

BROOKINGS

QUALITY. INDEPENDENCE. IMPACT.

Comments on:
“The Social Costs and Benefits of U.S.
Biofuel Policies with Pre-existing
Distortions”
by Harry de Gorter and David Just

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The Problem of Fuels

- External costs in consumption
- External costs in production
- Different, uncertain, and variable external costs for near-perfect substitutes
- Political economy that arises with high salience of price and low price elasticities

Policy levers in this paper

- Tax on fuels (gasoline and blends with ethanol)
- Tax credit for ethanol
- Quantity mandates on ethanol

Combos

- Fuel tax only
- Fuel tax plus ethanol tax credit
- Quantity mandate for ethanol only
- Quantity mandate plus ethanol tax credit
- Quantity mandate plus fuel tax

Not in this paper but matter:

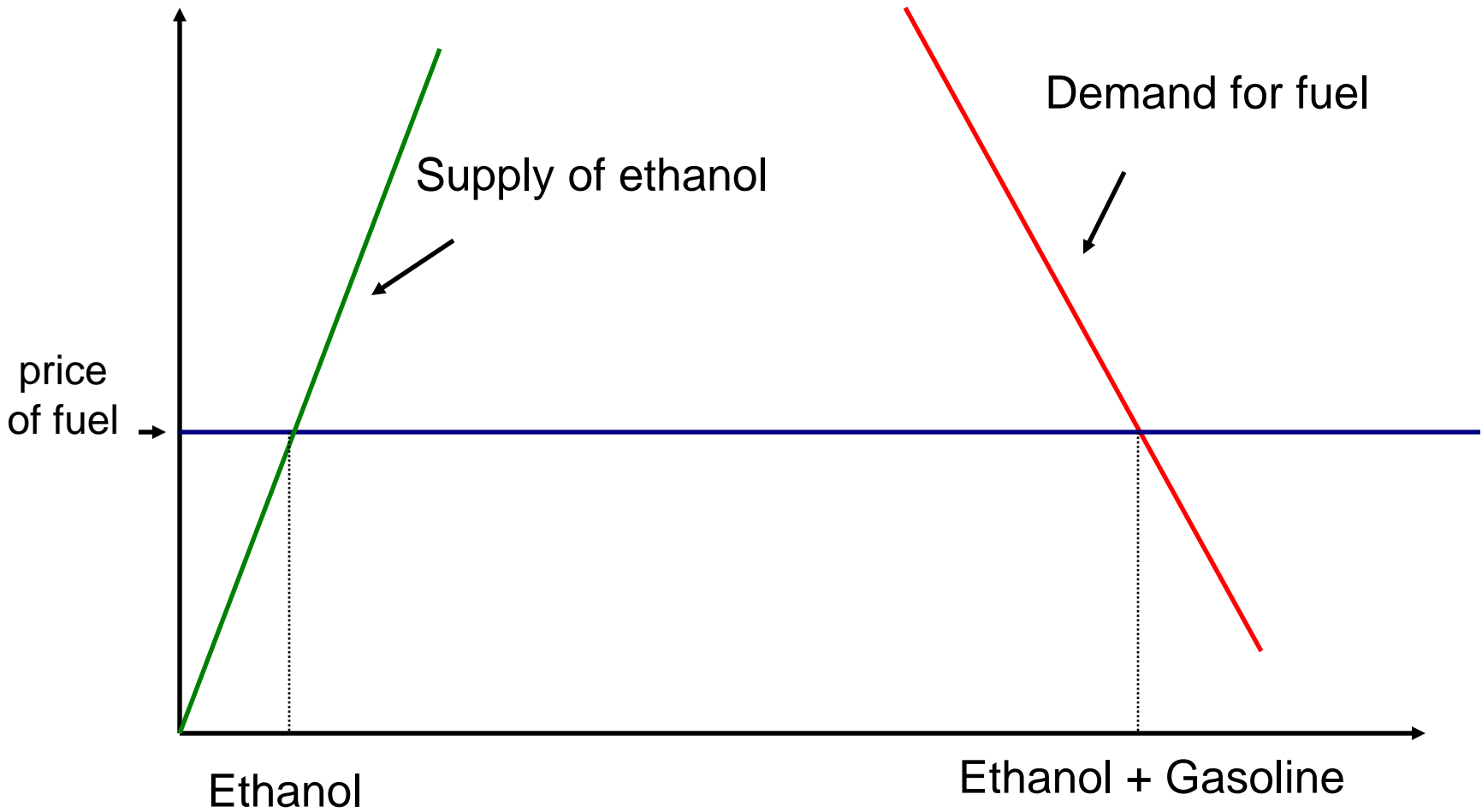
- Tariffs on imported ethanol
- Differential tax credit for cellulosic vs. corn ethanol
- Other production subsidies

Cartoon version of de Gorter and Just

- No externalities as function of miles driven
- Ethanol is carbon neutral
- Flat supply curve for gasoline

