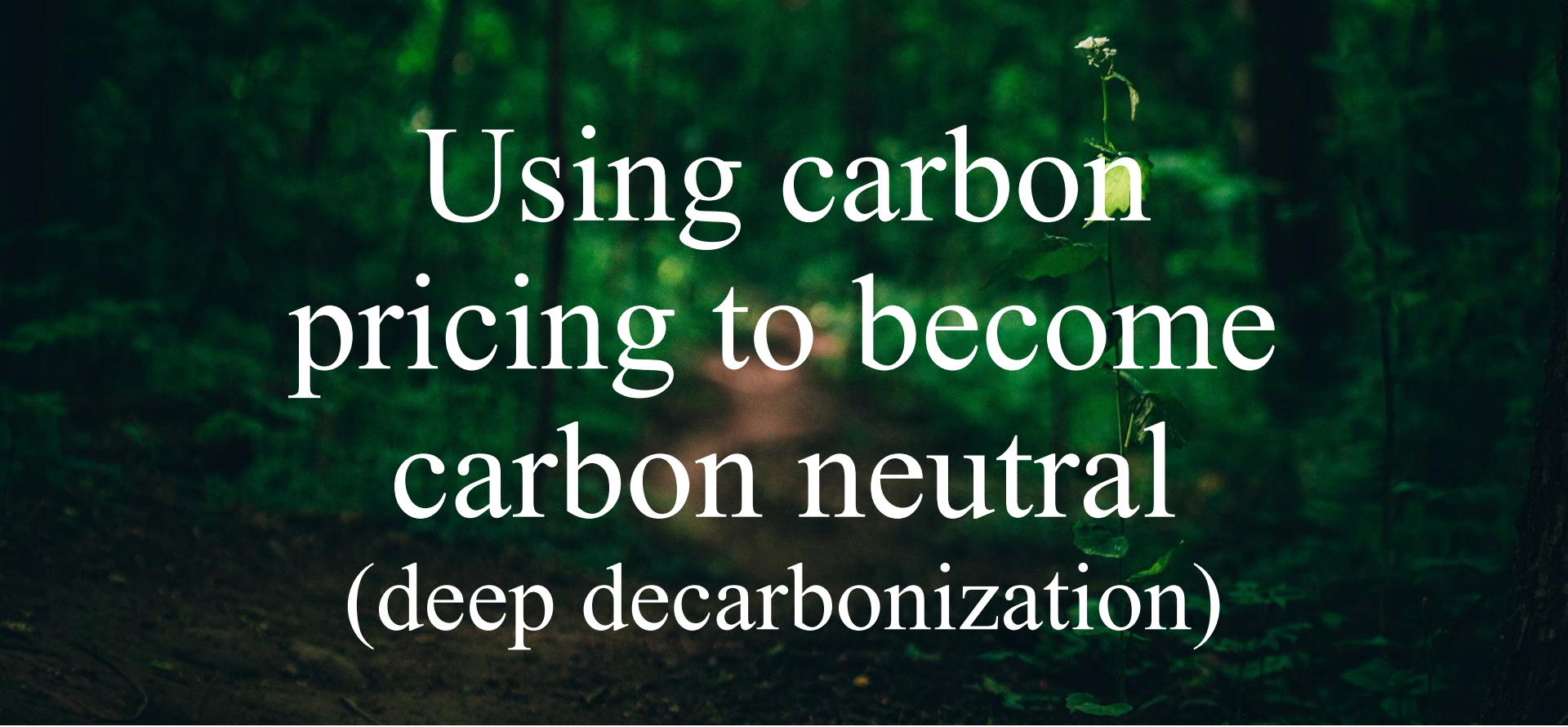
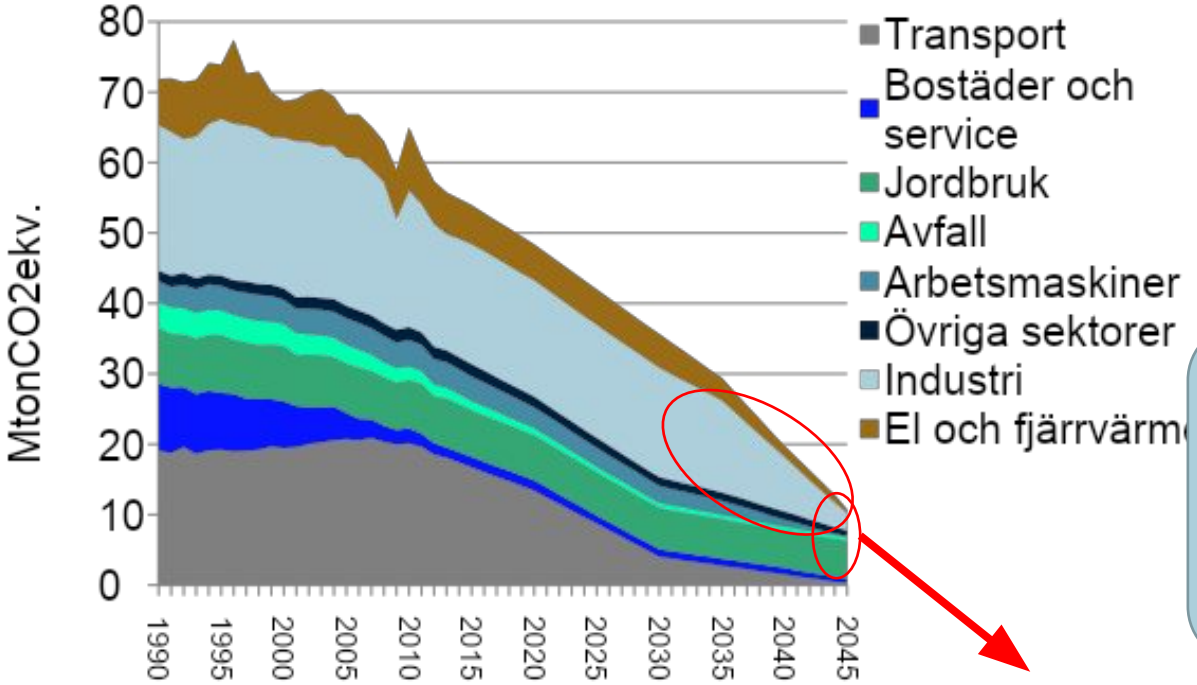


