



Green Economy

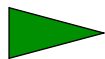
Green Jobs

Green Skills

Ueli Bernhard, economist, Managing Director
www.greenjobs.ch
Manufacturing Summit 2010 Washington
November 9, 2010



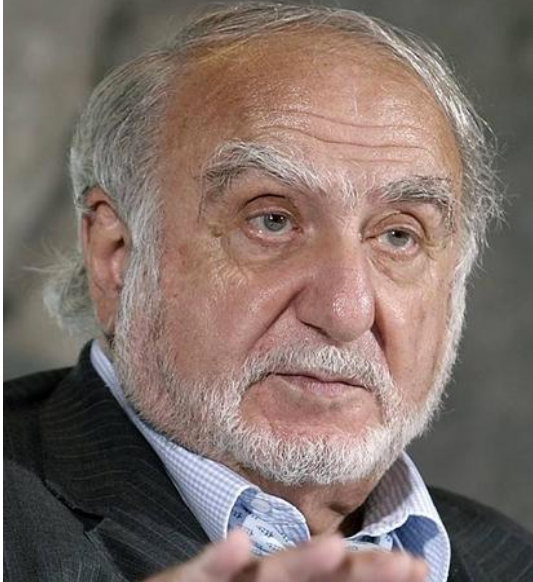
Overview



1. **Approaches to Green Economy**
2. Green Jobs Initiative
3. Green Skills for Green Jobs
4. Conclusion



Statements About Green Economy Values and Ethics



"I always bear in mind that we live on a spaceship. (...). And I believe that every passenger on this spaceship must help reduce the damage. I happen to have a certain amount of money, plus other resources and connections, and am able to do something. It is time for entrepreneurs to take action".

Nicolas G. Hayek, 2007
CEO Swatch

swatch⁺

Statements about Green Economy Global Competition



"Our competitors are catching up fast. China will soon replace Germany as market leader in solar technology. In fact, they have already overtaken Germany in terms of wind energy. China and the US may well have slowed down the global climate negotiations. But, in the real world of climate protection, they are in the fast lane".

Connie Hedegaard, EU Commissioner for
Climate Action, 2010 FrankfurterAllgemeine

Statements about Green Economy Triple Crisis Management



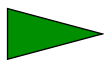
„Invest in a clean energy economy and help create 5 million new green jobs“.

„We need a green New Deal to meet our carbon emissions targets and create jobs in renewable energy and green technology. The world was in extraordinary times, in the midst of a major financial crisis, on the cusp of a serious energy crisis and at the same time, stoking the fire of a potentially catastrophic climate crisis“.

Barack Obama, President of the United States, 2008

Overview

1. Approaches to Green Economy
2. **Green Jobs Initiative**
3. Green Skills for Green Jobs
4. Conclusion





United Nations
Environment
Programme



International
Labour
Organization



International
Organisation
of Employers



International
Trade Union
Confederation

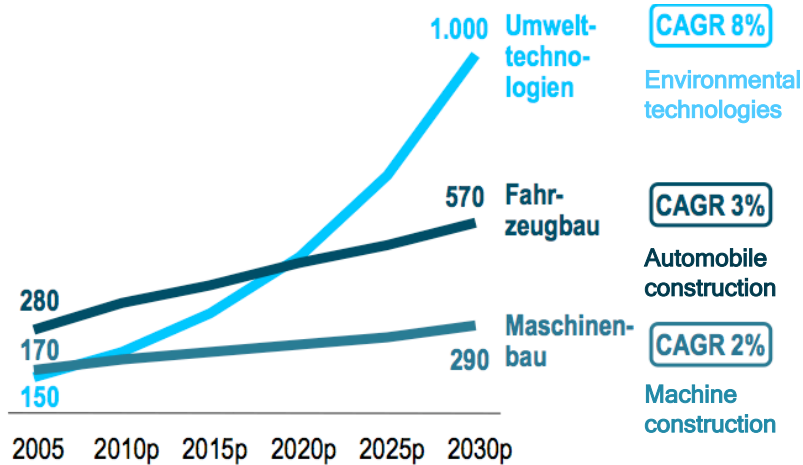
Table 4. Green jobs progress to-date and future potential

		Greening potential	Green job progress to-date	Long-term green job potential
Energy	Renewable energy	Excellent	Good	Excellent
	Carbon capture and sequestration	Fair	None	Unknown
Industry	Steel	Good	Fair	Fair
	Aluminium	Good	Fair	Fair
	Cement	Fair	Fair	Fair
	Pulp and paper	Good	Fair	Good
	Recycling	Excellent	Good	Excellent
Transportation	Fuel-efficient cars	Fair to Good	Limited	Good
	Public transport	Excellent	Limited	Excellent
	Rail	Excellent	Negative	Excellent
	Aviation	Limited	Limited	Limited
Buildings	Green buildings	Excellent	Limited	Excellent
	Retrofitting	Excellent	Limited	Excellent
	Lighting	Excellent	Good	Excellent
	Efficient equipment and appliances	Excellent	Fair	Excellent
Agriculture	Small-scale sustainable farming	Excellent	Negative	Excellent
	Organic farming	Excellent	Limited	Good to Excellent
	Environmental services	Good	Limited	Unknown
Forestry	Reforestation and afforestation	Good	Limited	Good
	Agroforestry	Good to Excellent	Limited	Good to Excellent
	Sustainable forestry management	Excellent	Good	Excellent

