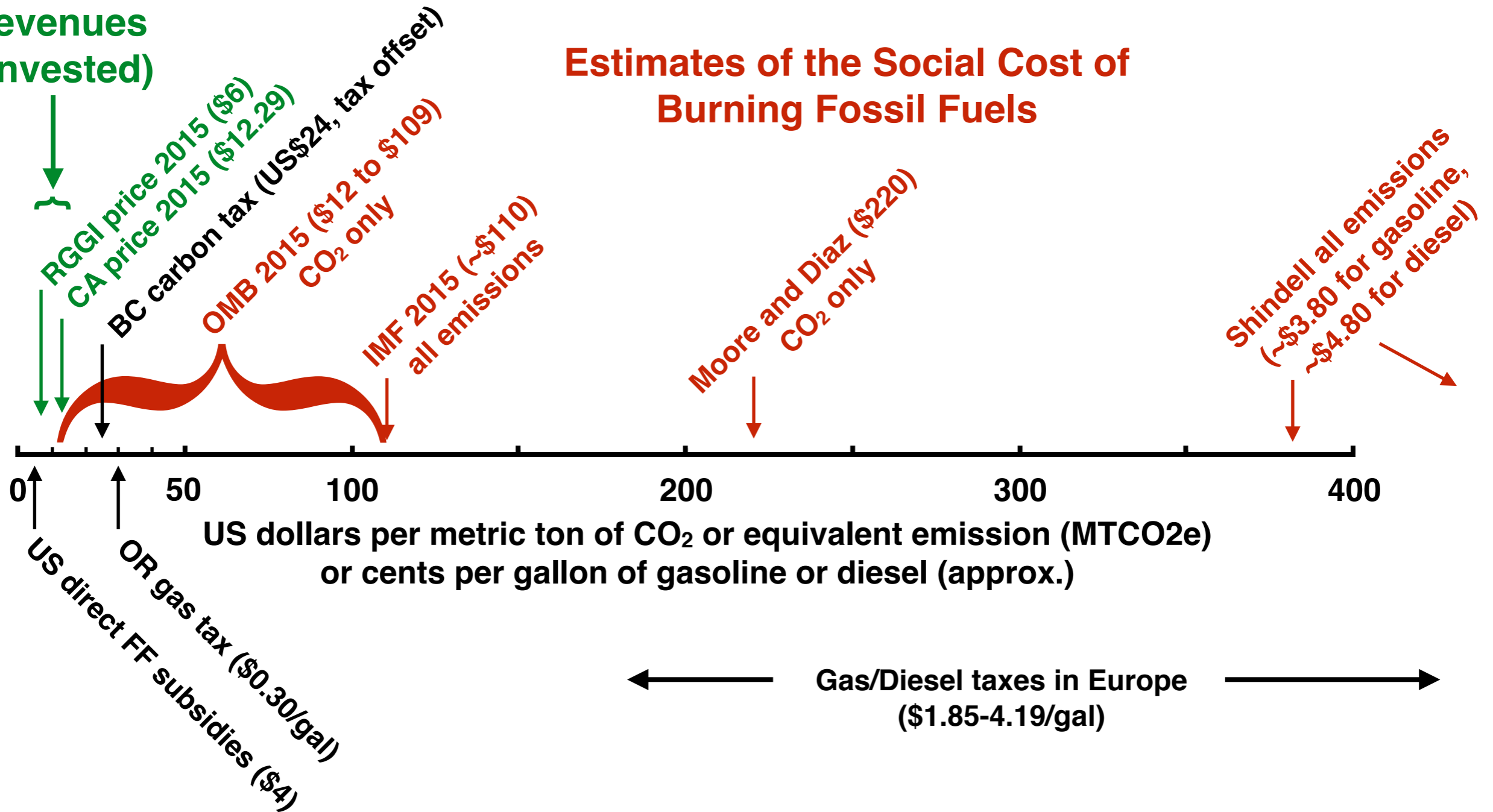


Various Costs and Prices of Fossil-Fuel Damages

(Dollars per ton of CO₂)

Cap-and-trade
revenues
(invested)

Estimates of the Social Cost of Burning Fossil Fuels



OMB: https://www.whitehouse.gov/sites/default/files/omb/inforeg/social_cost_of_carbon_for_ria_2013_update.pdf

