

# The direction to create jobs in the green energy field with the goal of realising a creative economy

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## Key points

- To transform economy to green forms of production we need incentives to final producers and consumers and better education for consumers
- Policy towards green jobs should be designed to **enable** the smooth transition to the green economy, not be the **driving force**
- Badly organized labor markets could frustrate attempts to move to green production

# Themes

- How can policy help job creation in the green energy field to enable transition?
- How can policy ensure that the economy that has these jobs becomes creative in new fields to achieve fast, sustainable and inclusive growth?
- Answers can be given once the incentives to final consumers and producers are present

# Policies for greener economies

- Carbon taxes, subsidies to green jobs, more social awareness of benefits of greener economies
- Implications for jobs: a tax on jobs that use fossil-based forms of energy
- May be accompanied by a subsidy to green jobs
- Outcomes in labor markets also depend on the use of revenue from carbon taxes or permits

## Labor market impacts of policy

- Structural change away from sectors that use fossil fuels to greener sectors
- Small overall because traditional fossil-based energy producers have low employment, less than 1% of total
- But some small sectors (production of gas, coal and fossil-fuel based electricity) could lose 40% of employment
- Combustibles, renewables, solar and wind energy could gain 40% rise in employment

# Caveats and implications

- More jobs could be affected within sectors; structural change analysis aggregative
- Need to retrain workers to enter green jobs
- Generally – policy needs to help the transition from brown to green jobs
- Definitions of brown and green jobs and numbers?

# Green jobs

- Still no consensus definition
- OECD/EC: green jobs are all jobs in eco-industries
- Eco-industries deal with ***pollution management*** and with ***resources management***
- 1.5-2% of employment in advanced economies

## Broader definitions

- UNEP/ILO broader definition, any job that belongs to a sector that contributes to preserving or restoring environmental quality
- Should be “good jobs”
- But this definition too broad and mixes social objectives with environmental
- Up to 20% of employment



## How important to know numbers?

- Moderately! Creation of green jobs is *derived* from the incentives that final users have to adopt greener products
- Once incentives are present the green jobs will be created – provided labor market does not frustrate their attempts
- Knowing number of green jobs can be used to monitor progress to greener economy

## Brown jobs

- Mostly found in polluting sectors
- Important to know how many there are because workers in them run risk of dislocation and need to new training
- OECD estimates sectors that cause 90% of pollution in member countries employ 14% of workers

# New skill requirements

- Two-way interaction between skills and job creation
- Skill acquisition without incentives to create green jobs will be wasted
- Creation of green jobs without proper skill training ineffective: bottlenecks and low productivity

# Transitional phase

- Initially workers exit brown sectors and enter green ones
- Number of green jobs will be sufficient to absorb them because greener technologies are more labor intensive
- But need to learn the new skills

# Steady state

- Once transition is completed, skill acquisition should put more weight to needs of green forms of production
- Environmental skills are different but not more difficult to acquire than traditional skills
- Challenge is *where* and *how* to introduce new skills training; not what type of training

## ILO/CEDEFOP study

- Comprehensive survey of practices in 21 countries
- Generally found insufficient cooperation between environmental agencies and vocational planning
- Some bottlenecks developing, especially where science and engineering skills are required
- Important for ministries, employers' associations, labor unions, schools and universities to come together to collaborate on training needs

# Special features

- Green skills are not particularly challenging but have some peculiar features
- Final consumer needs to take action to make it happen: e.g., recycling and switching to green forms of energy need consumer initiative
- Important to start education early in school
- Introduce courses on environment along with history, geography and other traditional subjects

# Flexible labor markets

- Flexible labor markets help economies adapt faster to new incentives and technologies
- Rigid markets could frustrate greening attempts
- Flexible markets give protection to workers through shorter durations of unemployment
- Employment policies supplement these with income support and retraining programs targeting long-term unemployed



# Revenue recycling

- Revenue from carbon taxes and permits could be used to subsidize green jobs
- Not a good use because of difficulty defining them and identifying them
- Could be used to reduce overall payroll taxes – the “double dividend”
- Subsidization of green R&D more exciting and could have beneficial employment effects

# Creative economy

- Green technologies are new, more needs to be learned
- More and better green production methods need to be discovered
- Best form of training for R&D is Science, Technology, Engineering and Mathematics (STEM)

# Inclusive economy

- Growth of incomes has been uneven both within and between countries since the introduction of digital technologies and globalization
- High skills and incomes benefited more from new technologies than low skills did
- Important to protect workers in low-skill jobs to avoid poverty and unemployment

## Policies to improve inclusiveness

- Payroll taxes for low-wage jobs should be reduced or better eliminated
- They reduce take-home pay in low-wage jobs and discourage job creation
- Carefully selected minimum wage could help
- Some fiscal redistribution essential, direct or indirect through progressive taxes

# Green economy and inclusiveness

- Make training for green jobs universal and help workers acquire the skills if they become unemployed for long periods
- Greener economies will not reduce inequalities by themselves – need help from education and training programs and fiscal policy
- But they are less likely to contain inherent forces for more inequality, such as digital technologies do