Source: Green Jobs - Towards Decent Work in a Sustainable, Low-Carbon World, UNEP/ILO/IOE/ITUC, September 2008

greenjobs.

Predicted turnover for German environmental technologies (in € 1000m)

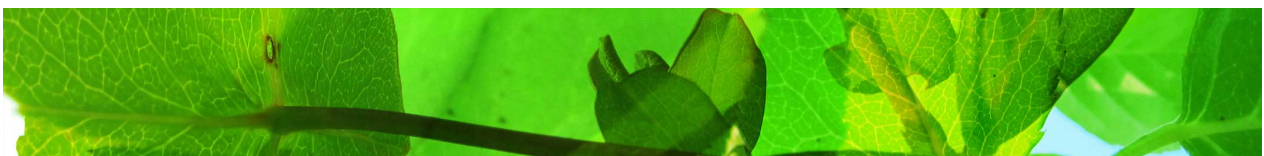
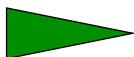


Quelle: Prognos 2006, BMU Unternehmensbefragung 2006, durchgeführt von Roland Berger Strategy Consultants

greenjobs.

Overview

1. Approaches to Green Economy
2. Green Jobs Initiatives
3. **Green Skills for Green Jobs**
4. Conclusion



greenjobs.

greenjobs. Thesis 1

In the future, every job will be a green job, contributing to varying degrees to continuous improvement of resource efficiency. Understanding the environmental impact of an occupation needs to be mainstreamed into education and training systems.

11



greenjobs.

Integrating and deepening green skills Response strategy I

...is a green redesign of well established curricula in all occupational fields. Every (new) apprenticeship ought to have a green skills qualification framework.

12



Example 1 Sustainable Mobility Instructor

Old footprint: Driving Instructor

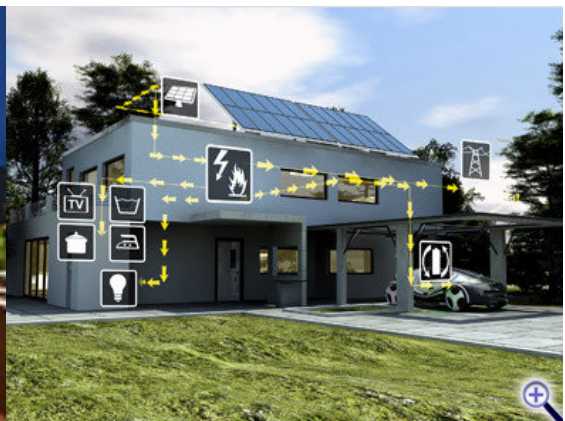
- Eco-drive Instructor (- 15 % petrol consumption)
- Indoor Drive Simulation Training
- Eco-drive trainer for bus driver, teamster
- Bicycling Instructor



Example 2 Smart Grid Electrician

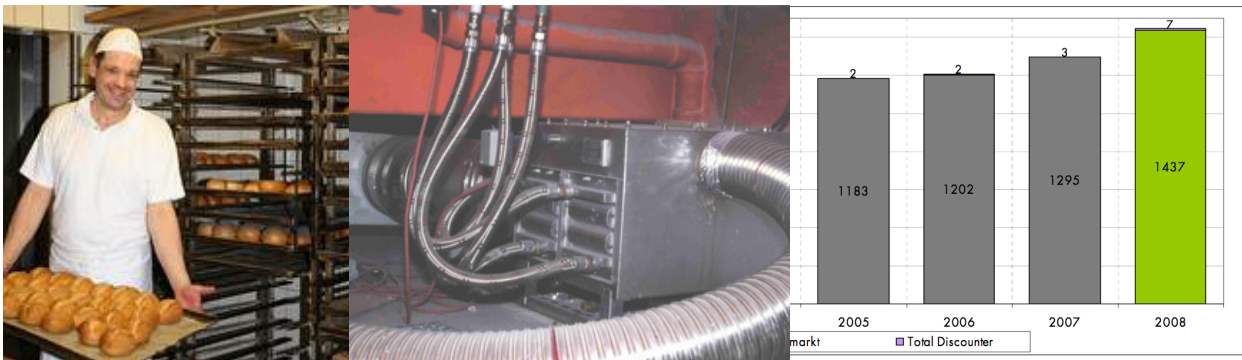
Smart Grid Electrician

- Smart Grid Management and Installation
- Swiss Energy efficiency potential in public lighting: - 60'000 t CO2
- LED new energy efficiency potential in public lighting