Using carbon pricing to become carbon neutral (deep decarbonization)

NATUR VÅRDS VERKET
SWEDISH ENVIRONMENTAL PROTECTION AGENCY

Sweden's long term climate goal: Net zero 2045, thereafter negative emissions

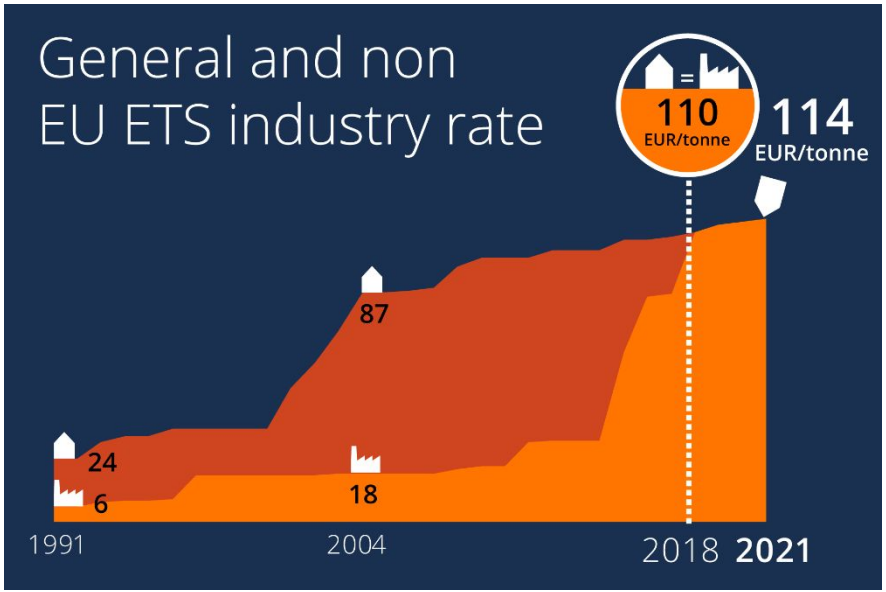


- -85% emission reduction
- 15% "complementary measures"

