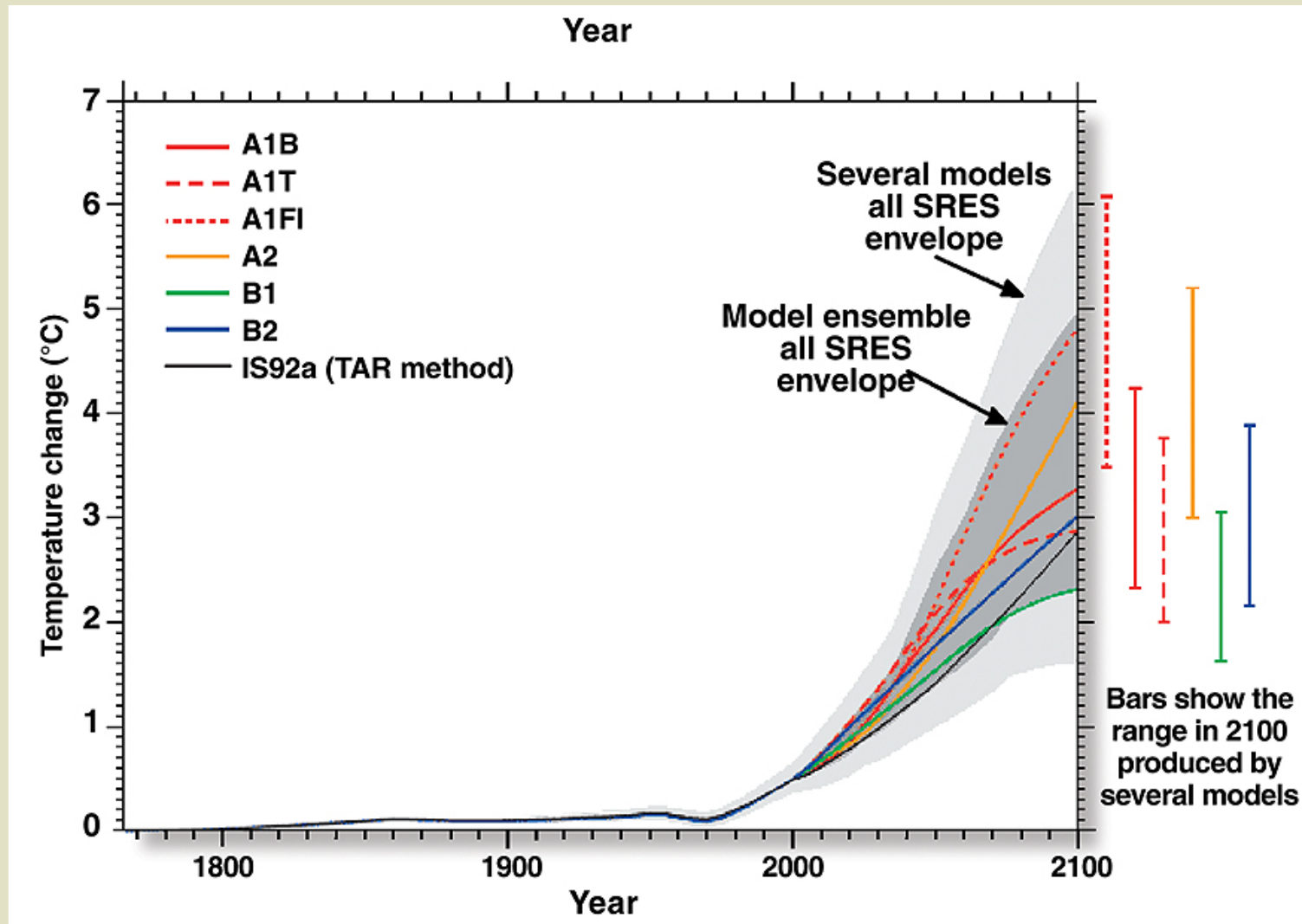


Forests and Climate

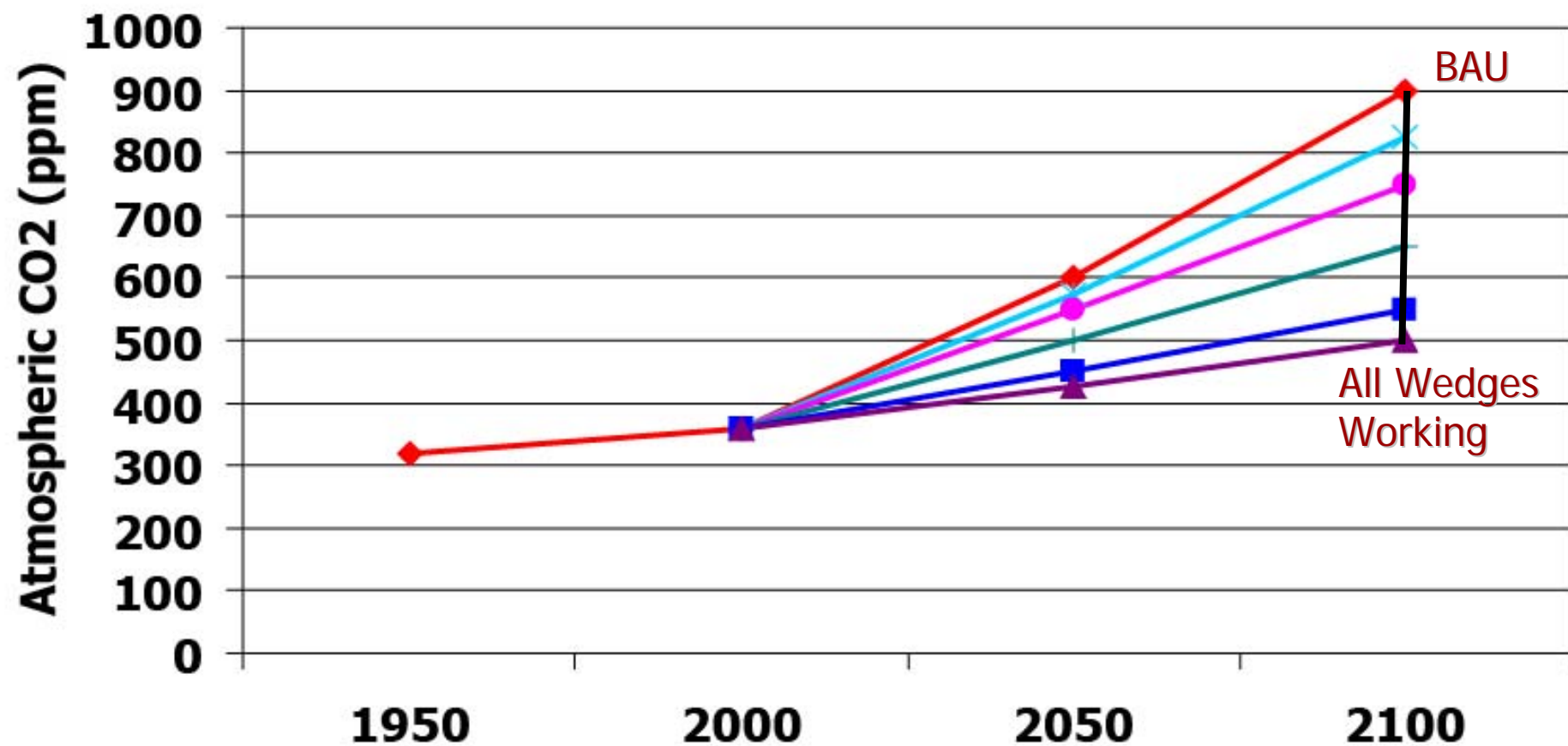


Creating a Niche for Oregon

IPCC Future Scenarios



Changing Course on CO₂ is Possible



After Pacala and Socolow (2004)

Forest “Wedge” Components



1. Halt, reverse deforestation^{*}
 - Reduces forest-based emissions, maintains storage capacity
2. Increase forested area, i.e., afforestation^{*}
 - Increases sequestration/storage capacity, reduces energy demand in urban areas
3. Manage to store more carbon, increase resilience to drought, insects, fires^{*}
 - Both increases sequestration and storage and reduces emissions
4. Reduce energy use in management
 - Reduces emissions from fossil fuel used

^{*} Proposed in Markey/Waxman

Forest “Wedge” Components



5. Capture more carbon in durable wood products
 - Extends “life” of stored tree carbon
6. Use wood products instead of energy demanding, higher polluting substitutes
 - Avoids carbon emissions from materials production
7. Use mill waste, woody biomass, consumer waste for bio-based, renewable, domestic energy^{*}
 - Avoids carbon emissions from energy production
8. Create sustainable incentives to stimulate the above
 - Avoids policy perversions from subsidies

^{*} Proposed in Markey/Waxman

Concerns About Emerging Policies



- Power politics, fear of future; need scientific realism, adaptive mentality
- Obsessed with GHGs, ignoring other factors, e.g., albedo, water balance
- Baselines & “business as usual;” discount C already stored, penalize “good” actors, e.g., OR
- Concepts of additionality, permanence, leakage; local to global scale issues
- Ignore forest products as storage, offsets, substitutes
- \$\$\$/incentives to change behaviors??
- Social justice issues

A Proactive Forest Strategy



1. Revenue streams, markets for diverse forest goods and services
