

# Green Cable:



## Reality or Myth?

Elizabeth Ness



First, I would like to thank ICF for inviting me to talk here, or to be precise, I should thank ICF for giving me a real challenge.

Because ICF asked me to talk about the ultimate green cable, I like to include the questions of life cycle assessment, recovery and recycling. I was told that the audience looks forward to hear a global view for the next 10 years.

## Green Cable - Reality or Myth?



- "Ultimate" Green Cables, or ecoproducts
  - Life Cycle Assessment
  - Recovery
  - Recycling

- A global view
- The next 10 years



So, I began to think and talk with people about green cables.  
Are they real or perhaps just a myth?

Asia-Pacific: Green Cable???

Africa: Green Cable???



**We'll supply if the  
customer asks & pays**

**(But:we have bigger  
environmental problems than  
"green cable")**

So, I asked marketing people.

In Asia-Pacific and Africa, I asked, "Have you got Green Cable? Is it important? "

They said, "Oh, we sell green cable if the customer asks and if he pays. But, really, we have more important environmental problems than green cable."

## South America: Green Cable???



We'll supply if the  
customer asks & pays

(But: we have bigger  
environmental problems than  
"Green cable")

In South America:

Exactly the same answer, "We have more important problems."

## South America: Green Cable???



South America sees sustainability in terms of social activities in the community

Is moving to EU approaches:

- ❖ Brazilian "Business Council for Sustainable Development
- ❖ Larger companies adopt the EU/US standards
- ❖ Laws dealing with safe disposal of batteries, lamps, tires etc

But, in South America people had more to say:

They said, "We look at sustainability and we see it in terms of social activities in the community. But we are moving to EU approaches."

In Brazil the answer was: "We have the Business Council for Sustainable Development. Larger companies apply European Union and US standards. And we have laws dealing with safe disposal of batteries, lamps, tires, all kind of goods."

Oceania: Green Cable???

Europe: Green Cable???



We'll supply if the customer asks & pays

In Oceania and Europe there was the same response: "Only if the customer asks and pays for it. There is no free lunch. Nobody would pay for an environmental cable."

## North America: Green Cable???



**We'll supply if the  
customer asks & pays**

Not surprisingly, it was exactly the same in North America.

But then I spoke to NEMA, the National Electrical Manufacturers Association. They said to me, "We've been discussing green cable. Would you like to show some of the presentation we made at our last meeting?"



# THE NEW APPROACH TO ENVIRONMENTAL REGULATION

## Environmentally Conscious Design and Product Stewardship

**RIC ERDHEIM**  
**AUGUST 2002**

Mr. Ric Erdheim of NEMA kindly gave me a permission to use his slides on the new approach to environmental regulation, saying that he was working on environmentally conscious design and product stewardship.

## TRADITIONAL ENVIRONMENTAL REGULATION

- End of Pipe Controls

## NEW ENVIRONMENTAL FOCUS

- Environmentally Conscious Design  
(Design for Environment -- DfE)
  - ❖ Types of Materials Used
  - ❖ Efficiency in Use of Materials
  - ❖ Energy Efficiency

At NEMA, they are moving from traditional environmental regulation, i.e. end of pipe controls, towards a new environmental focus. We call this design for environment (DfE), which includes looking at types of materials used, efficiency in the use of raw materials and in particular energy efficiency.

## NEW ENVIRONMENTAL FOCUS

- **Product Stewardship**
  - ❖ **Manufacturer role in educating customers about product**
  - ❖ **labeling, materials declarations**
  - ❖ **Manufacturer role in spent product management (End-of-Life)**
  
- **NEMA Response being proposed**

New environmental focus includes product stewardship. It gives manufacturers a role in educating customers about products, in providing labeling and materials declarations. The role ends with spent product management (end of the life of the product). Which means that the new environmental focus deals with the product from “the cradle to the grave.”

And in America, NEMA is pursuing a dialogue with government, with other trade associations and along supply chain to discuss how industry in America should respond to these challenges. They are preparing a proposal. And it will be interesting.

## Japan: Green Cable???



Japanese Wire & Cable Makers Association  
Committee of Ecological Cable Promotion

We are developing some definitions,  
and  
there is a "Green Public Procurement" Law.

Japan: Green Cable ?

This was the most interesting conversation, because the Japanese Wire and Cable Makers Association has a Committee of Ecological Cable Promotion. They told me, that they are developing some definitions and there is a Green Public Procurement Law in effect.

## Japan: Green Cable???



### The Market:

- Products which are recyclable or have "low environmental load"
- "Green procurement" requires recyclability
- "EM" - Ecological Material products - halogen-free, flame retardant
- "EM" cables reaching 10% share of LV&MV construction market

Why ?

The market in Japan requires that products are recyclable or have environmental load. The Green Procurement law requires the products can be recycled.

EM, ecological material products, refers at the moment only to products which are halogen-free, flame retardant. At this time they have about a 10% share in the low voltage & medium voltage construction market.

## Japan: Green Cable???



### Why?

- Greater understanding by industry of environmental issues
- ISO14001 growing rapidly
- Industry realises:
  - ❖ can enhance company image
  - ❖ can get increased profit from "eco-products"

By now there is a greater understanding for environmental issues in Japan. ISO 14001 is growing rapidly and industry realizes that they can enhance company image and increase profit through eco-products. Now, that is an incentive!

