



Green Economy - Green Jobs - Green Skills Opportunities of a transition to a Green Economy



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
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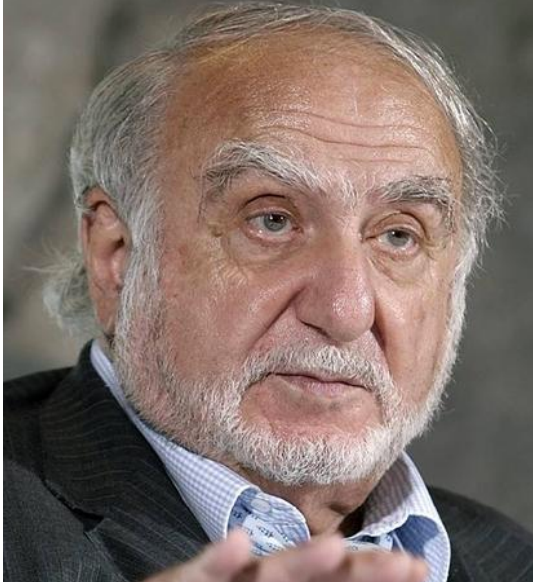
Overview



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

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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

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Towards a
GREEN *economy*

Pathways to Sustainable Development
and Poverty Eradication

Overview

Enabling Conditions for green economy

Drivers

- Taxes and market-based instruments to promote green investments
- Government investment, Green Stimulus packages
- Regulatory frameworks
- Consumer information and homeowner events
- NGO Campaigns
- Companies, Company Alliance, Sustainable Landlords Associations
- Strengthen International Governance
- Capacity Building, Vocational training and Education

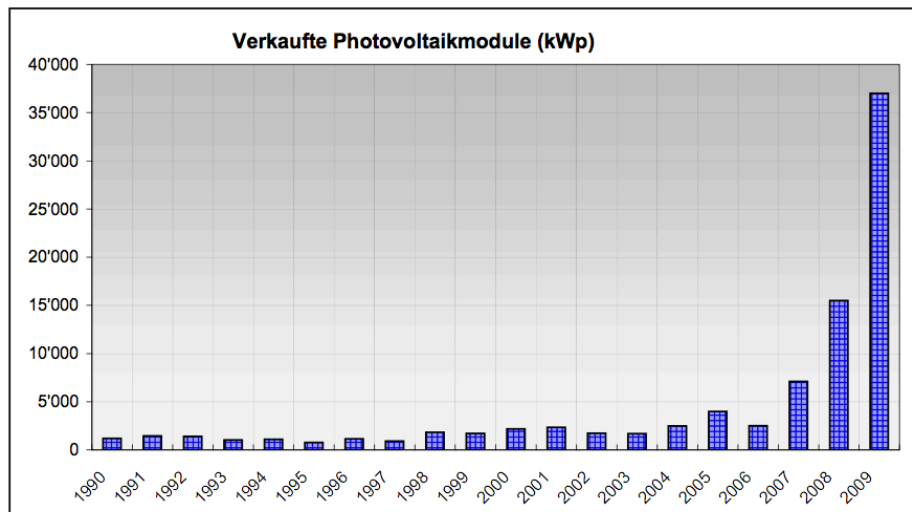
Driver 1: Taxes and market-based instruments to promote green investments

Taxes and market-based instruments

- Introduction feed-in tariffs (solar energy resource-generated electricity, biogas, wind)
- CO2 taxes for engine fuels, electricity, oil and gas in foreseeable steps, Swiss Heavy Vehicles Fee LSVA, VOC tax)
- Environmental taxes allocated to the originator (early waste disposal taxes, etc)
- Performance agreements and sector specific solutions between federal government, cantons and economy
- Net metering

Example: Introduction feed-in tariffs

11.1 Verkäufe Photovoltaik-Module (kWp)



Example: Swiss Heavy Vehicles Fee LSVA

Was wäre ohne Landverkehrsabkommen und Verlagerungspolitik?

