Transforming the electricity sector

Catalysing the role of consumers

UIC

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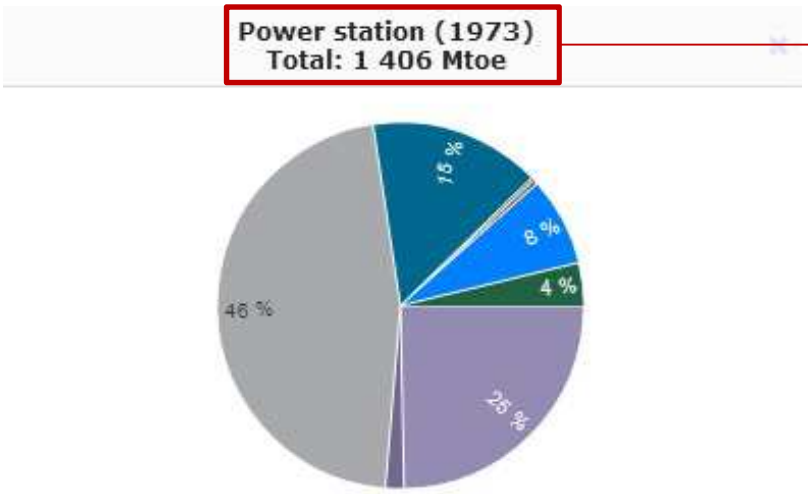
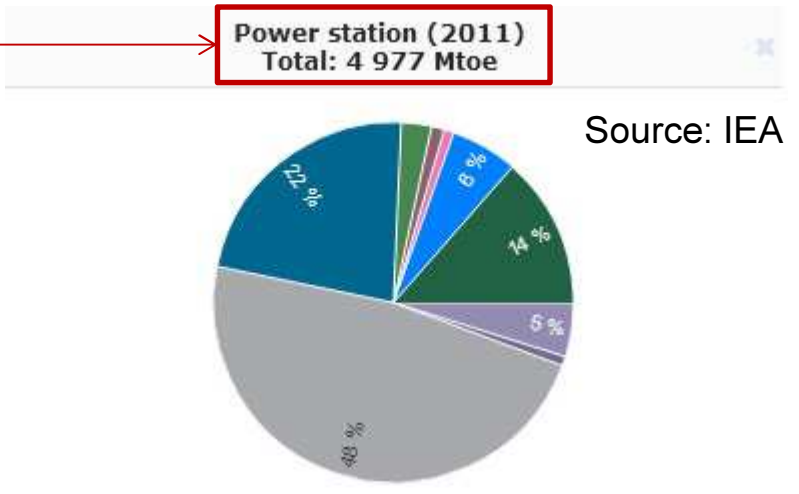
World electricity production