## Japan: Green Cable???

WASTE FROM  
ELECTRIC AND  
ELECTRONIC  
EQUIPMENT

### Legislation

- ❖ Promotion of Efficient Resource Use
- ❖ Waste Treatment,
- ❖ Recycling of Packaging, Construction Materials & WEEE

Japan is active in liaison with EU:

- ❖ Japan Business Council in Europe  
JBCE
- ❖ Japanese International Standards  
Committee, JISC

Legislation in Japan promotes the efficient use of resources, waste treatment and recycling of packaging, construction materials and WEEE, something familiar to all Europeans, waste from electric and electronic equipment. I will talk in more detail about WEEE later.

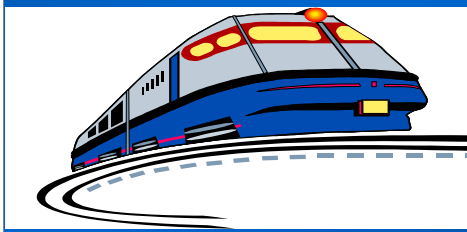
Japan is very active in its liaison with European Union. I know because when I am working with Europe Cables, I regularly see the activities of the Japan Business Council in Europe (JBCE), which comments on and contribute to the process of developing the registration in Europe.

In addition the Japanese International Standards Committee (JISC) has an active liaison with CENELEC, the European standards making body.

## China: Some Environmental Actions



- Has Signed the Kyoto Protocol on Climate Change
- Is reforesting vast areas
- Is reducing pollutive emissions
- Is improving public transport



**2003:**

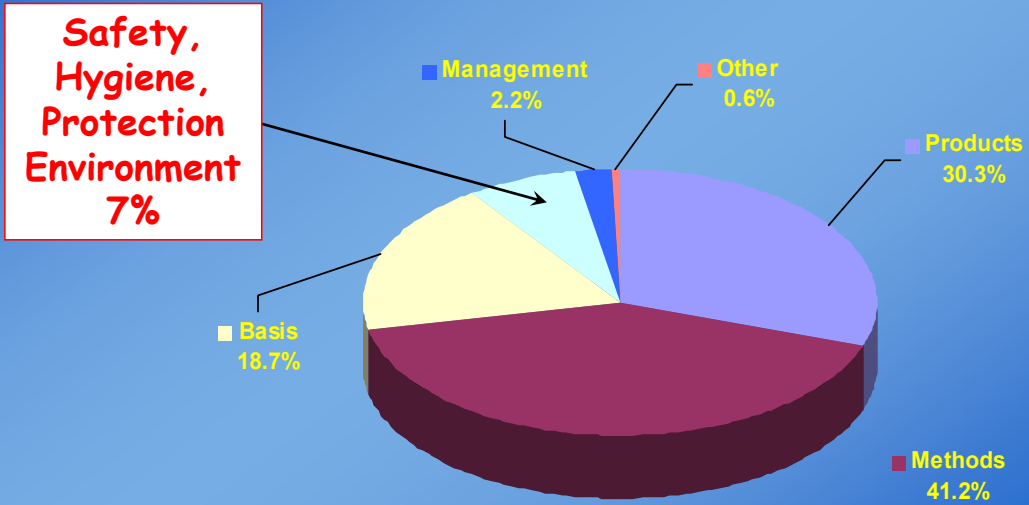
**The first commercial Maglev:  
Shanghai and Pudong Airport at  
435kph**

**Planned High speed link:  
Beijing to Shanghai - 1300km**

China has signed the Kyoto Protocol on Climate Change. It is reforesting vast areas and reducing polluting emissions, as well as improving public transport.

China is building the first commercial Maglev (Magnetic Levitated Vehicle) from Shanghai to Pudong Airport to be opened next year. This will travel at a speed of 435km per hour. The next planned high speed link is between Beijing and Shanghai.

# China: National Standards



*Standardization Administration of P.R.China (SAC)*

National Standards in China:

7% of all standards in China deal with safety, hygiene and protection of the environment and implementation and regulations are growing.



## Sustainable Development: Rio to Rio +10



### World Summit on Sustainable Development

- 1992: Rio de Janeiro
- Rio + 10 Johannesburg, 2002



Let's look back to when the green cables started.

Mr. Bo Rasmusson introduced you the World Summit on Sustainable Development. This idea of sustainable development was introduced 10 years ago in Rio de Janeiro.

So what happened in 10 years?

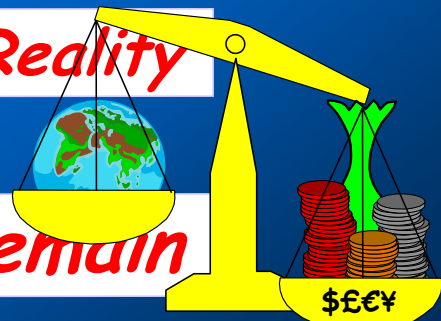
## UNSUSTAINABILITY

Current Economic Model for Financial  
& Manufactured Capital Leads to:

- Environmental Degradation
- Waste

*More Rhetoric than Reality*

*Rio's challenges remain*



We still have un-sustainability. Why?

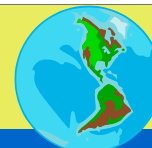
Partly because of the way in which we must operate our businesses. We must make profits, report quarterly to the stock market, meet targets, take share prices into account, .....

That means that models leads to waste, which leads to environmental degradation, because when we price our products, the price of environment is not included.

In fact, since Rio de Janeiro 10 years ago, there has been much more talk than action and everything more or less remains to be done.



## Sustainable Development: Rio to Rio +10



### Key issues remain:

- Waste - consumption, pollution
- Water - for life



Waste is still the most important issue together with water for life. As we speak, over 2 billion people on the earth today can not have access to the free and clean fresh water. That is one of the biggest problem facing us, when we talk about the environment

And it is why we are talking about things like risk reduction, legislation, and green cable. This really affects humans!