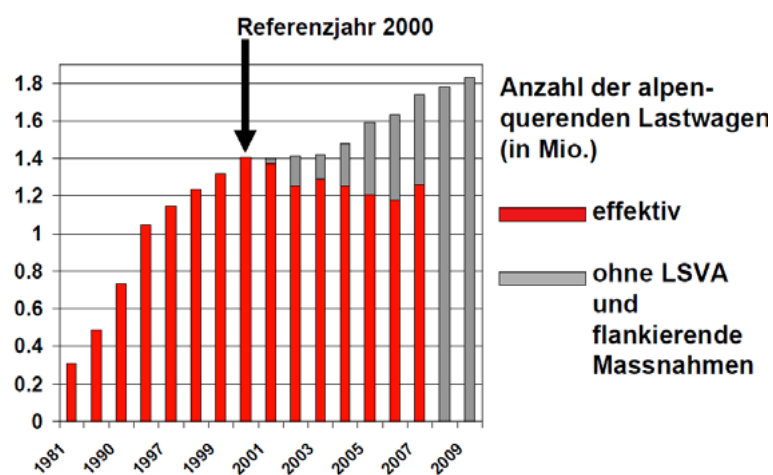


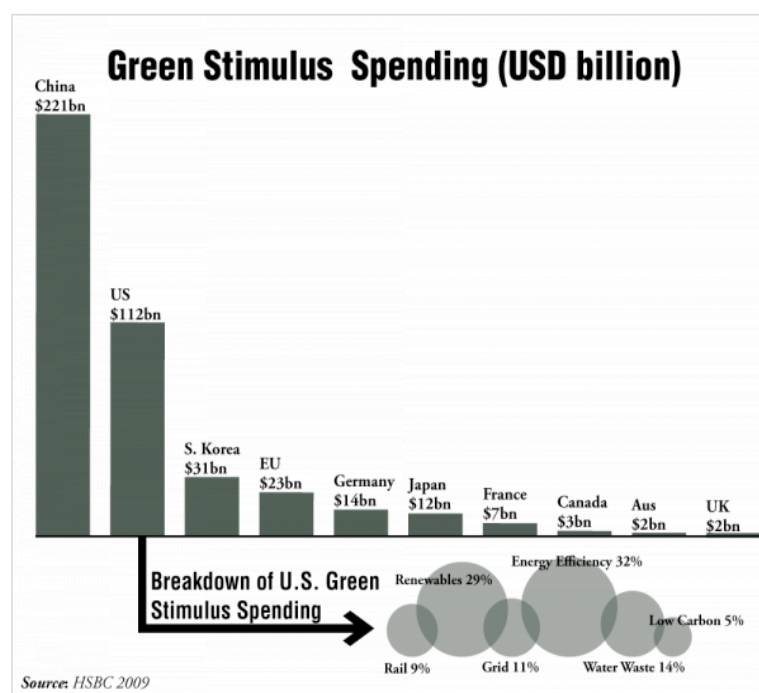
Abbildung 2: Die Auswirkung der Verlagerungspolitik auf den Schwerverkehr
(Quelle: BAV)

Driver 2: Government investment, Green Stimulus packages

Government Investment and Spending

- Green Stimulus packages
- Direct grants: National Real Estate Program
- Government procurement
- Communication and Vocational Training

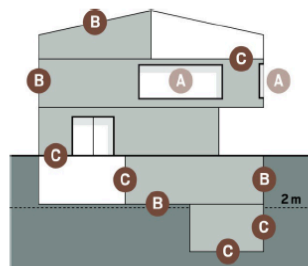
Example: Global New Green Deal



Example: Direct grants - National Real Estate Program



Förderbeiträge



Massnahme	Bedingungen	Fördergeld
A Fensterersatz	U-Wert ¹⁾ Glas $\leq 0.7 \text{ W/m}^2\text{K}$ Glasabstandhalter Kunststoff / Edelstahl	70 Fr. / m ² Mauerlichtmass
B Wand, Dach, Boden: Dämmung gegen Aussenklima ²⁾	U-Wert $\leq 0.20 \text{ W/m}^2\text{K}$	40 Fr. / m ² gedämmte Fläche
C Wand, Dach, Boden: Dämmung gegen unbeheizte Räume ³⁾	U-Wert $\leq 0.25 \text{ W/m}^2\text{K}$	15 Fr. / m ² gedämmte Fläche

Example: Country Data

Market Size in terms of Solar Thermal Capacity (KW_{th}) and in terms of Collector Area (m²)