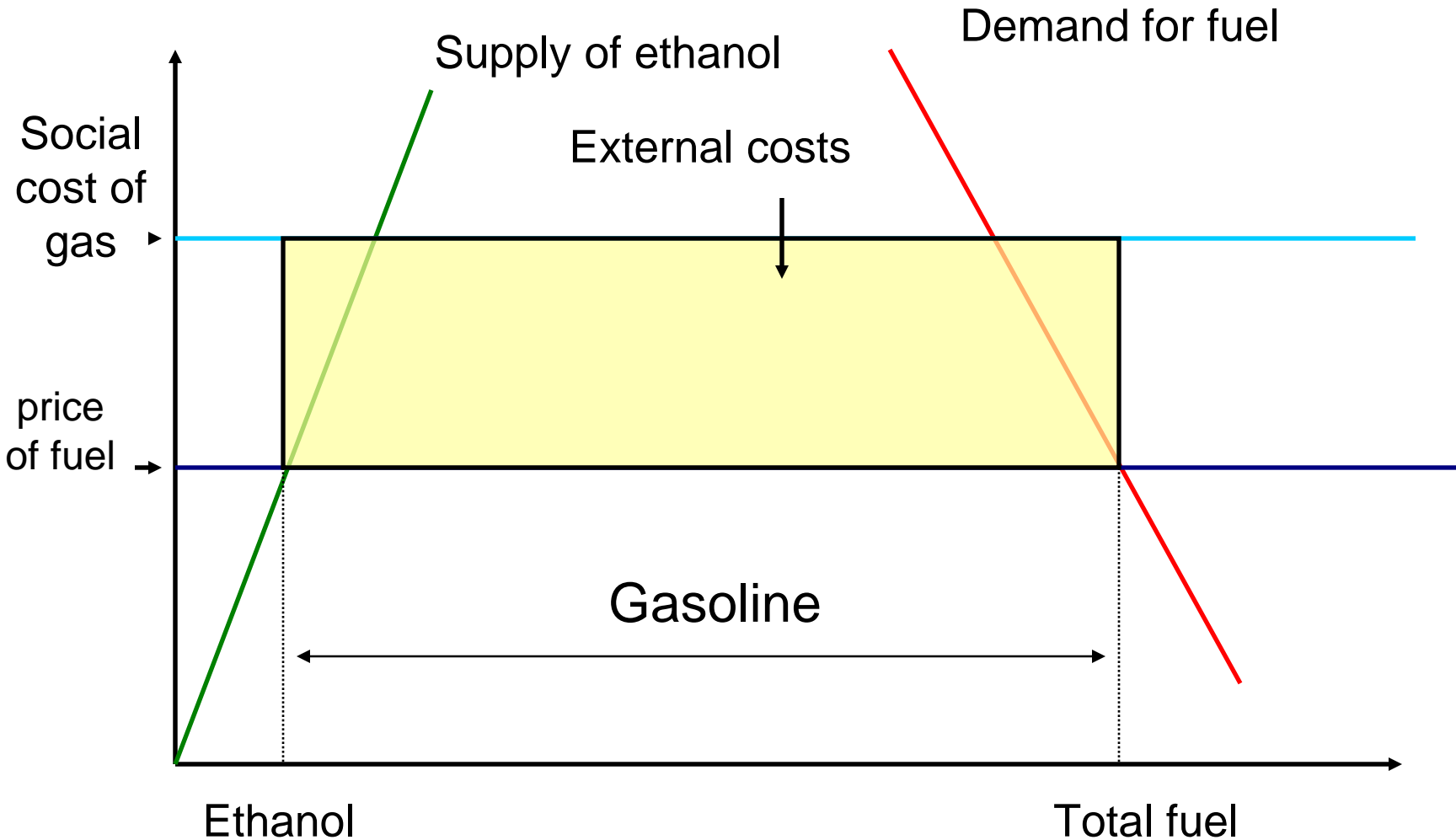
\$/mile

World of no policy

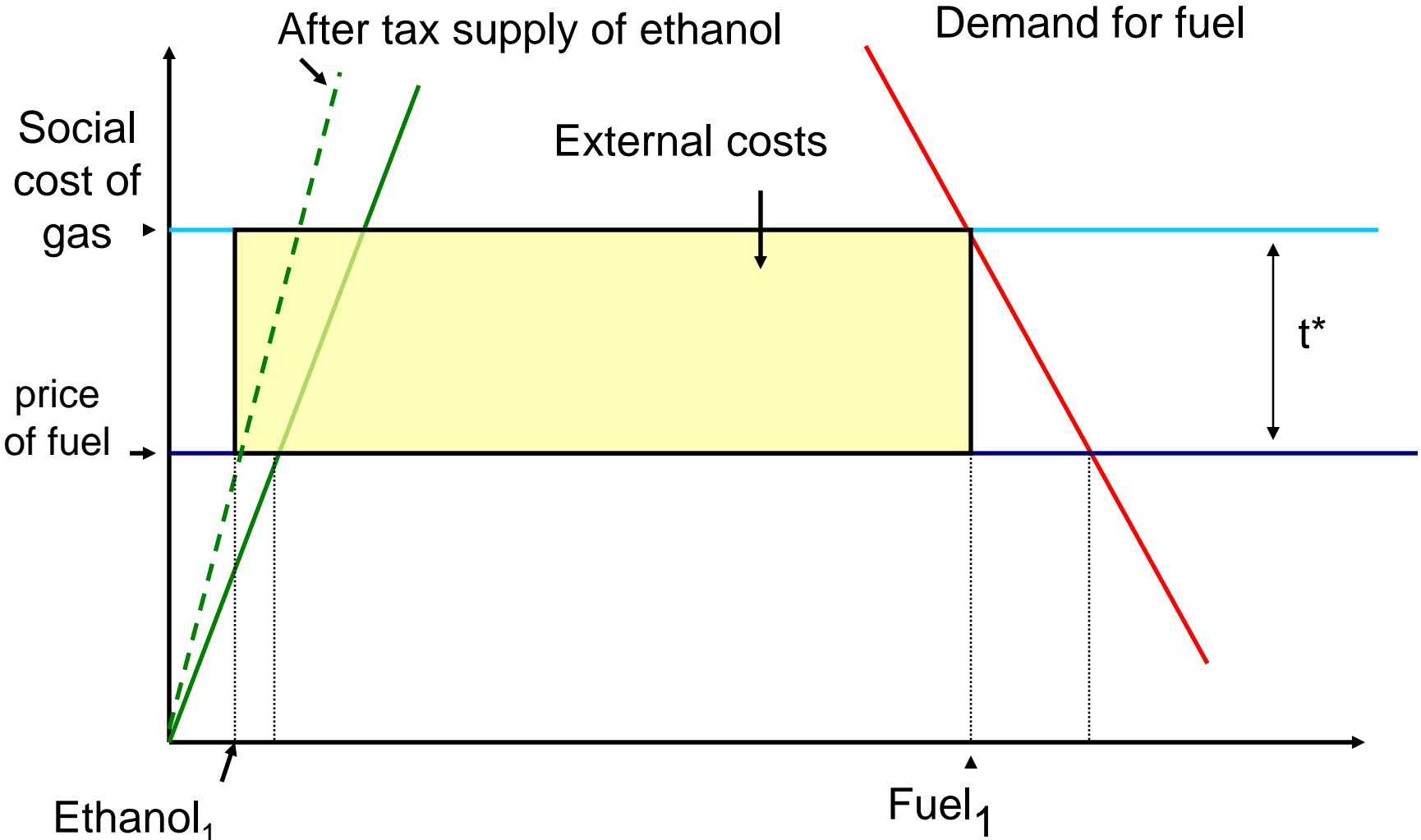