Key Issues for Cable Industry tomorrow:  
Sustainability



1. **CSR:**  
*Corporate Social Responsibility*
2. **IPP**  
*Integrated Product Policy*

*In the EU this is the  
Sixth Environmental Action Programme 6EAP:  
"Sustainability"*

Over the next 10 years, sustainability will be a key issue for the cable industry. Corporate social responsibility (CSR) will be a must for a quoted company. We will see the emergence of an integrated product policy (IPP) and environmental cable.

In the EU, this is called 6<sup>th</sup> Environmental Action Programme (6<sup>th</sup> EAP): Sustainability.

## Key Issues for Cable Industry today



1. Environmental Risk
2. Waste Directives
3. Risk Assessment &/or Bans on "Substances"
  - > heavy metals
  - > Phthalate plasticisers
  - > Halogens/PVC
  - > Copper & Zinc

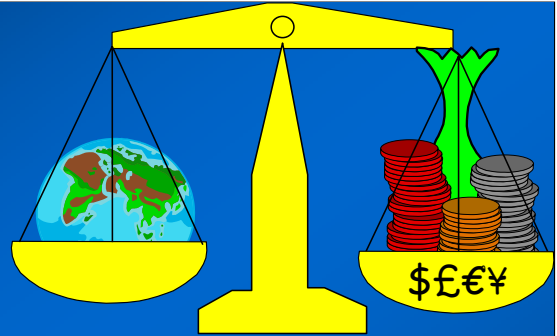
*In the EU this was, and is,  
the Fifth Environmental Action Programme 5EAP:  
The "Polluter Pays Principle"*

Today, we look at environmental risks as Mr. Colin Parker described them. There are waste directives and risk assessments or bans on materials, such as the heavy metals we use, the Phthalate plasticisers in PVC, Halogens, PVC itself, Copper and Zinc are all covered under risk assessment in the European Union.

This was and still is the 5<sup>th</sup> Environmental Action programme (5EAP); The "Polluter Pays Principle".



## UNSUSTAINABILITY



### Changing the Economic Balance: LEGISLATION

*..... Enterprises Showing: "No Willingness to Collaborate and to Engage in "Green Products".....*

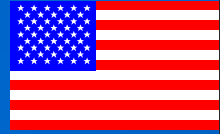
*.....will have to bear with Regulation*

Un-sustainability :

Governments know they have to work on the economic balance so industry can continue to be profitable but in a sustainable way. This is done through Legislation.

The European Union observed that enterprise showed no willingness to collaborate and engage in green products and decided to continue to regulate.

## WASTE in the USA



In normal life, each person generates about

☠ 1 ton Hazardous Waste/year

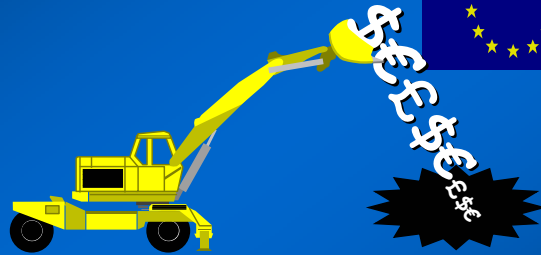
💣 1 ton "Non-Hazardous" Waste/year

- > \$500 Billion for "Clean-Up" of  
Polluted Sites & Groundwater

Waste in the USA is a high priority issue. In the USA, in normal life every person generates 1 ton of hazardous waste per year and 1 ton of non-hazardous waste. This takes everything into account: all activities, the clothes people buy, the goods they buy, the foods they eat and planes they take.

And in the USA, the bill for clean-up of polluted sites and ground water already amounted to \$500 billion .

## WASTE & the EU



Europe, 1999:

2000M Tonnes Waste,  
40M Tonnes is Hazardous Waste

**Over the last 6 years, waste has increased  
by 10% every year**

In Europe an estimated 2000 million tons of waste and 40 million tons of hazardous waste generated in 1999. And figure grows yearly by 10%. We are not reducing waste, we are increasing it! We are not increasing sustainability, we are getting worse.

That's why legislation is needed!



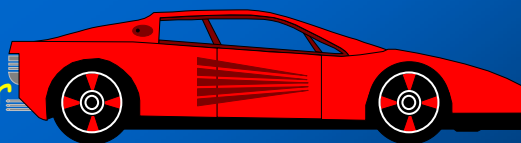
Already in the EU, there is legislation covering hazardous waste, landfill waste, packaging, construction and demolition. Which is just as you've seen for most of other parts of the world as well, Japan, North America, Australia. In all of these areas waste streams are covered by legislation. There are two other waste streams which are geared to the producer responsibility: end-of-life vehicles which are now regulated by laws in the EU and electrical and electronics waste, which will be dealt with in the next piece of legislation.

## EU: ELV End-of-Life Vehicles



### *Became EU Law in 2001*

- Vehicles Must Be Returned at End-of-Life
- Cost to Consumer
- Bans on Substances
- Recovery/Recycling Targets
- Reporting



First , end-of-life Vehicles:

In the EU, you must give back your car away at the end of life. The consumer has to pay. What I want to say to all my Italian colleagues: When your Ferrari reaches the end of life, I am willing to take it back free from you. I will not charge you 50 Euros, which you would normally have to pay in Italy in order to give the car back.

