Plan of talk

- Why fiscal instruments (environmental taxes or ETS with allowances sold)?

- Design issues
Why fiscal instruments?

They are environmentally effective

- They exploit all—and strike right balance between—emissions mitigation opportunities:
  - E.g., a carbon tax
    - promotes fuel switching in power generation
    - reduces demand for electricity, transportation fuels, heating fuels
  - Regulatory policies are much less effective:
    - e.g., fuel economy standard (misses ~ 50% of reduction opportunities in transport)
    - renewables mandate (misses some fuel switching opportunities in power sector)
A $25/tonne CO₂ charge would raise:
- $130 billion p.a. in US (0.8% of GDP)
- $210 bn p.a. in China (1.6% of GDP)

If revenues used productively, costs of fiscal instruments are modest.

Some OECD countries already raise about 6 percent of revenue from environmental taxes
- issue here is to re-focus them more directly on emissions
Design issues (1)

- **Base.** Target source of emissions:
  - fuel use rather than vehicle ownership
  - emissions rather than electricity consumption

- **Administration**
  - *upstream* (e.g., refinery gate) with rebates for downstream emissions capture (e.g., SO₂ scrubbers, CCS)
  - *downstream* (e.g., on power plant emissions), though admin. costs higher and may lack full coverage

Design issues (2)

- **Level of charges**
  - charges should reflect environmental damages from carbon and local pollution
  - motor fuel taxes should also reflect congestion, accident, and road damage (with long-term transition to mileage-based taxes)

- **Promoting clean technology development/deployment**
  - fiscal instruments provide across-the-board incentives
  - but other policies may be needed (prizes, adoption subsidies)
Energy price reform burdens households

- Holding down energy prices is inefficient way to help low-income households

- Compensate (with modest fiscal cost) through targeted measures, e.g.,
  - scaling back pre-existing energy taxes
  - adjusting broader tax system
  - transfers, health, education, housing
  - subsidize clean technology alternative

Concluding

- How can international organizations help progress energy price reform?
  - providing practical guidance on ‘getting the prices right’ by measuring environmental damages—IMF is working on this.
  - monitoring effective taxes/subsidies on fuels/energy—fossil fuel subsidies worldwide were $480 billion in 2011.