World of no policy, with external costs

\$/mile



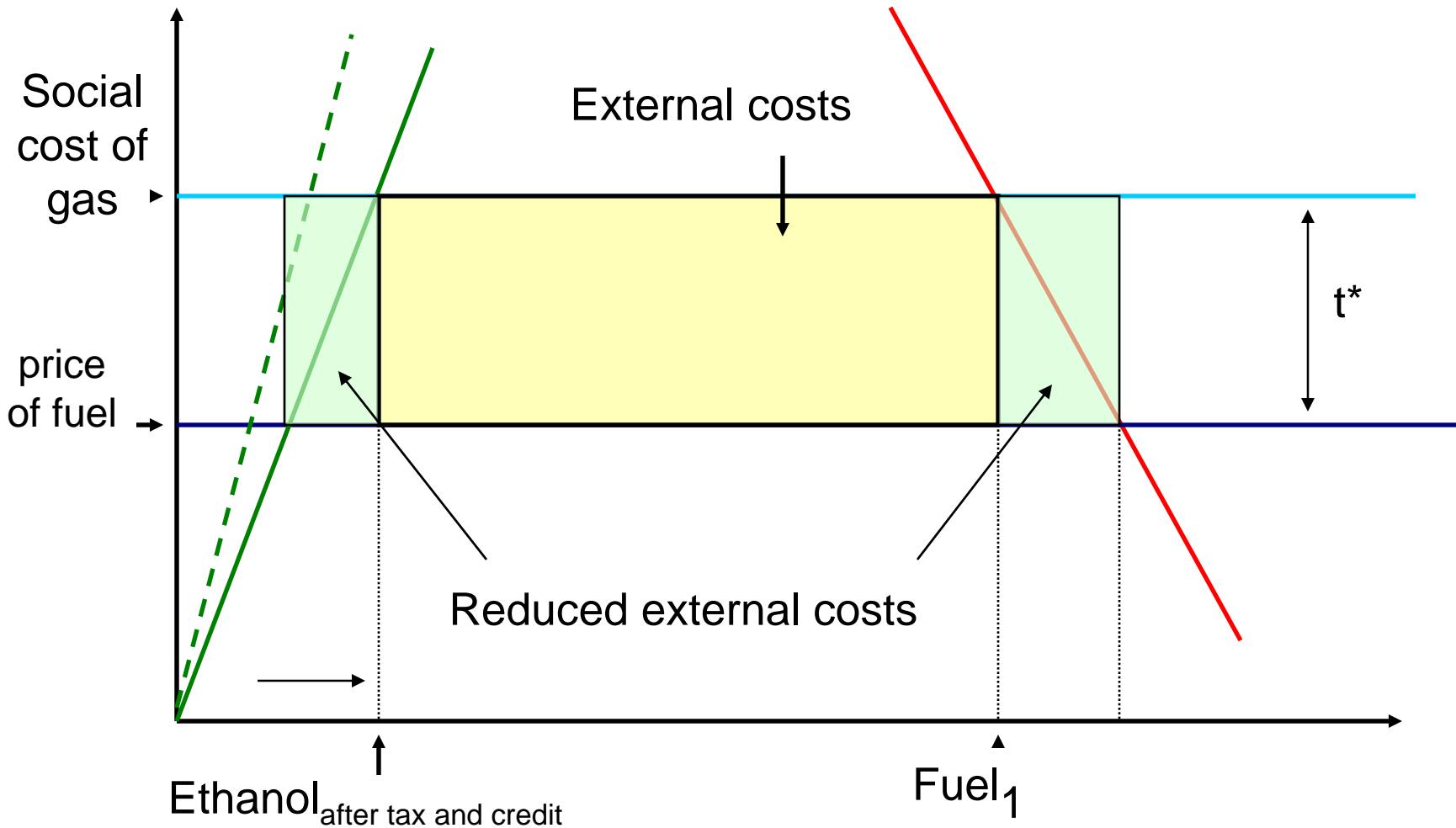
Add tax on all fuel of $t^* = \text{SMC of gasoline}$