End-of-life vehicles have been regulated by law since 2001 requiring that vehicles be returned at the end of life at the expense of the consumer. There are also bans on materials that can be used in cars. Recovery and recycling targets require that up to 95 % of the weight of the car eventually be recovered and recycled. All of this must be reported in the detailed statistics to the European Union.



***STOP PRESS***  
***EU agreed final text 11 October***



The next producer responsibility legislation governs waste from electric and electronic equipment.

On the 11<sup>th</sup> of October, after about 8 years of development, negotiation and discussion, the final text of this legislation was agreed.

## EU: WEEE & RoHS Waste from Electric & Electronic Equipment



*Will become EU Law in early 2003  
& in all EU countries by mid - 2005*

- Last user may return free of charge
- To Producer, who must set up collection systems
- Visible fees on new products to fund historical waste
- Individual financing, with guarantees, for collection & recycling.....i.e. real Producer Responsibility - rewards green design)
- Progressive targets for recovery & recycling
- Data collection & reporting

In early 2003, it will become EU law and in all EU countries by mid 2005, it must be implemented.

This legislation says: The last user of the following equipment may return free of charge: televisions, PCs, refrigerators, microwaves, telephone exchanges - all of these equipments are covered by the low voltage directive. They are returned to the producer, who must set up collection systems. There will be visible fees on new products to fund historical waste. When you buy a new computer, there will be in it a little fee, which says this a tax to pay for all the old computers which exists, which will eventually need recycling .

Individual financing with guarantees: That means, when producers put goods onto the market in EU, they must give financial guarantees against their balance sheet, so that their products can be recycled. The less your products cost to recycle, the lower the required financial guarantee. This rewards green design. There are progressive targets for recovery & recycling between 65 and 85 % by weight .

The cable industry is classified as components. So, we are not producers. We do not have to do all of this, but our customers do. They will be specifying to us how they want the products delivered in the future to make recycling easier, what they should be made of and what it should contain according to the directive which becomes law at the same time.



- By 1 July 2006 ,
  - lead, cadmium, mercury, Cr(VI) and their compounds to be phased out plus certain brominated flame retardants
- PVC - still being studied

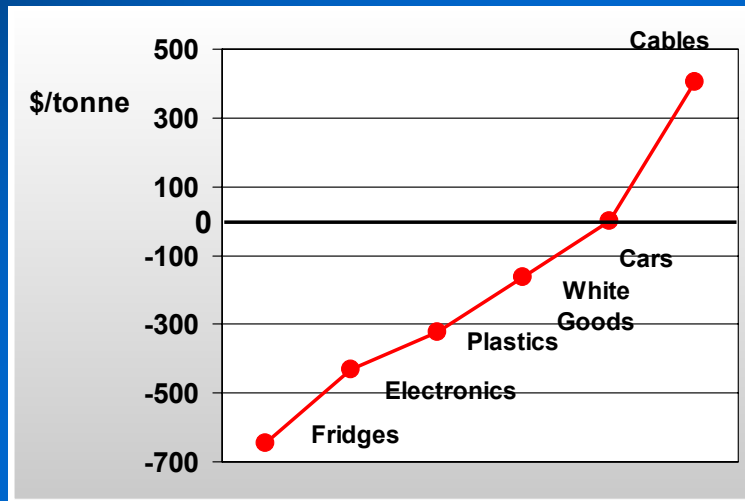
Restriction on hazardous substances:

During the same time period (i.e. by July 1<sup>st</sup> 2006), lead, cadmium, mercury, Cr6 and their compounds must be phased as must certain brominated flame retardants. In addition, PVC is still being studied as to whether it will continue to be allowed to be supplied and European Commission has asked for tenders for a life-cycle assessment of PVC.

# Waste *Nordic Cable Project*



## *Recycling Value*



If we look at cable waste, what should we as producers do?

We can look at an example of Cable project, which has been put together by the Nordic countries, Sweden, Norway, Denmark and Finland. It is a proposal to look at how we can profitably recycle cable. Cable is interesting. When you have recycled it, it still has value. Of all the electric and electronic goods, cars break even, cables have value. This is why regulators like cables.

## *Waste Disposal in the EU*

- *Can recycle >90% polymeric waste*
  - *33% recycling, (Solvay)*
  - *33% chemical recovery (Watech)*
  - *33% incineration with energy recovery*

At moment, we can recycle about 90 % of polymeric waste if we want to. But we don't. We have the technology. So, if we use present day technology and we say we will recycle one third using Solvay process, which recovers PVC, one third by the Watech process, which recovers the fillers like calcium carbonate and reduces them to their chemical components and remaining one third we incinerate for energy recovery.

## *Cost - Benefit of EU Producer Responsibility for Cables*



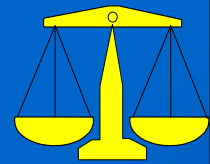
- Recycling/recovery processes cost an extra \$27/tonne
- Net Value of cable decreases: from \$404 to \$377/tonne
- Feasibility of project depends on:
  1. Cost of export for "Recycling"
  2. Relative cost of landfill