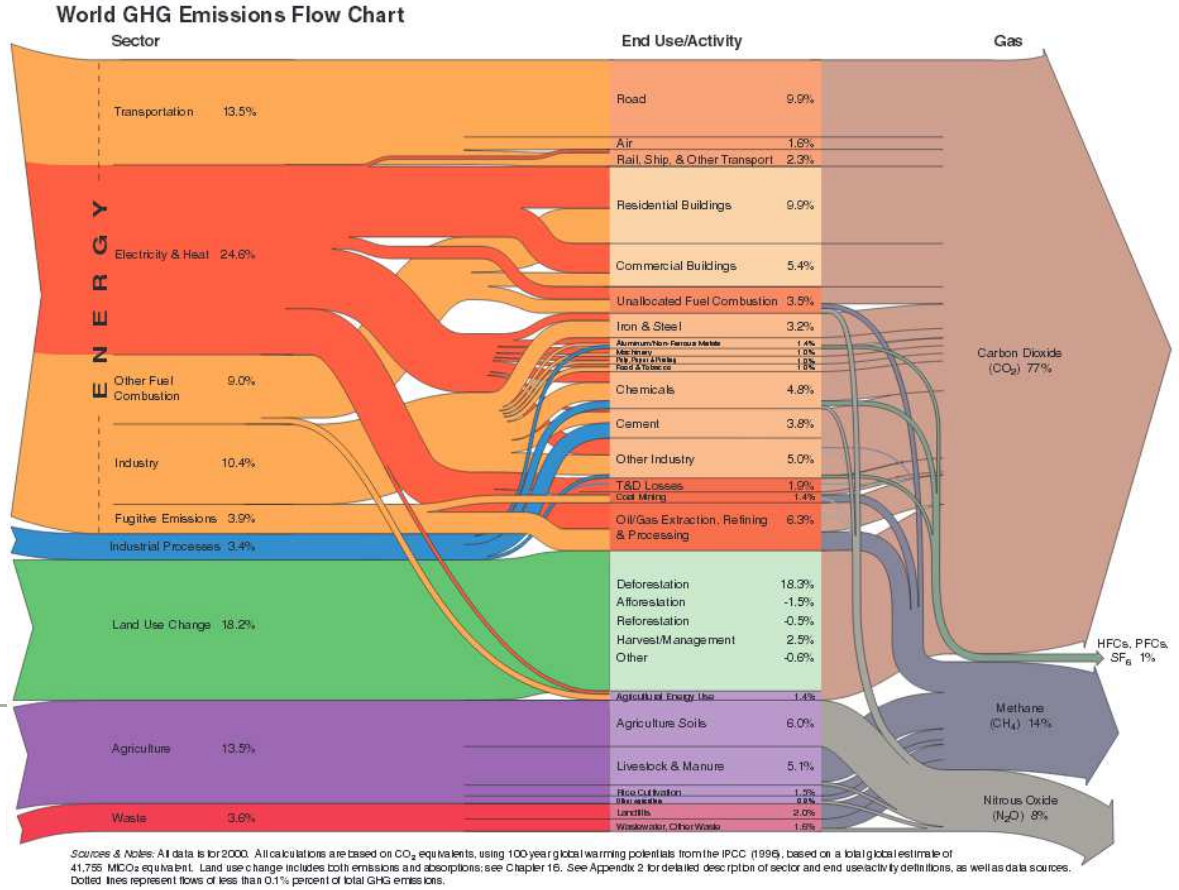
Oil products	347 Mtoe
Oil	23 Mtoe
Coal	651 Mtoe
Natural gas	212 Mtoe
Biofuels and waste	4 Mtoe
Geothermal	6 Mtoe
Solar/tide/wind	0 Mtoe
Hydro	110 Mtoe
Nuclear	53 Mtoe



Source: IEA

Oil products	241 Mtoe
Oil	42 Mtoe
Coal	2 366 Mtoe
Natural gas	1 118 Mtoe
Biofuels and waste	135 Mtoe
Geothermal	58 Mtoe
Solar/tide/wind	43 Mtoe
Hydro	300 Mtoe
Nuclear	674 Mtoe

What does it means in terms of emissions?



Sources & Notes: All data is for 2000. All calculations are based on CO_2 equivalents, using 100-year global warming potentials from the IPCC (1996), based on a total global estimate of 41,755 $MtCO_2$ equivalent. Land use change includes both emissions and absorptions; see Chapter 16. See Appendix 2 for detailed description of sector and end use/activity definitions, as well as data sources. Dotted lines represent flows of less than 0.1% percent of total GHG emissions.