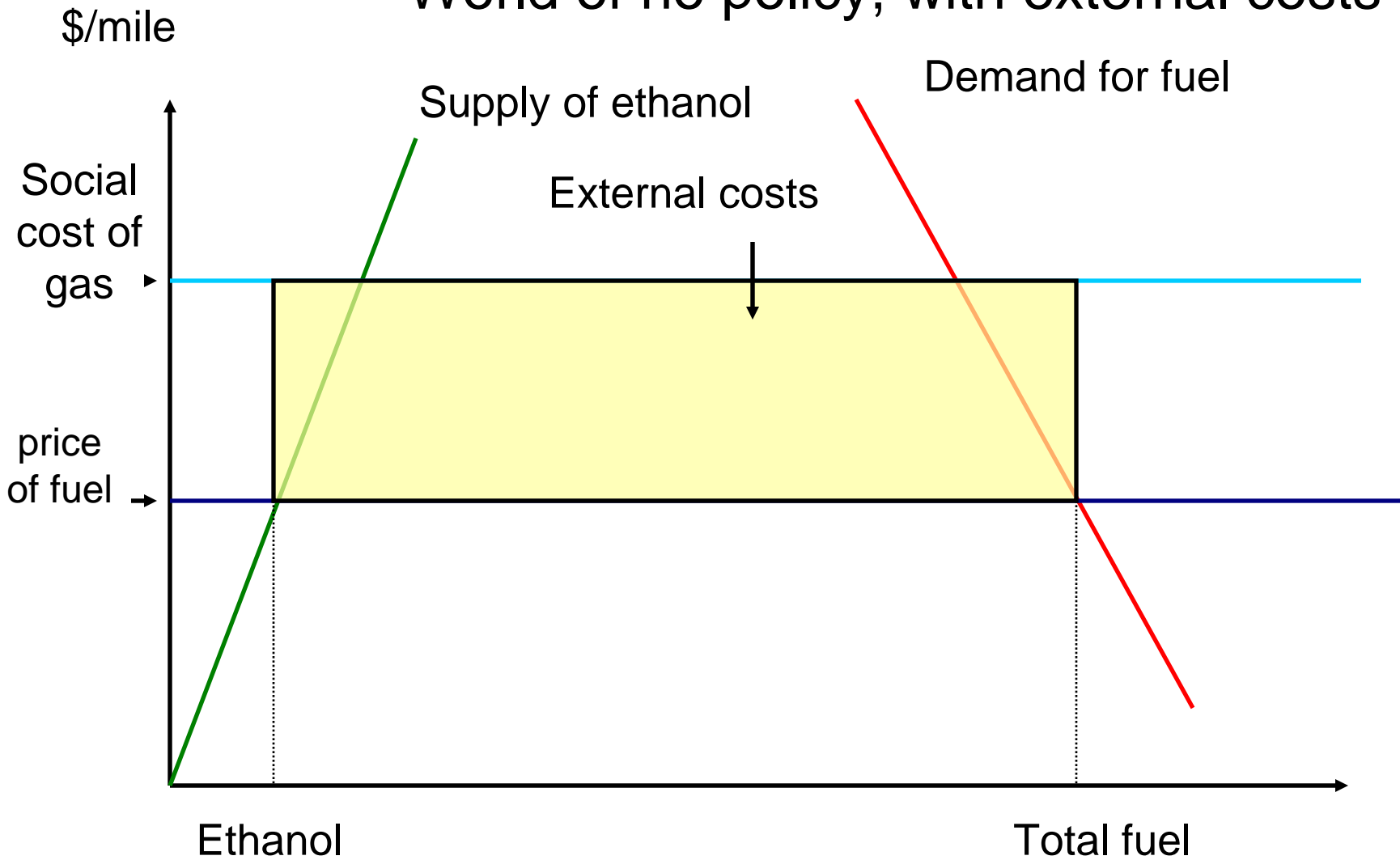
Tax lowers consumption of ethanol along with gasoline

\$/mile

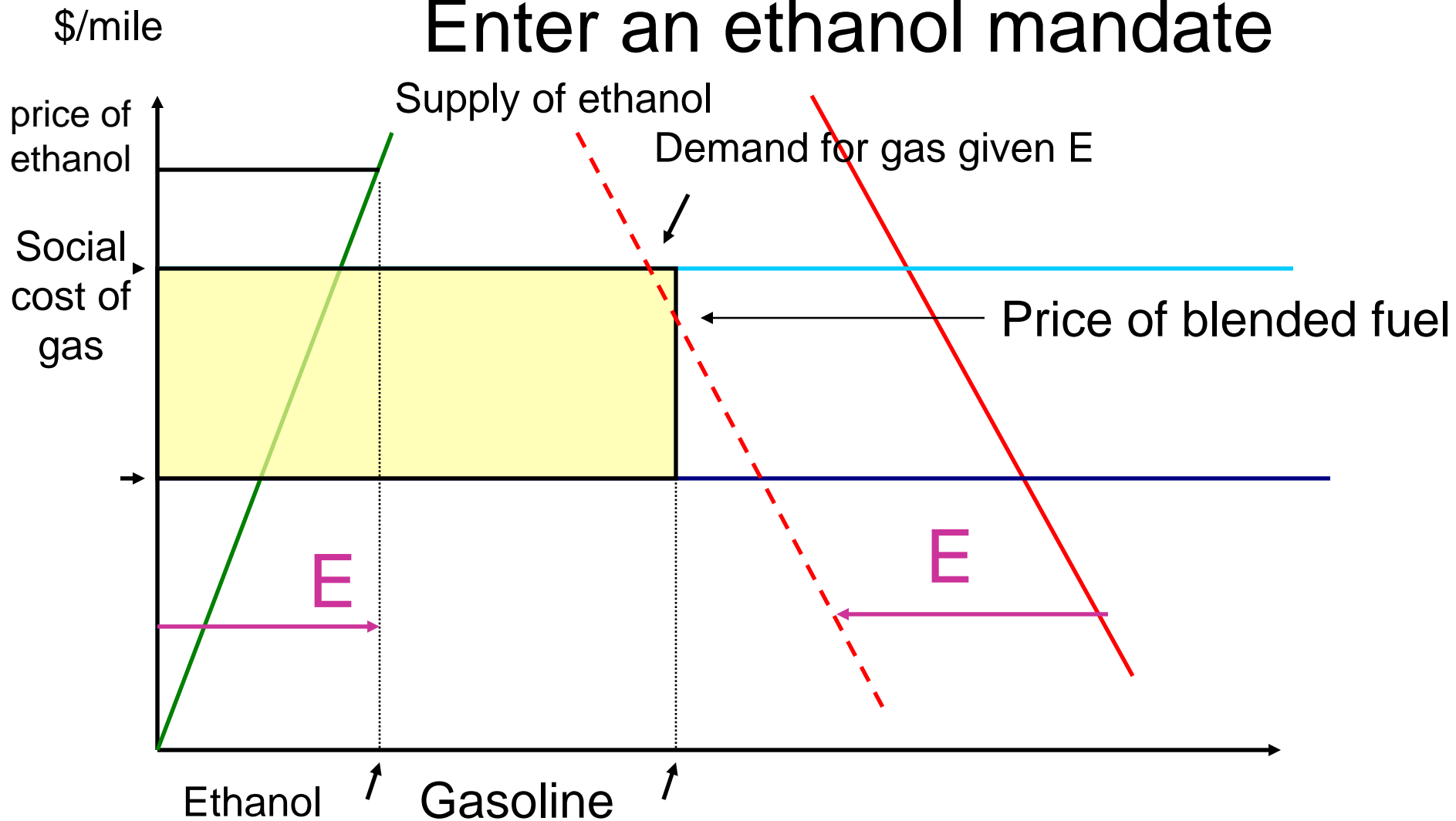
Tax credit on ethanol sets efficient consumption