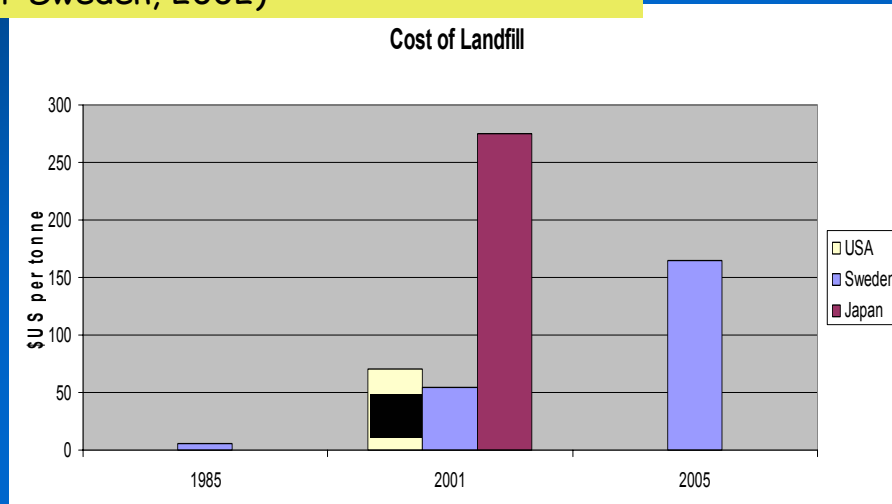
What happens then?

We need to look at cost benefit. Recycling and recovery will cost an extra \$27 per ton of cable. This reduces the net value of the cable from \$404 to \$377 per ton. And that is enough to say, that the feasibility of the project actually depends on the relative cost of exporting for recycling and relative cost of landfill in the countries. Most of the cable is exported to China for recycling.

## Changing the Economic Balance: Landfill Laws & Taxes



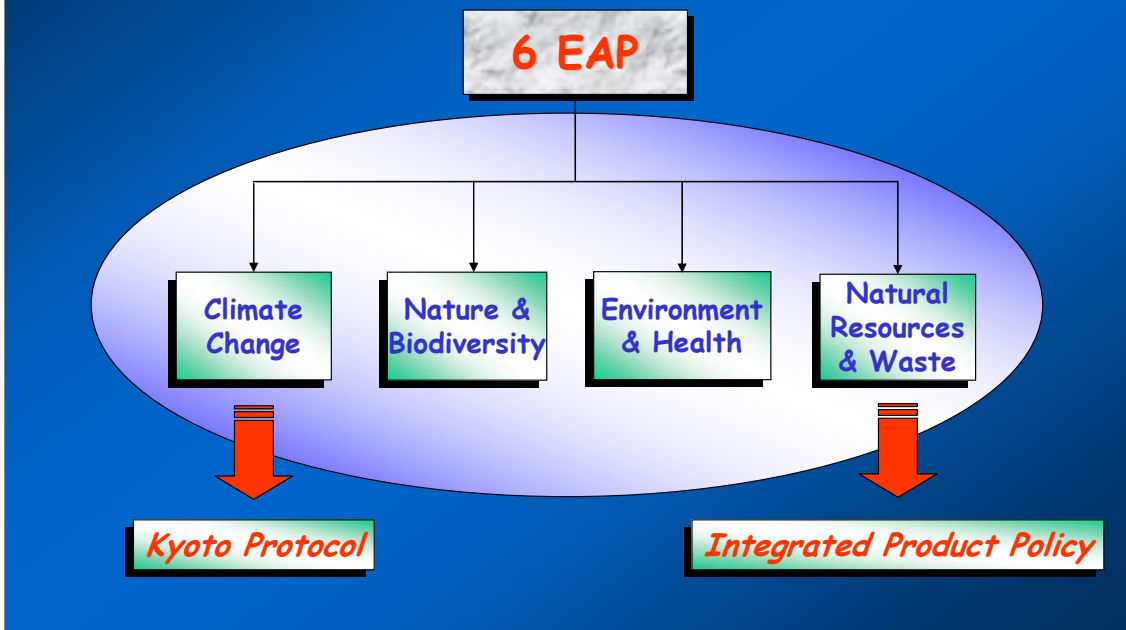
No Landfill of polymeric waste after 2007  
(for Sweden, 2002)



European Union has decided to step in and change the economic balance by regulating landfill and by means of taxes. By forbidding Introduction of polymeric waste into landfills will be forbidden after 2007 (in Sweden after 2002). Landfill costs in Sweden were about \$10/ton in 1985, today they are \$55/ton and in 2005 the will rise to \$155/ton. By comparison, in Japan landfill costs are \$250/ton. That explains progress in Japan. In contrast, in the USA costs vary depending on the state between \$40 and \$75/ton.

This changes how you look at recycling, waste and landfill.

EU: 6th Environmental Action Programme  
Sets the Objectives for the 10 Years 2001-2010



If we move on look at future:

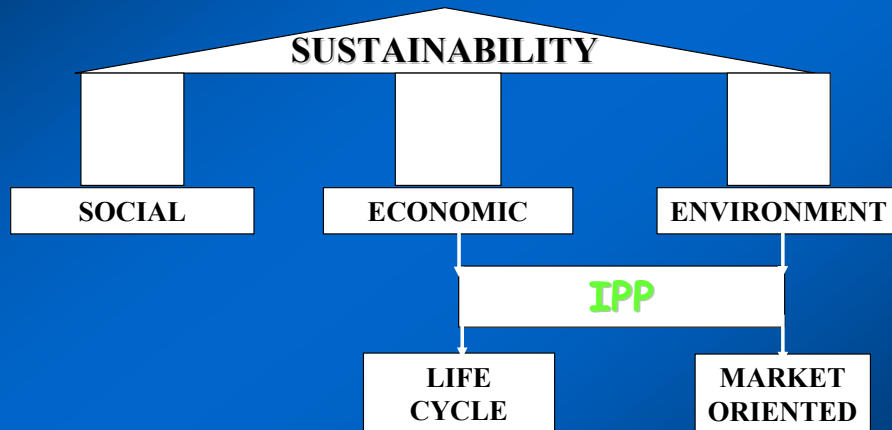
The 6<sup>th</sup> Environmental Action Program, which covers climate change, nature and biodiversity, environment and health, and natural resources and waste.