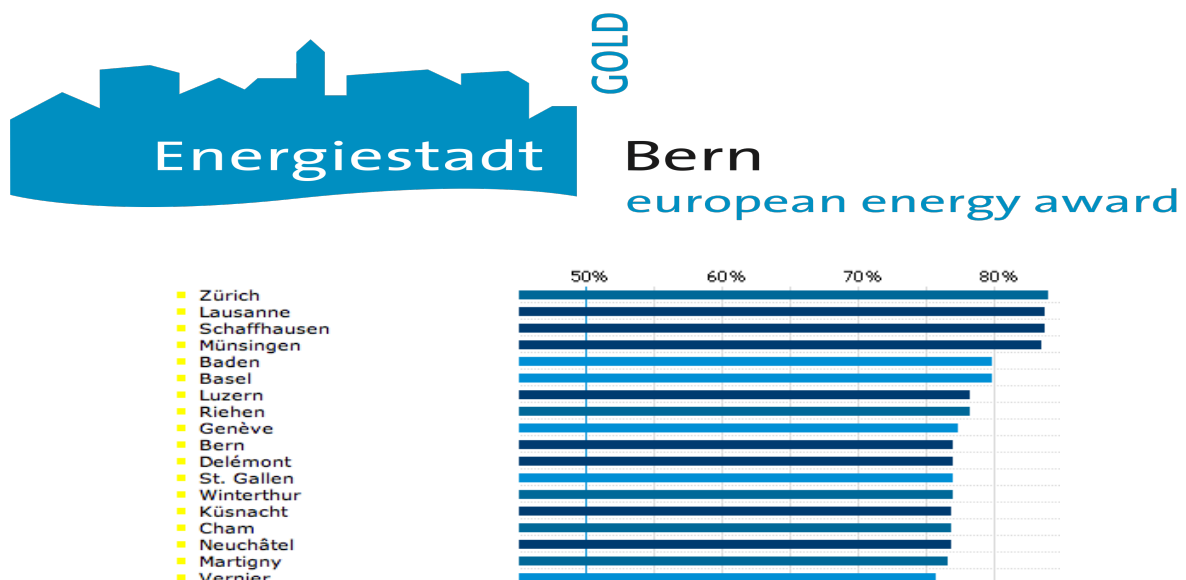
	In Operation ²		Market (=Newly Installed)						Annual Evolution of the Market
	2009		2007	2008	2009				2009/2008
	Total Glazed		Total Glazed	Total Glazed	Total Glazed	Flat Plate	Vacuum Collectors	Total Glazed	Total Glazed
	m ²	kW(th)	m ²	m ²	m ²	m ²	m ²	kW(th)	%
Austria	3,596,874	2,517,812	281,000	347,703	356,544	348,786	7,758	249,581	3%
Belgium	290,847	203,593	65,000	62,200	50,700	45,500	5,200	35,490	-18%
Bulgaria	127,900	89,530	2,500	25,500	25,000	23,750	1,250	17,500	-2%
Switzerland	768,707	538,095	65,576	112,833	146,750	136,500	10,250	102,725	30%
Cyprus	735,200	514,640	60,000	60,000	55,000	53,000	2,000	38,500	-8%
Czech Republic	211,220	147,854	25,000	35,000	40,000	30,000	10,000	28,000	14%
Germany	12,709,000	8,896,300	940,000	2,100,000	1,615,000	1,430,000	185,000	1,130,500	-23%
Denmark	472,780	330,946	23,000	33,000	54,500	52,000	2,500	38,150	65%
Estonia*	2,420	1,694	350	500	450	60	390	315	-10%
Spain	1,802,166	1,261,516	275,000	434,000	391,000	375,000	16,000	273,700	-10%

Driver 3: Regulatory Frameworks

**Establish
Regulatory
Frameworks**

- Standards for sustainable building
- Standards for energy cities
- Standards for sustainable schools and public buildings
- Performance agreements and sector specific solutions between federal government, cantons and economy
- Communication and Marketing for Regulatory Frameworks in sustainable building (National Agency for Minergie Building)