World of no policy, with external costs

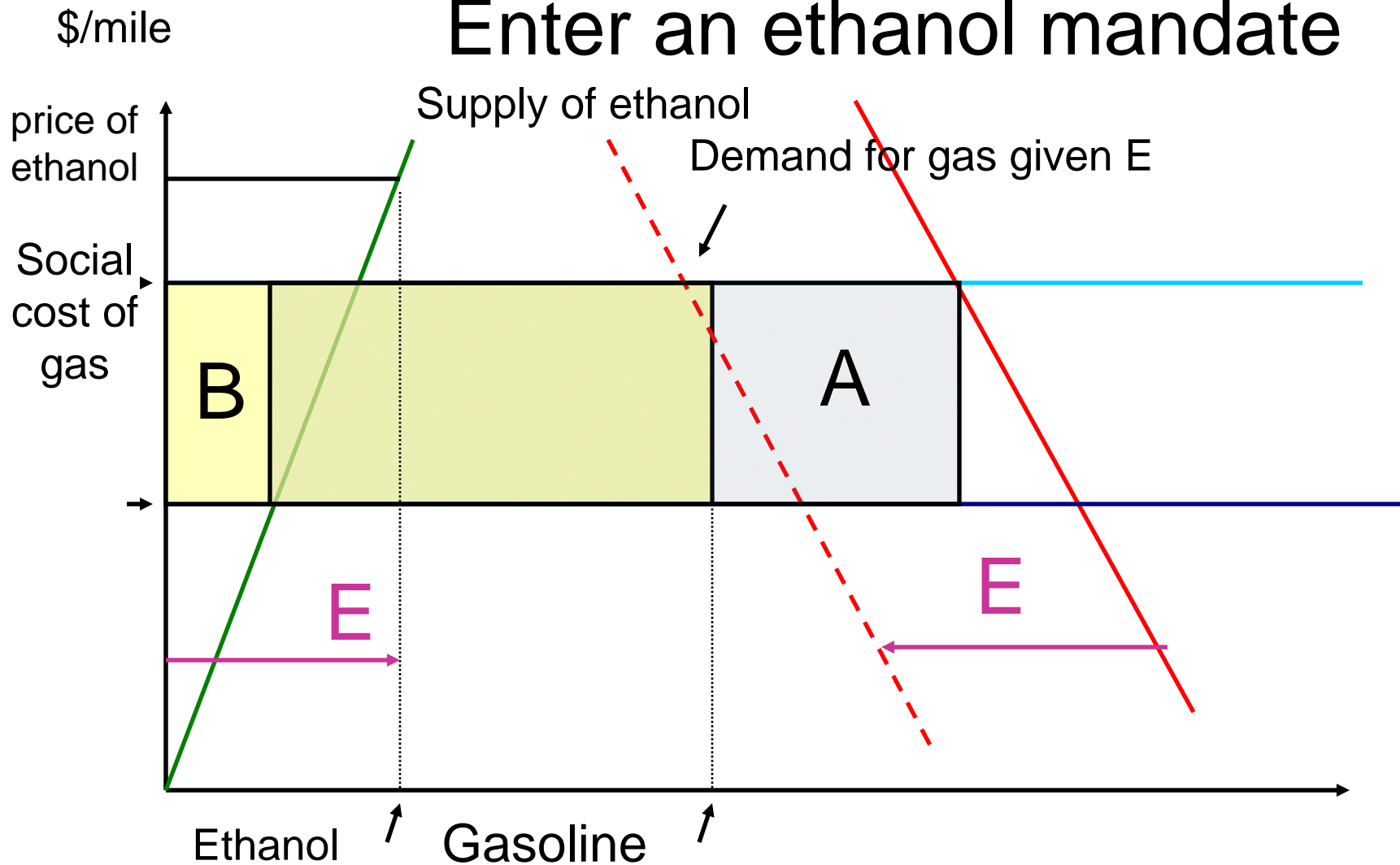


Enter an ethanol mandate



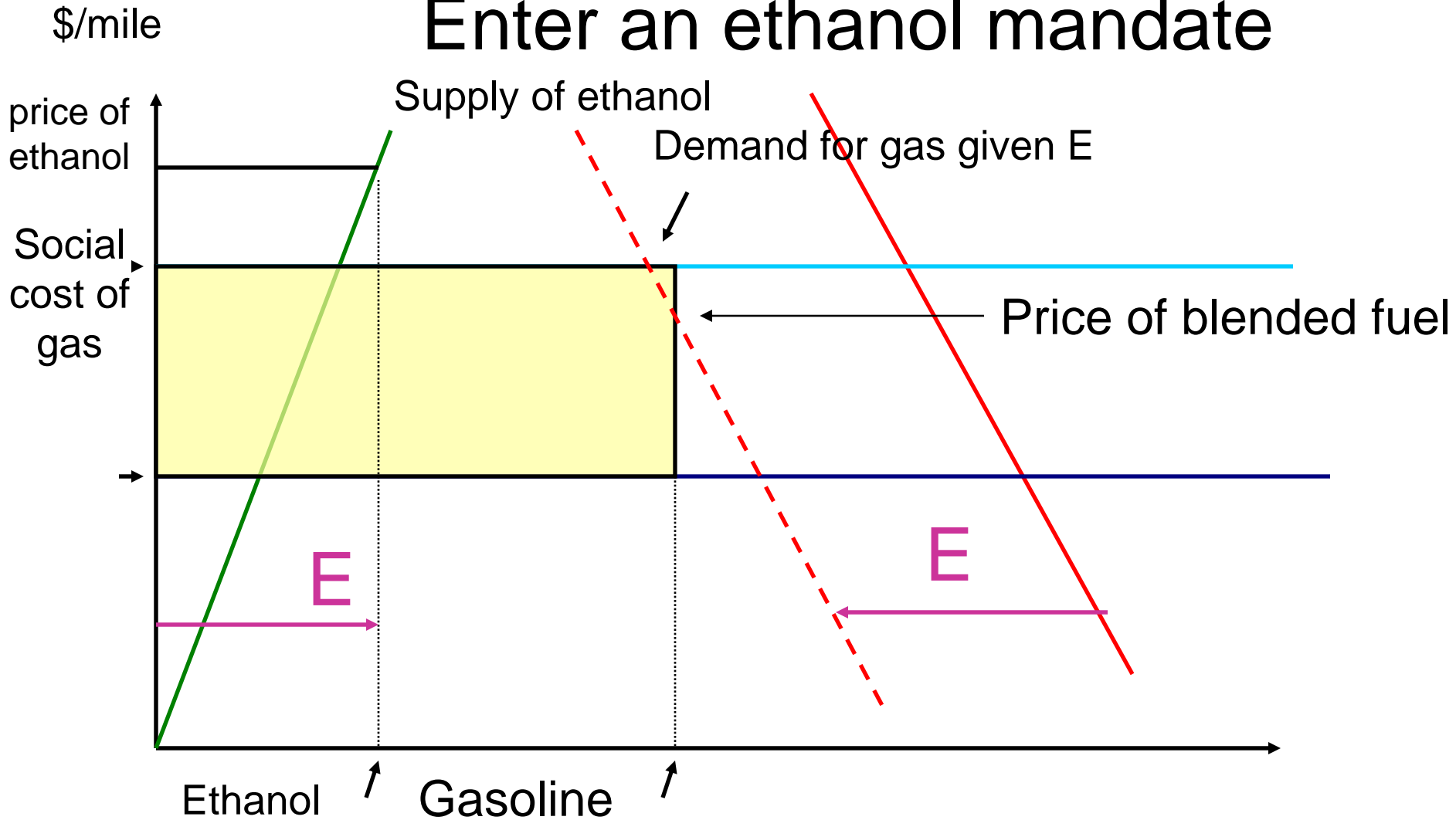
Mandate acts like a fuel tax by raising price of blended fuel