Climate change, is covered by the Kyoto Protocol, as we heard.

Natural resources and waste fall under integrated product policy.

This is the set the objectives for the 10 years from 2001 to 2010 in the EU.

EU:  
the **Green Paper** on **Integrated Product Policy**:



*a threat or an opportunity?*

EU integrated product policy looks at the factors economics and environment. It is not just a question of the environmental but also of economics. It takes environmental effects and economic effects and looks for the best balance.

Now, is this a threat or an opportunity for us as cable makers?



### THREE MAIN CHARACTERISTICS

- Integrated...  
use of life cycle
- Product...  
main focus on products but  
services NOT excluded
- Policy...  
focus on facilitation rather  
than intervention

There are three main aspects to consider:

Integrated : You consider the whole life cycle of the product.

Product : Although the focus is on product although some consideration will be given to services.

Policy : There will be a focus on facilitation rather than intervention.

In other words, there is an opportunity here to develop our own strategy before being told by law, what to do.



## THREE MAIN PILLARS

- Using Price Mechanisms....  
*Taxes, Incentives*
- Designing and Marketing the Products of the Future ....  
*Green design*
- Creating Consumer Demand....  
*Information*

*A more Holistic Approach 5-10 years*

The three main pillars: the use of price mechanisms, taxes, incentives. The job is to change the physical equation. To design and market the product of the future, we must have a standard for green design.

What has been done in Europe? It is said that we will integrate the question of the environment into the standardization process.

Mr. Reimer Stubbe said this morning IEC standardization should be private. The EU has said that standardization must be inclusive and they have already launched programs which will include non-government organization (NGOs) such as Green Peace. The EU provided funds for environmental groups to attend the standardization meetings. This is a change.

But consumer demand must also be created. Unless we can persuade people to buy green products, we will fail.

A more holistic approach is preferable to regulation through laws.



## SOME DIRECT CONSEQUENCES FOR BUSINESS

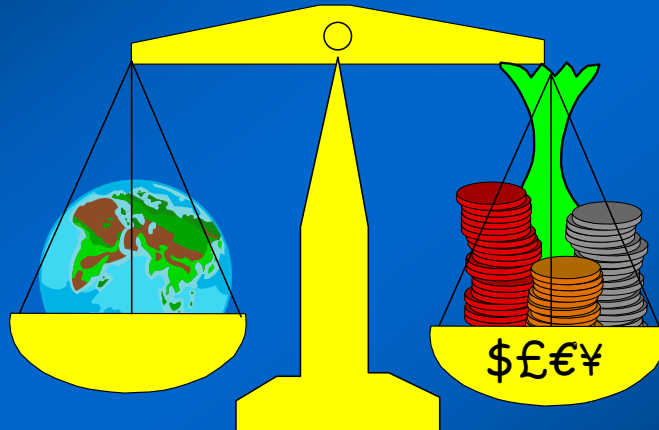
- *Green Public Procurement.....*  
*preference given to products which fulfill formal environmental criteria*
- *Taxation .....*      *according to environmental performance*
- *State Aid...*      *to support development of environmentally sustainable products*

There are some direct consequences for business;

The Green Public Procurement law states openly: "preference will be given to products which fulfill formal environmental criteria." Taxation would be according to environmental performance. State aid will be given to support development of environmentally sustainable products.

