrust.org.uk)
- Good Practice Guide (GPG)

23

---

---

---


---

---

---


---

---

 **Carbon Trust** 

GOOD PRACTICE GUIDE 309

**Reducing energy costs in industrial bakeries**



thermostat at the temperature

as much as used.

in correct use savings on

ENERGY EFFICIENCY  
BEST PRACTICE

Accredited my organisation

Our services

Quick browse

Find carbon saving advice relevant to your company sector and size:

Sector >

Size >

Find advice for specific technologies:

Technology >

Hospitality sector services

Case studies

Related services

Sector innovation: get involved

---

---

---

---



---

---

---

---



 **Contents** 

- Why Structured Energy Management
- Bill Analysis & Procurement
- Identification of energy using equipment
- Identification of opportunities
- Planning energy management
- Best practice, guides, help support
- **Grants, finance, tax breaks**
- Evaluation of products and services

25

---

---

---



---

---

---

---

---

 **Grants** 

- Grants
  - Domestic & low income grants
  - RE-Heat grants
  - Biomass CHP
  - Energy Efficiency retrofit fund – closed 2010
  - Schools summer works: lighting, insulation etc.
- Future support
  - Obligated suppliers of electricity to support energy savings
  - Launching in 2011
  - Modelled on UK obligations

26

---

---

---

---

---

---

---

---

 **Accelerated capital allowance** 

- List of high efficiency products
- Allowing full cap-ex of high efficiency products be written off in 1 year.
- Worth about 5 - 10% of cost
- Large amount of equipment categories:
  - pumps, motors, lighting, IT, heating system components, refrigeration, catering, hospitality etc.
- [http://www.seai.ie/Your\\_Business/Accelerated\\_Capital\\_Allowance/](http://www.seai.ie/Your_Business/Accelerated_Capital_Allowance/)
- Likely will be basis of green public procurement in 2011.

27

---

---

---

---

---

---

---

---



## Evaluation of Products and Services



- Market full of new innovative products
- Targeted at energy saving/ renewables
- Some excellent products
- Some products are user specific (may be excellent or terrible depending on application)
- Buyer beware!

28

---



---



---



---



---



---



---



## Investment



- Energy Efficiency 1st, Renewables 2<sup>nd</sup>
- Get certification/ accreditation from vendors
- Ask for guaranteed savings, and a method to evaluate savings.
- Ask for references, case studies and use google.
- Try to evaluate cost per kWh (saved) & payback – are there any other benefits
- Use the “generosity” of suppliers/ installers
- If it sounds too good to be true....

29

---



---



---



---



---



---



---



## Investment



- Renewables are a considerable investment but can be very worthwhile
- Get cost per kWh of heat/ electricity
- Compare to current bills
- Know the payback – from your own figures
- Seek expert help in advanced contracts if needed.
- Seek expert help before making a big decision.

30

---



---



---



---



---



---



---



- Tipperary Energy Agency
- Craft Granary
- Church St, Cahir
- Co. Tipperary, Ireland
- Paul Kenny
- Senior Energy Consultant
- T: 052 7443090
- F: 052 7443012
- E: [shoyne@tea.ie](mailto:shoyne@tea.ie)
- W: [www.tea.ie](http://www.tea.ie)

**Thanks for your time. Questions??**

31

---

---

---

---

---

---

---

---