Enter an ethanol mandate



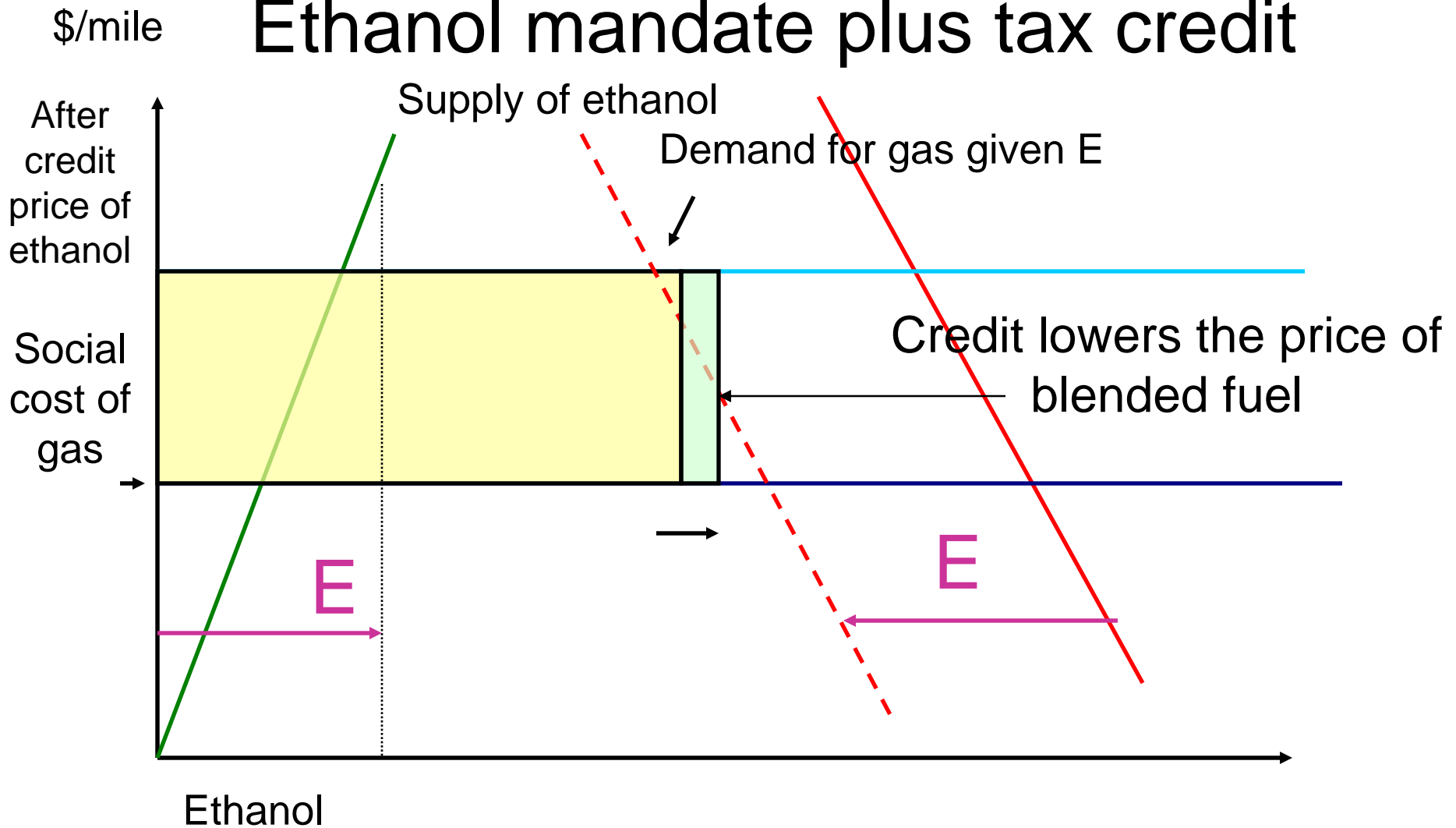
Reduction in external costs = A - B