2. “Green-product” preferences – local wood products and sustainable forestry that produces them
3. Market competitive advantages of wood products over other materials in “green” economies
4. Improve productivity of forests sustainably managed for wood products – more wood from fewer acres, commodity wood supply on sustainably managed, high-yield forests

A Proactive Forest Strategy



5. Manage/conserve forests for high-value wood and non-wood uses and services
6. Increase forest cover in urban areas
7. Develop sustainable policies for federal forests – local, regional and national environmental, economic and community/social justice goals in a fair and balanced manner

A Niche for Oregon



- 30M acres forestland, 50% of state
 - Currently sequester and store ~ 50% of annual OR emissions
 - How much more is possible? Depends:
- Wet = highly productive; Dry = fire prone
 - Manage wet to store more C in forests & products, generate biodiversity co-benefits, mill waste for heat, energy
 - Manage dry to reduce emissions, restore habitats, biomass & mill waste for heat, energy, products
 - Get \$ for current free services: C, water, biodiversity, recreation
- Old forests = sink; Very young forest = source
 - Protect federal old forests, includes thinning fire-prone
 - Get trees growing on disturbed sites
 - Don't ignore habitat diversity in young forests

A Niche for Oregon



- World class forest operations, manufacturing, marketing
 - Competitive, viable, well distributed – needed to make it all work
- Science-based FPA protections for private lands
 - Keep effective & efficient
- OR family forestlands = 16%; state forests = 3%
 - Manage for value-added wood products, market as such
 - Get \$ for current free services: C, water, biodiversity, recreation
- Leading edge R&D
 - OSU FRL & OCCRI; USFS PNW; USGS; EPA
 - OR INC; OR BEST; OWIC