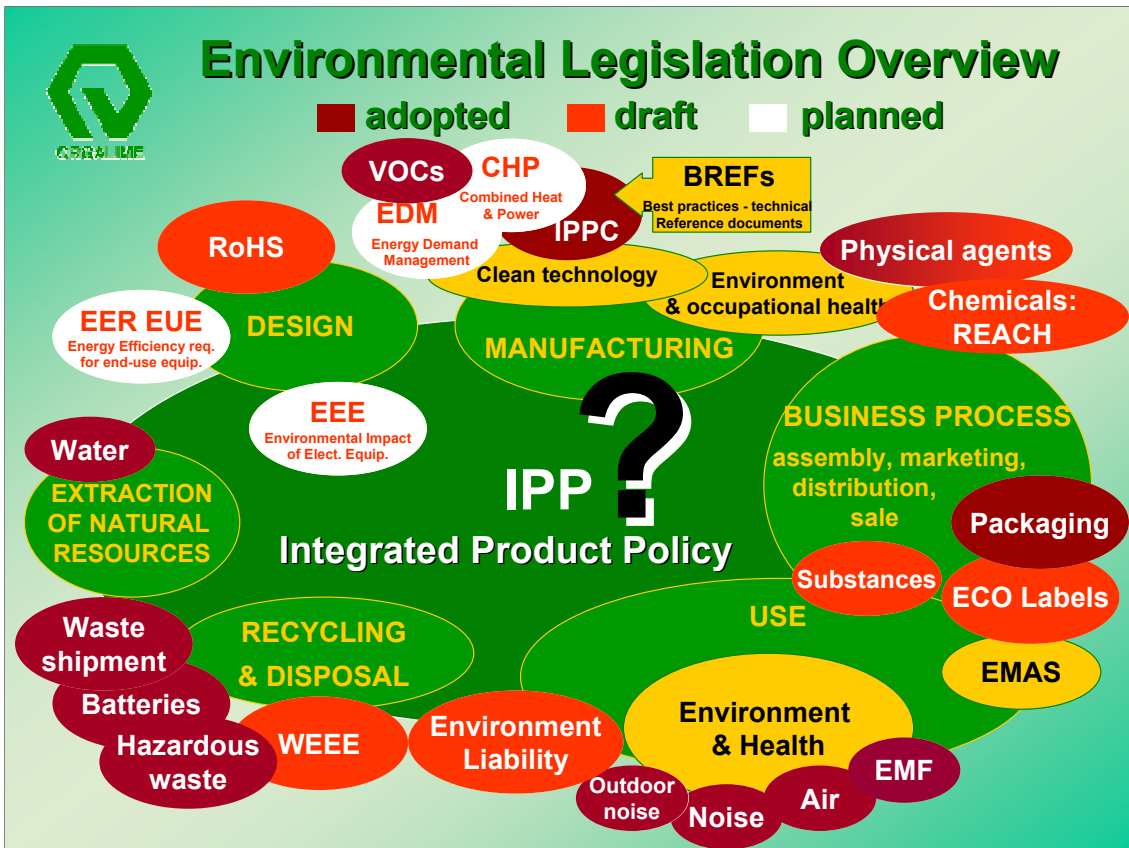


## Sustainable Development: Changing the Economic Balance



So, where is this future ?

Sustainable Development: Changing the Economic Balance.



The above:

Green represents the umbrella group of all electro-technical industries in the European Union and Europe Cable along with many other trade associations which work together to lobby the European Union.

Red shows areas where there is the legislation in Europe. This is environment in which we as manufacturers have to operate. Those are the number of laws which affect how we consider source materials, how we manufacture, how we sell our products, what our liability is, how they must be disposed of at the end-of-life.

To put it very simply, Europe Cable has said to EU Commission: "Is this really Integrated Products Policy or is this bureaucracy?"

That is the challenge we are facing.



# 1 EEE: Environmental Effects of Electric and Electronic Equipment

" .....Use LIFE CYCLE ASSESSMENT to select THE DESIGN SOLUTION ....." "

As if it is not already enough, DG Enterprise have proposed more draft directives. A directive on the environmental effects of electric and electronic equipment is planned, which will require manufacturers to use life cycle assessment to select the best design solution by balancing environmental, economic and safety issues.

Cables are included in this draft. They are specifically included and named. They are not excluded as components.



## 2 Energy Use of EEE

"..... Energy Efficiency Improvements  
at the Design Stage ....."



***Business opportunity for  
power cables***

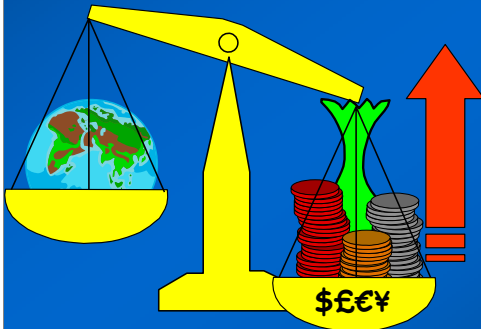
Another draft directives has been proposed on energy use of electric and electronic equipment. The plan is to require that energy efficiency improvements be designed in at the beginning. This could be a business opportunity for power cables. We can try and sell more copper.



## Sustainable Development: TOTAL LIFE THINKING



- Progress within the current economic model
- We must be profitable to survive !
- A base for moving to a new economic model



*The economic balance  
is changing*

Sustainable development is therefore total life thinking. If we are going to progress to sustainability and make a profit within the current economic model, something has to be changed. What is the basis for moving to make profit in sustainable way ?

The answer is very simple. Legislation.



## The Declaration: Implementation

Margot Wallstrom, Director General Environment:  
the EU

*".....must continue to take the lead and translate political commitment into concrete action".....*

Catherine Day, EU Commissioner for  
Environment:

*....."the EU will take initiatives on Sustainable Patterns of Consumption & Production".....*



After Johanneburg, Margot Wallstrom of EU said: "The EU must continue to take the lead and translate political committment into concreate action."

In addition, Catherine Day, EU Commissioner for Envirnment, said: "The EU will take initiatives on sustainable patterns of consumption and production."

# Green Cable?

Will result when a company:

- Manages production to continuously reduce environmental impacts
- Integrates environmental standards into the supply chain
- Uses "Life Cycle Thinking" in design & production
- Takes Responsibility as a Producer



Remember, we do have options.

You asked me about green cables. In my opinion, you get green cables, when you as a company manage production to continuously reduce the environmental impact. And when you integrate environmental standards into your supply chain, in other words, you demand the same environmental performance from your suppliers, that you demand from yourself.

When you use life cycle thinking in design and production, this is not the same as life cycle assessment. It is not looking at all little numbers which make a huge computer programme to compare things, but rather a question of asking what matters most. In energy cables, this will be the use of energy during the life. We know that. But we also know that some of the materials have higher impact on others. We can think simply here. We can start integrating the background of the law into our product design in a very simple way.

And that means, we can take responsibility as a producer. We can offer that to our customer.

# Green Cable?



*Self-Regulation: Voluntary Agreements, Product Declarations, Management Systems, Life-Cycle thinking.....*

*OR*

*..... Enterprises Showing: "No Willingness to Collaborate and to Engage in "Green Products".....*

*.....will have to bear with Regulation*



Otherwise there is a threat.

We can take a part in self-regulation: voluntary agreement, product declarations, management systems, life cycle thinking....

OR

If enterprises show no willingness to collaborate and to engage they will have to bear with regulation.

It is our choice.