Enter an ethanol mandate



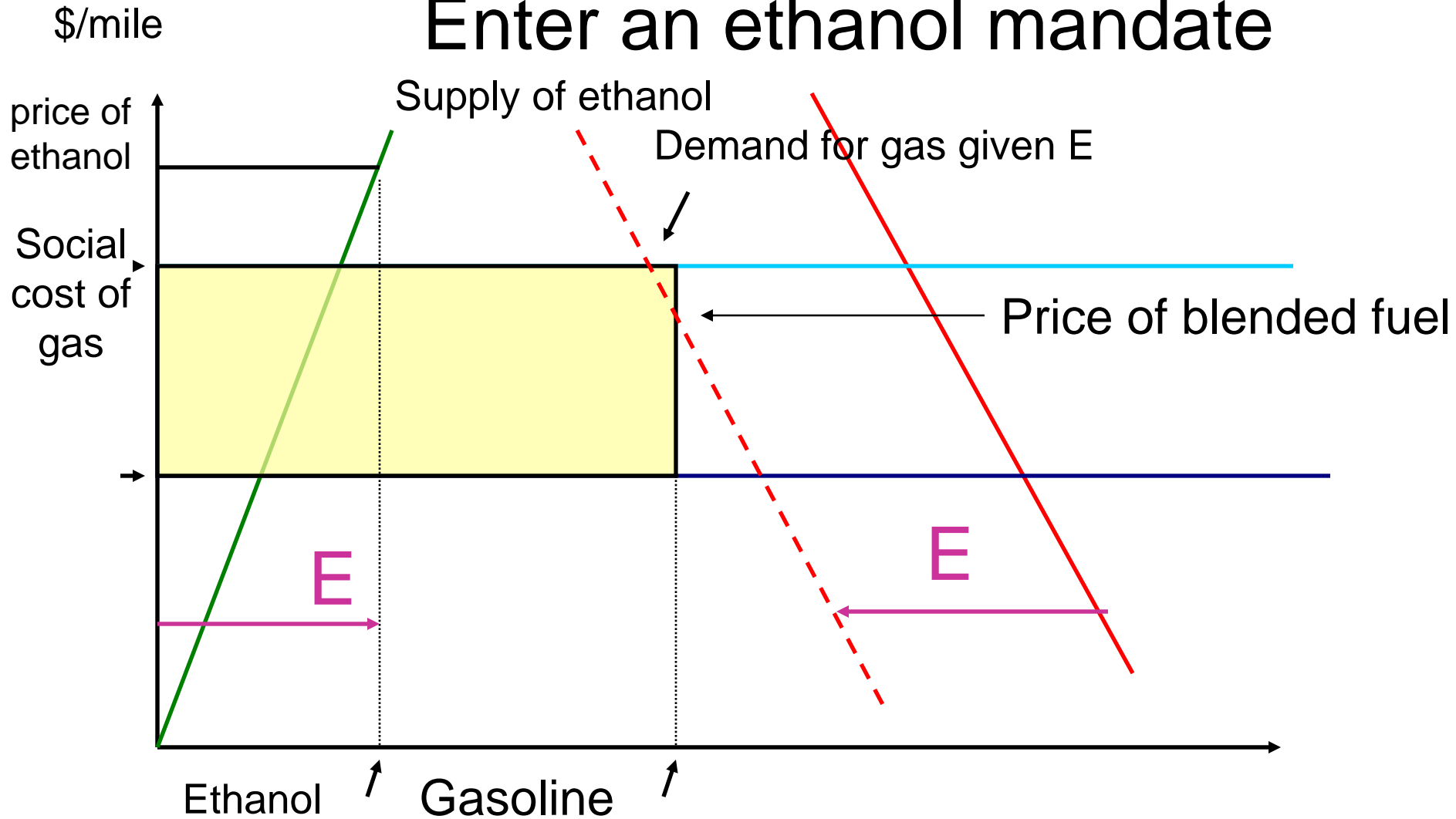
Mandate acts like a fuel tax by raising price of blended fuel