SOU 2016:47

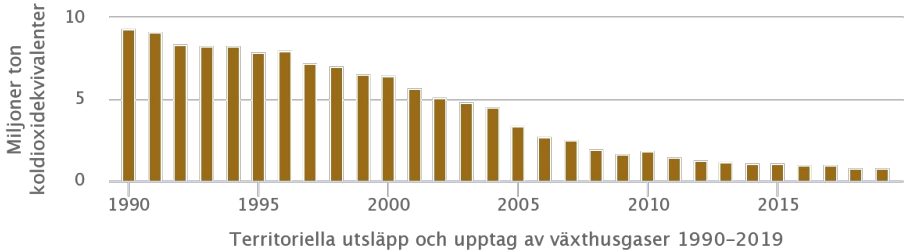
Introduction of carbon tax and its effects

- Introduced in 1991 as part of major tax reform
- 95% of emissions under tax or ETS



- Combination of Co2-tax and investments in district heating, heat pumps.

- When alternatives available – carbon pricing becomes transformative



Carbon pricing as part of a policy mix – industry (ETS)

Barriers

- Technology not available
- Large investments with revenues in far distance
- Reduction not linear and current price probably insufficient

Support

- Reducing/sharing risk (Industry leap etc)
- Help increase demand (CCfD)
- Protect competetive-ness (CBAM)

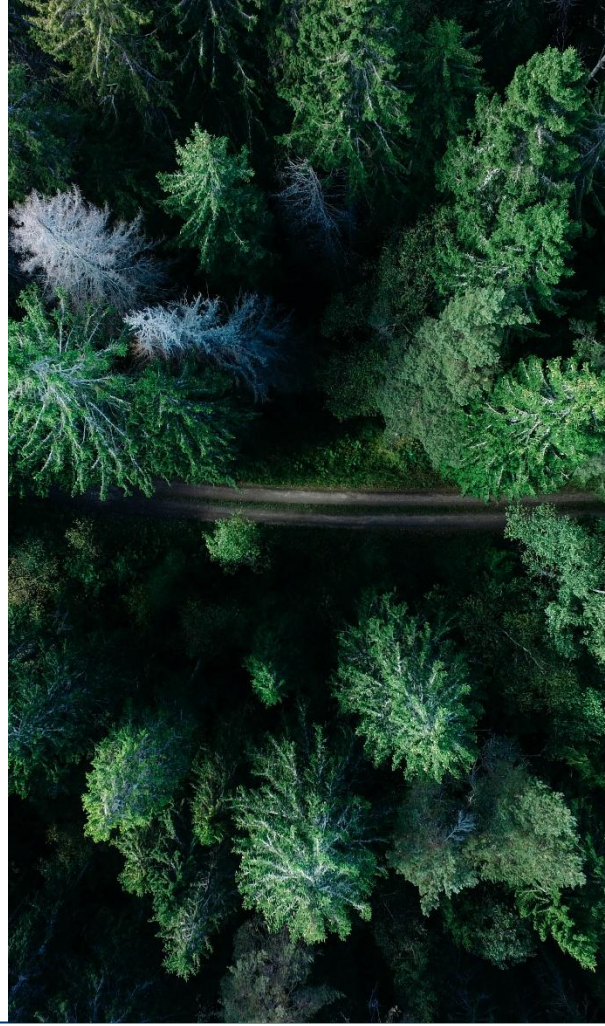
Price&Trust

- Long term price make investments profitable
- Trust in targets and scheme
- Free allocation reduces cost pass-through



What role for carbon pricing in stimulating the ”net” in net zero?

- Carbon pricing to stimulate increased removals in LULUCF?
  - Looking forward to European Commission report on certification of removals
- Carbon Pricing to stimulate increased technical removals such as Bio-CCS
  - Sweden is launching reversed auctioning
  - But where to account it?
- Off-setting in mid-century?





SWEDISH ENVIRONMENTAL
PROTECTION AGENCY