

Greener energy's benefits and trade-offs: Discussion

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Green energy: benefits

- Environment, especially in terms of CO2 emissions
- Once up and running – long-term sustainable (renewable!)
- Diversification of energy portfolio – good for energy security
- Not very localized (unlike e.g. oil and gas), which also contributes to energy security

Green energy: costs

- Costs of installment
- Costs of attracting private investors
 - Cheaper options with carbon (shale gas boom)
 - Higher risks, so subsidies/guaranties are needed
- Technological costs
 - Lower flexibility
 - Intermittent power generation

Green energy: costs (cont.)

- Negative externalities of greener energy
 - Interrelated transmission networks → shocks due to intermittent power generation are spread to neighboring regions/countries → demand for compensation mechanisms
 - *E.g., Germany sets high green targets. Does it mean that the neighboring EU members (from former Eastern block) would have to develop more of (dirty) smoothening/compensation power plants?*
 - Greener energy (e.g. in the EU) → lower local demand for carbon → lower price of carbon energy → “outside” countries with softer “green standards” consume *more* carbon-based energy

Green energy: costs (cont.)

- Costs of transition to new energy types
 - Monetary: direct (including higher energy prices of final consumers) and indirect (reallocation of labor, and capital)
 - Political: costly actions may be difficult to “sell” to voters; also significant counter-lobbying from affected energy-intensive industries
 - Also, historically, such transitions were slow (e.g., in the US it took 38 years to nuclear electricity generation to reach 20% share, and 40 years to natural gas -run turbines)
 - May be even slower due to boom in shale gas
- Political frictions due to asymmetries
 - In composition of energy portfolio
 - In policies towards pollution (some countries “free-ride” on the abatement effort of the others)

Green energy policy

- All in all, we need to have a realistic expectations of forthcoming political and economic costs
- Green energy will be requiring a lot of smartly designed government involvement (and intergovernmental coordination) for many more years

Green energy: more challenges

- How to prevent/minimize “relocation” of “dirtier” environment to LDCs?
- How to motivate (relatively) short-horizon politicians to support long-term green development?