Ethanol mandate plus tax credit



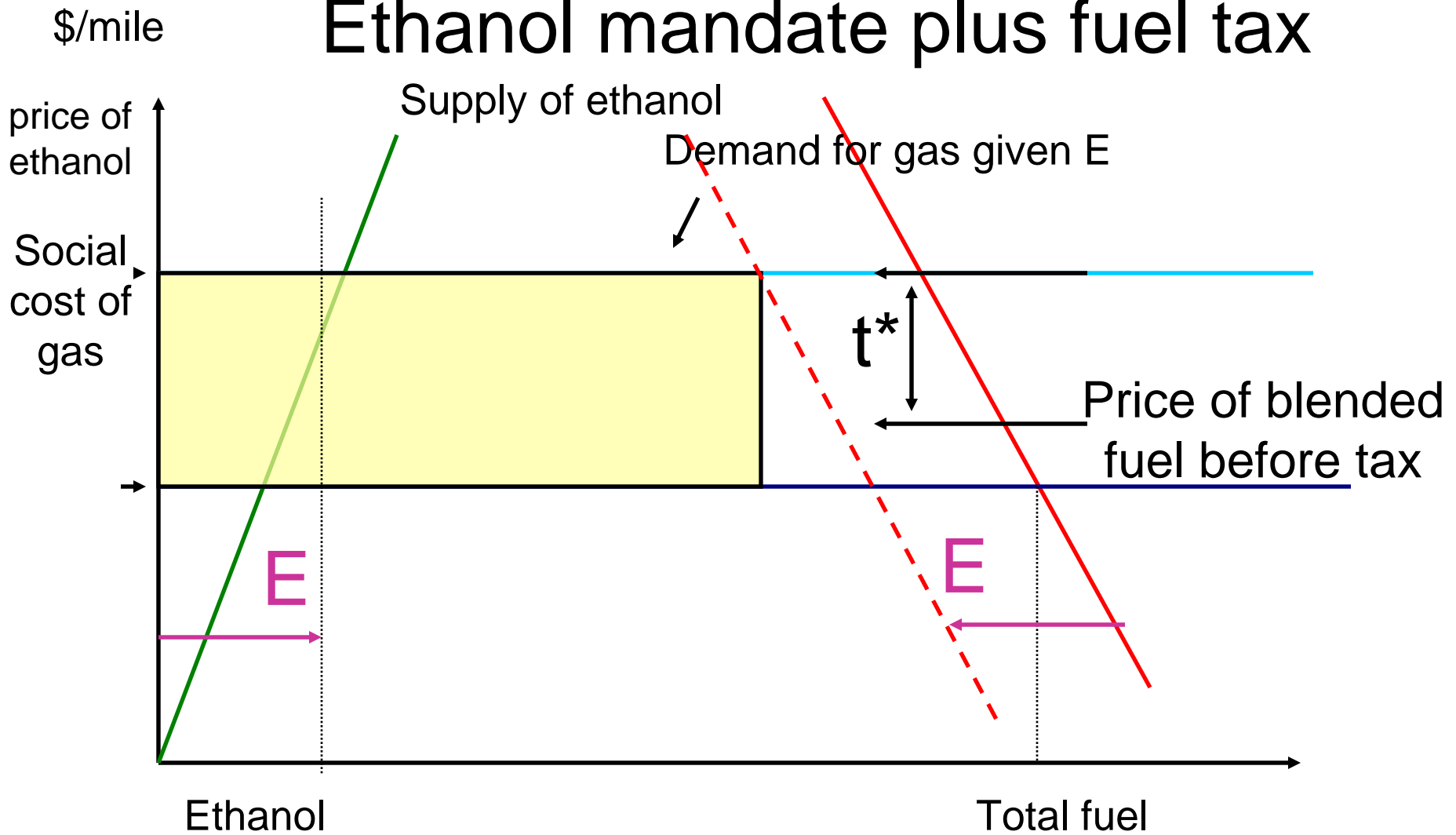
An unambiguously bad idea

Enter an ethanol mandate



Mandate acts like a fuel tax by raising price of blended fuel

Ethanol mandate plus fuel tax



Blended fuel price + tax does the job

Theory Conclusion

- Can optimally construct:
- Option 1: a tax combo (fuel tax/ethanol credit)
- Option 2: ethanol mandate alone
- Option 3: ethanol mandate plus fuel tax
- Bad idea: ethanol mandate plus ethanol tax credit

Real Conclusion

- There's no way Congress can get the combo of levers even close to right.
- If it's not worth doing, it's not worth doing badly.
- Price carbon.

Questions for the authors

- Whether/how to include a safety valve on the ethanol mandate?
- What about quantitative limits on ethanol that the vehicle fleet can use (not enough flex fuel vehicles)?
- What are the efficiency costs of the ethanol tariff?
 - » Supply curve artificially steep
- How can we communicate these results to policymakers?