Source: WRI

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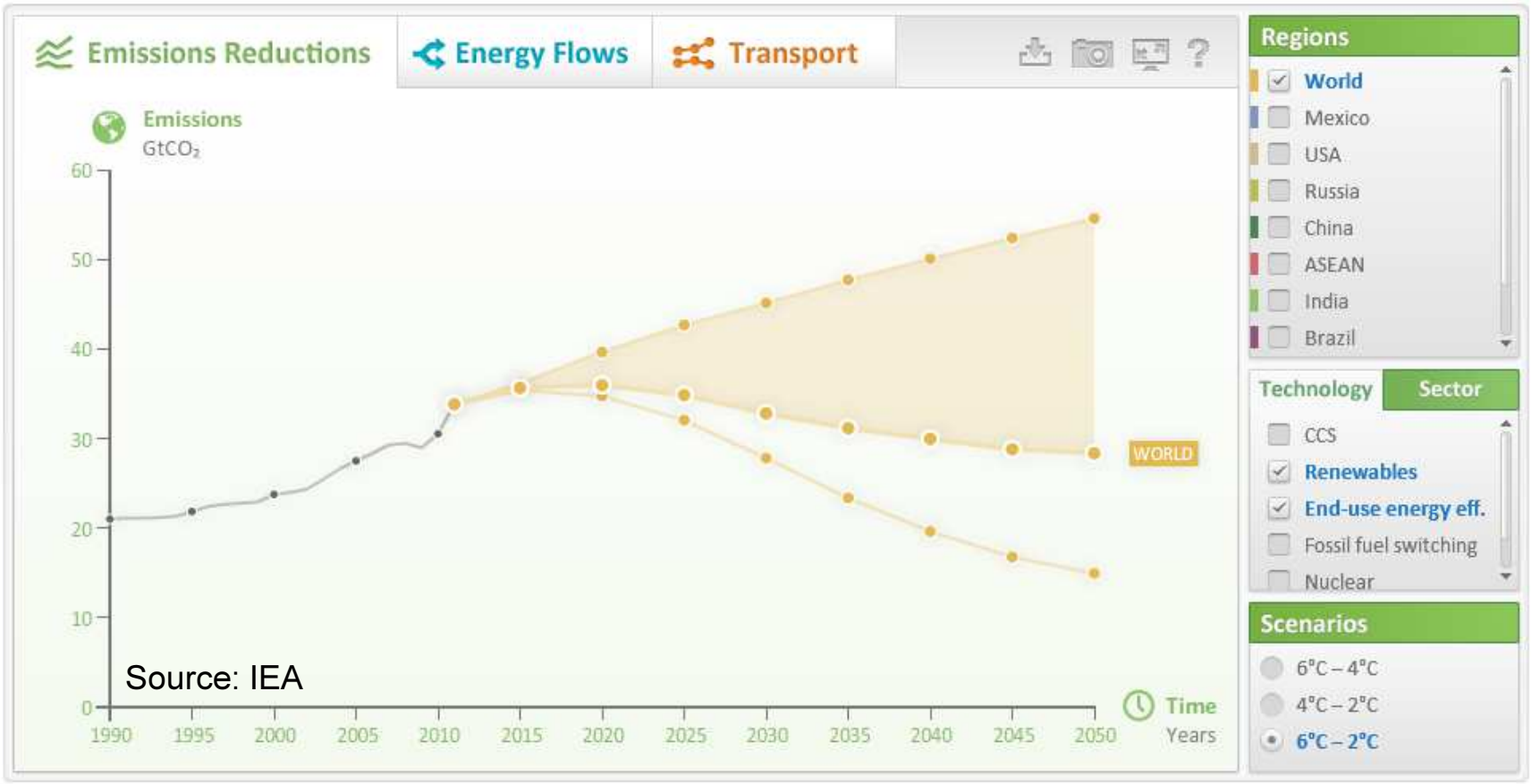
The challenge – contribution of EE and RE



Why CDP exists? Challenging times

Our climate is changing.

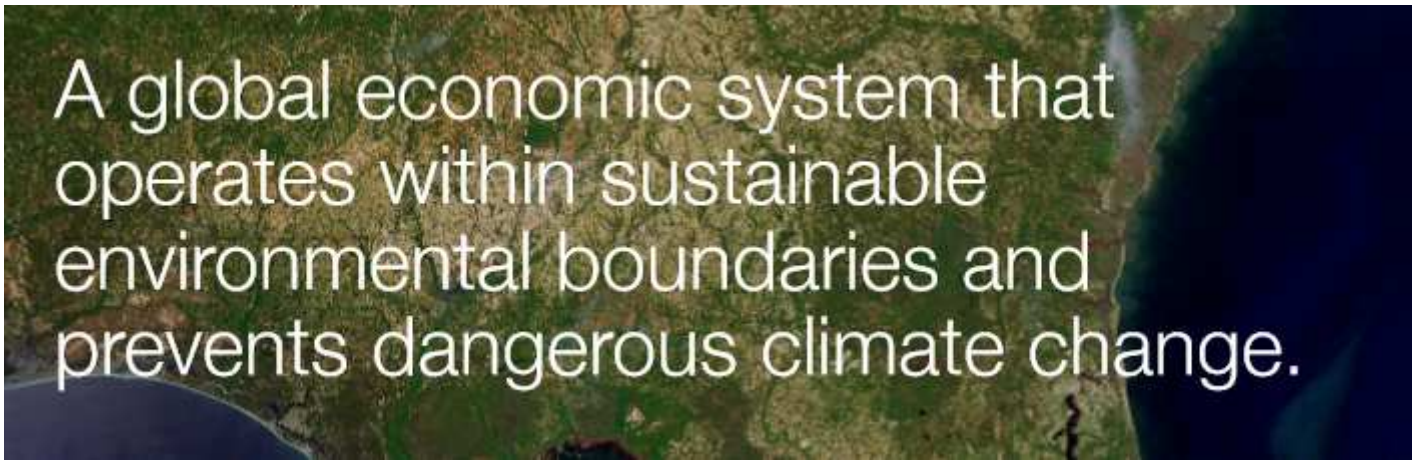
We are facing unprecedented global economic challenges.