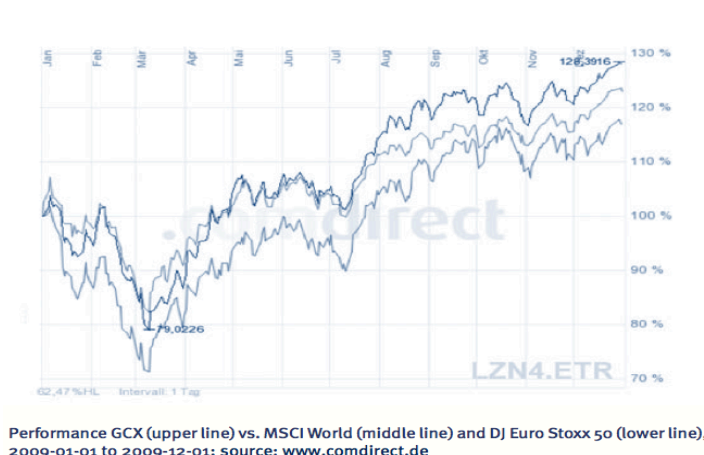
Example 3 Sustainable Bakeries

- Bakery using 100 % renewable energy
- Heat recovery (energy saving potential in bakeries 30 %)
- Energy efficient management of coolers
- Organic primary products



Example 4 Leaders for Sustainable Finance

- Sustainable Real Estate Management
- Sustainable Portfoliomanagement
- Sustainable Finance Consultant



Asset Manager
Green Property Fund Credit Suisse



greenjobs.

greenjobs. Thesis 2

Integrating green skills into existing qualifications through specialisation or diversification is generally more effective than creating new occupations.

17



greenjobs.

Integrating and deepening green skills Response strategy II

Deepening green skills through integration and national recognition of green specialisation fields within existing occupations.

18



greenjobs.

Example 1 Specialisation

Gardener

- specialised in natural gardening
- national diploma

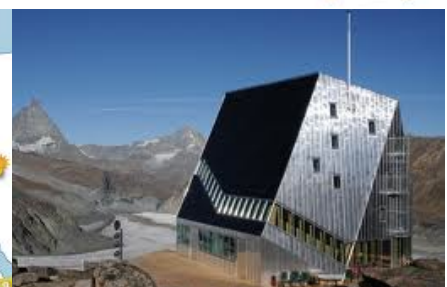


greenjobs.

Example 2 Specialisation

Roofer

- specialised in solar thermal energy
- national diploma (currently being prepared)



Example 3 Specialisation

Engineer HF Energy and Environment

- specialised in energy and environment
- national diploma



Integrating and deepening green skills Response strategy III

Deepening green skills through diversification of existing occupations.



Example 4 Diversification

Energy advisor for buildings

- Additional training to provide green upskilling, through diversification of services
- Builds on basic occupational fields - heating installers, plumbers and chimney sweepers



*greenjobs.*Thesis 3

Green Skill response strategies have to be incorporated into larger “greening” policies, programmes, such as

- green stimulus packages
- research and innovation
- environmental strategies (climate change policies etc)
- educational policies
- green restructuring of traditional industries/regional policies faced with declining markets



Green stimulus packages and green skills response strategies

	Package	Total fund and % green investment	Composition
DE	Twin stimulus packages (November 2008 and January 2009)	EUR 100 billion 13.2%	Energy efficiency (buildings); low-carbon vehicles (scrappage bonus, loans to develop low-carbon engines, emission-based vehicle taxation scheme); public transport systems
FR	Economic revival plan (December 2008)	EUR 26 billion 21.2%	Energy efficiency (buildings); low-carbon vehicles (scrappage bonus, premium for low-carbon cars; investment in high speed rail); renewable; grid infrastructure

Environmental policies and green skills response strategies

Example climate change legislation (CH)

Part of the carbon emission charge will be invest in training, information and advising for low-carbon initiatives for business, communities and consumers.

Ihr Beitrag	CO ₂	Preis
Flug von Zurich (CH) ZRH nach Washington (US) IAD Retour, Economy Class, 13'362 km , 1 Reisender	2.744 t	EUR 66.00
Spende für die Klimabildung	0.0 t	EUR 6.00
Total	2.744 t	EUR 72.00

greenjobs.

CONCLUSION



GREEN SKILLS
GREEN VALUES
GREEN CHANGE

NO BEGINNING
NO MIDDLE
NO END

THANK YOU

greenjobs.



Ueli Bernhard
Environmental Economist
Managing director of *greenjobs.*

Bollwerk 35, 3011 Berne
Switzerland

info@greenjobs.ch
www.greenjobs.ch