## Sustainable Development: Consequences for Industry



### *THIS CHANGES THE ECONOMIC MODEL FOR PROFITABILITY!*

#### *New success factors:*

- *Environmentally sound products/services from design, production & end-of life management will cost less*
- *Companies that have introduced Sustainable Development (Corporate Social Responsibility, management systems...) will attract more capital, pay less insurance & taxes*

**Environmental Issues to be integrated  
into WTO (Doha, Monterrey)**

We have new success factors:

Environmentally sound products and services from design, production to end of life management will cost less because the law has changed.

Companies that introduced sustainable development, corporate social responsibility, will attract more capital, ethical stocks, pay less insurance because you control risk, design part of it.

Environmental issues are to be integrated into WTO agreement, Doha Monterrey. So, it's started to become real.



### The Declaration: Implementation

- .....the "Coalition of the Willing"-
- .....the OPEC of Renewables
- .....“Private-Public Partnerships”

Implementing Declaration:

In a coalition of the willing, those governments, industries and companies who wish to act, will band together to do it , exactly same as the OPEC renewables.

Private-public partnerships is seen as a way forward and an alternative to regulation or the end of pipe.

What is green cable?

# Green Cable?

- The Cable industry has a fairly low profile in terms of Pollution
- We operate mainly B2B

- We can choose to:
- Manage risk in a planned way,
- Adopt a pro-active approach to regulations,
- Participate at the level we decide,
- Grasp market opportunities

OR

- We can avoid engagement -
- and take the costs

The cable industry has a fairly low profile in terms of pollution. We are not huge chemical industry, not oil refinery. We do not operate at a consumer interface. We operate business to business. This gives us the ability to quietly develop policy. It means that we can choose to manage our risk in a planned way without surprises. We can be pro-active where we wish to. We can participate at the level we decide upon. And we can take advantage of opportunities. Otherwise we must pay the cost. It is a choice we make.

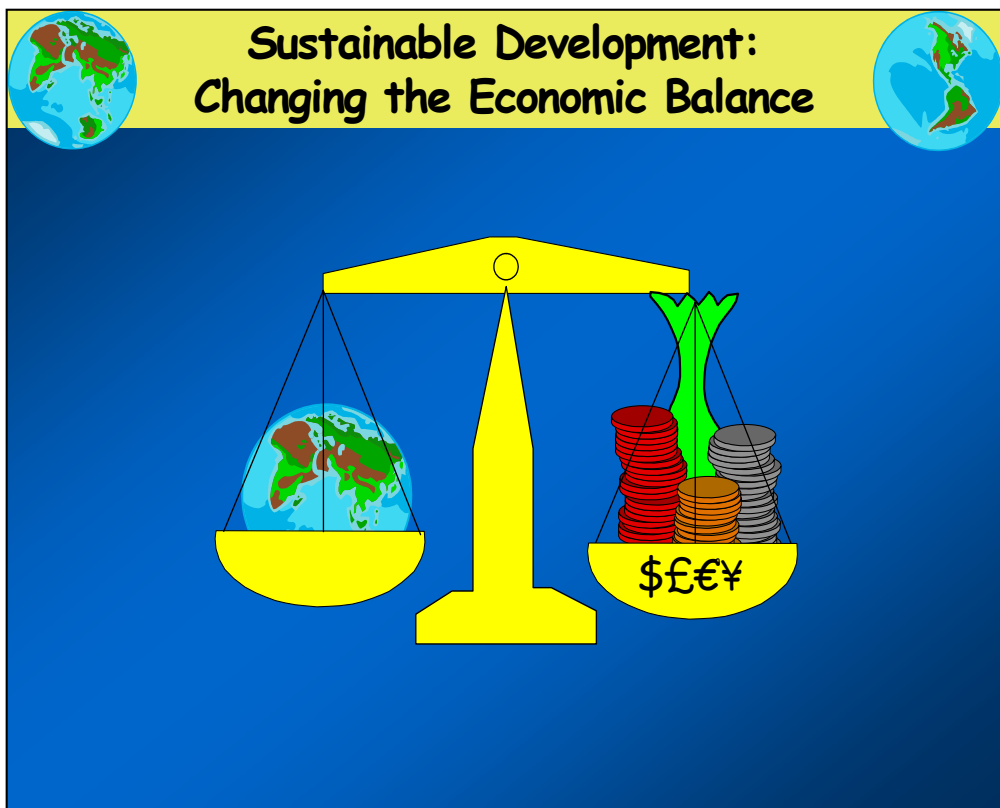
# RISK

Engage? Engage at what level?

Or not engage..

So if we want to turn risk into opportunity, we have to change the economic balance. Green cable is what we make of it.

# OPPORTUNITY



# Green Cable?



## Reality or Myth?



**Question by Dr. Peter Goessing**, Corning Cable Systems, Germany

Is actually upper management generally engaged in environmental issues or is this actually handled by some other levels in the company? What is your experience?

**Answer by Dr. Elizabeth Ness**

It varies enormously from company to company. In Pirelli the top management is engaged. You can see from Pirelli's Environmental Report that this is a company's decision. Where the top management is engaged, obviously things happen more quickly. The example is in quality management.

If you manage quality to have just a label of ISO 19001 and some books with systems, then you have bureaucracy. If you manage quality to be a quality company, the books don't matter so much as the leadership from the top which ensures quality. It is the same with environment. A company which manages quality well, manages its business well, manages environment well. It is interrelated.

The level of engagement does depend on where the company is, and how they operate. So, you actually see in those Greener (Nordic) countries where the legislation is higher, has more attention from the CEO because it affects the bottom line more. That would be normal.

Thank you.