By 2030 the global population is expected to increase 18.5% to 8.3 billion.

This demands:

- **50%** more food;
- **50%** more energy;
- **30%** more fresh water;
- Every ton of carbon to become at least **five** times more efficient in its economic output

Our vision


A global economic system that
operates within sustainable
environmental boundaries and
prevents dangerous climate change.

Strategic goal

Our strategic goal is to drive action by companies and cities globally to reduce greenhouse gas emissions, safeguard water resources and prevent the destruction of forests.

Strategic pillars

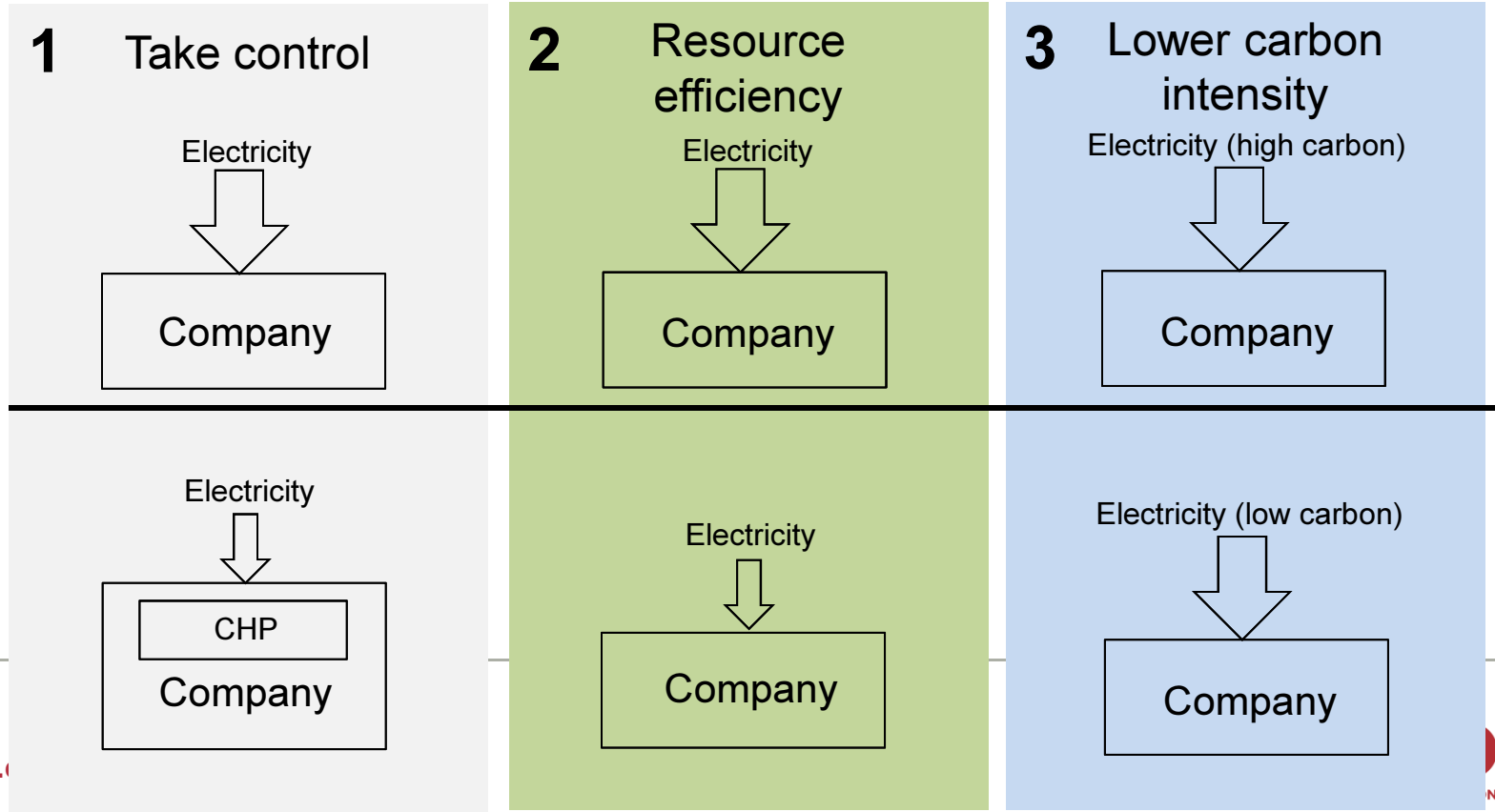
To increase corporate transparency on environmental impact and performance