Example: Energy Cities – Ratings and awards

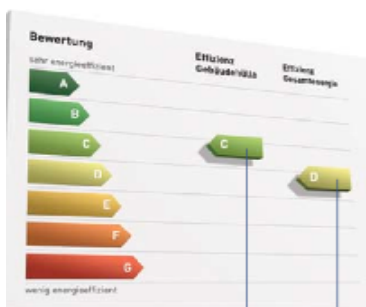


Driver 4: Consumer information and homeowner events

Green real estate market as part of lifestyle

Consumers,
Tenants, Landlords

- Consumer/tenants information
 - Real Estate Identity Card (A to G)
 - Energy information for household appliance
- Energy consultants for landlords
- Energy labels
 - Ties: Minergie Label
 - Green electricity: naturemade Label
- Events (Energy aperitifs)



Example: Consumer/tenants information

ÚSPORNÉ SPOTŘEBIČE v České republice

Novinky | Informace | Kritéria | Podněty a připomínky | Kontakt | SOUTĚŽ

hledat výraz

Vítejte na stránkách www.usporiespotrebice.cz

Tyto stránky obsahují množství informací o úsporách energie při nákupu a využívání domácích elektrospotřebičů.

Naleznete zde konkrétní návod, jak se při koupi nových elektrospotřebičů orientovat podle energetických štítků. A naleznete zde také konkrétní a pravidelně aktualizovanou databázi energeticky nejúspornějších spotřebičů, které jsou v prodeji v České republice! Můžete v ní vyhledávat podle energetické náročnosti jednotlivých druhů výrobků i dalších parametrů.

Doufáme, že zde získáte řadu užitečných informací.

SEVEN, Středisko pro efektivní využívání energie, o.p.s.

Novinky

SOUTĚŽ - Buď nejlepší v úspoře energie!
01. 03. 2011

Trend zelené energie a přechod na úsporné varianty elektrospotřebičů budí zájem...

Nové energetické štítky
25. 02. 2011

V průběhu roku 2011 se v obchodech začnou u některých spotřebičů objevovat nové typy...

Nová publikace o osvětlení
13. 12. 2010

SEVEN, Středisko pro efektivní využívání energie, o.p.s. ve spolupráci s...

všechny novinky

Driver 5: NGO Campaigns

NGO Campaigns

- Campaigns for environmental-friendly or faire trade markets (solar energy, energy-efficient equipment, etc.)
- Campaigning (e.g. Solar Roof Program “100 Now !)
- Strategic partnerships with wholesalers, financial institute, real estate sector in order to strengthen environmental markets
- Establishment and support of eco-labels

Example NGO Campaigns: Integrated marketing campaign 100 Solar roofs in a municipality in the next 18 months



Solar Roof Program “100 Now”

=

Discount 10% Manufacturer

+ Discount 10% Local Bank

+ Discount 10% Solar Consulting

+ Government Grants

+ Project Management / Public Information

+ Social Cohesion

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Companies, Company Alliance, Sustainable Landlords Associations

- Companies using sustainable building products “Nature plus”
- Company Alliance for energy efficiency and sustainable real estate policies
- Sustainable National Landlords Association Switzerland



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Driver 7: Strengthen International Governance

Strengthen International Governance

Europe 2020: smart, sustainable growth

- Rio + 20: Green Economy
- International standards for multinational companies
- International treaties like biodiversity, climate change, etc.
- Green Stimulus packages

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Capacity Building,
Vocational Training
and Education



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UNEP, ILO, IOE, ITUC

Green Jobs Initiative



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

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Overview

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2. Green Jobs Initiatives
3. **Green Skills Strategies**
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skills for
green jobs
EUROPEAN SYNTHESIS REPORT

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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.





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.



Example 1 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 2 Leaders for Sustainable Finance

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



62,47%HL Intervall: 1 Tag

Asset Manager
Green Property Fund Credit Suisse



greenjobs. Thesis 2

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



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Integrating and deepening green skills Response strategy II

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



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Example 1 Specialisation

Roofer

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



Example 2 Specialisation

Engineer HF Energy and Environment

- specialised in energy and environment
- national diploma



Example 3 Specialisation

Gardener

- specialised in natural gardening
- national diploma





Integrating and deepening green skills Response strategy III

Deepening green skills through diversification of existing occupations.



Example 1 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

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Conclusion



TOO BIG
TO FAIL

ONE PLANET
ECONOMY
IS NOT ONLY
A VISION
IT'S REALITY

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