To assist cities to reduce their climate impacts and build resilience

To make environmental performance central to investment and business decisions

To support effective policy and regulation to protect the environment

Choices to reduce indirect footprint



Fundamentals – Accounting of electricity emissions

Basics

X tCO2 = Activity data [MWh] * Emission Factor [tCO2/MWh]

Implications

Energy Efficiency

Electricity procurement

Consume RE Power

Consume & transform power

CDP response

Action Exchange

RE100

Ren Power Procurement

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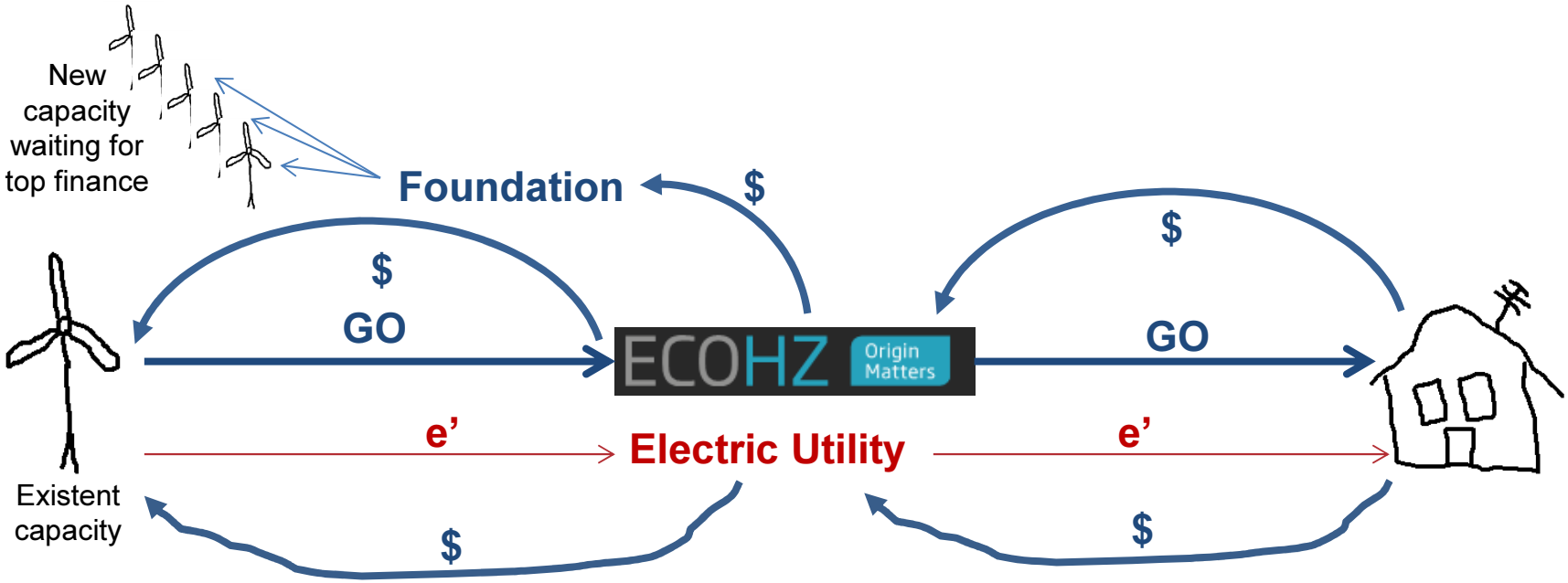
Renewable Power Procurement – tracking electricity & $



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Ren Power Procurement – eliminating barriers (I)

Table 8.1 Risk profile of different technologies

	Regulatory	Construction	Market	Operations
CCGT	Low	Low	Medium	Low
Onshore wind	Low	Low	High	Low
Solar PV	Low	Low	High	Low
Offshore wind	Medium	High	High	Medium
Nuclear	Medium	High	High	Low
Large hydro	Medium	Medium	Medium	Low

Low Medium High

Source: IEA

Ren. Power Procurement – eliminating barriers (II)

Growth of non-hydro renewables has been especially rapid in markets where households and smaller companies have underpinned deployment. However, such investors do not usually have substantial assets that can generate income to finance new capital expenditures. The expansion of renewables assets by household and small company investors, therefore, relies more on external sources of finance than is typical for conventional power plants.

Source: IEA

Trying to work and understand needs of European RE cooperatives

Coopérnico

Som energia

RESCOOP

Use your choices to build a brighter future

May your choices

reflect your hopes,

not your fears! ~

Nelson Mandela

Thank you!

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