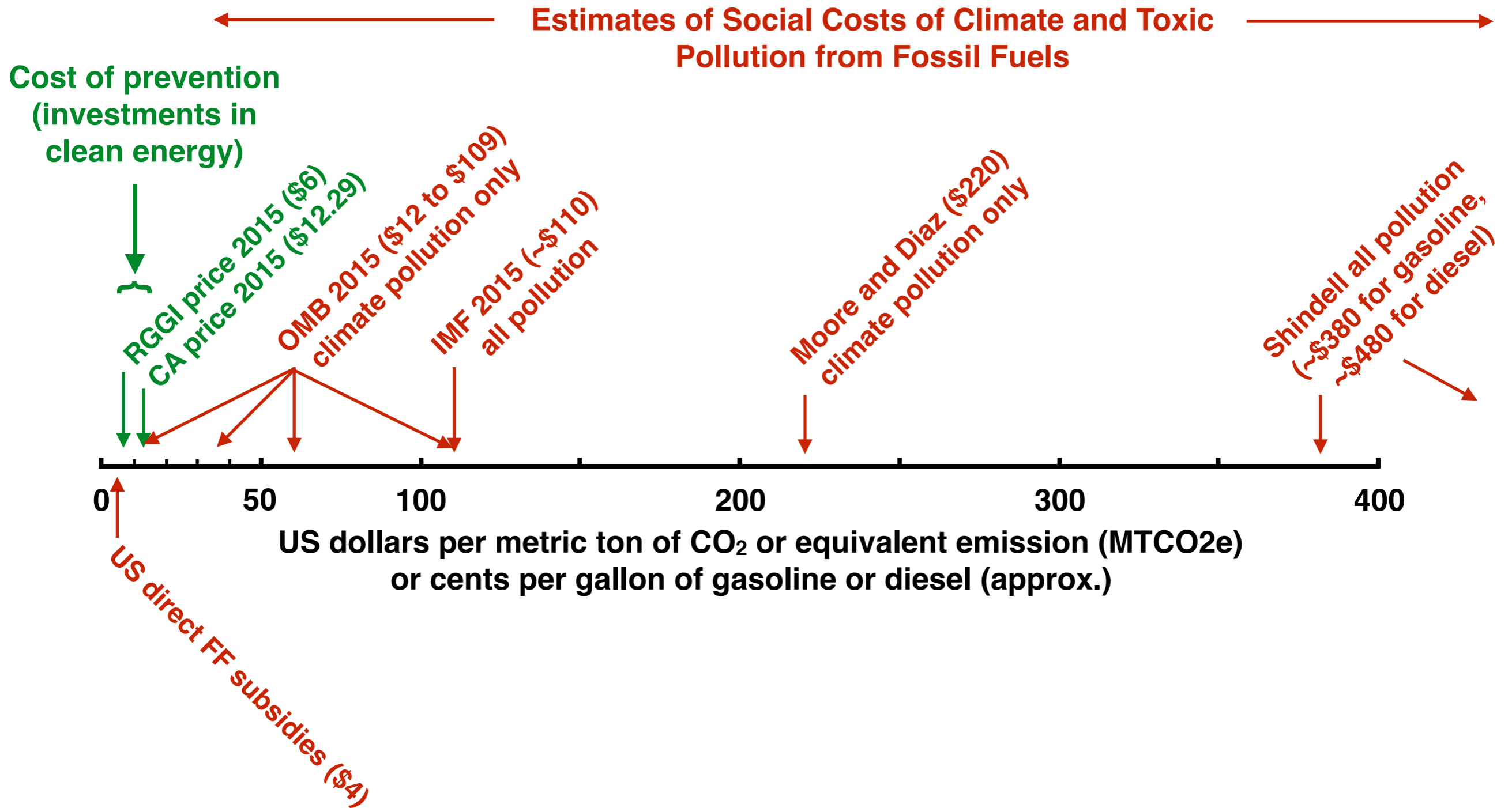
IMF: <http://www.imf.org/external/pubs/ft/wp/2015/wp15105.pdf>

Moore and Diaz: <http://news.stanford.edu/news/2015/january/emissions-social-costs-011215.html>

Shindell: <http://thinkprogress.org/climate/2015/03/05/3630136/social-cost-of-fossil-fuels/>

http://download.springer.com/static/pdf/498/art%253A10.1007%252Fs10584-015-1343-0.pdf?originUrl=http%3A%2F%2Flink.springer.com%2Farticle%2F10.1007%2Fs10584-015-1343-0&token2=exp=1447218427~acl=%2Fstatic%2Fpdf%2F498%2Fart%25253A10.1007%25252Fs10584-015-1343-0.pdf%3ForiginUrl%3Dhttp%253A%252F%252Flink.springer.com%252Farticle%252F10.1007%252Fs10584-015-1343-0*~hmac=6ff1cb914c04164f9fa4445c2af617cf15b33293d2c2094210f583713c8f79d2

Prevention is Far Cheaper Than Fossil Fuel Pollution



OMB: https://www.whitehouse.gov/sites/default/files/omb/inforeg/social_cost_of_carbon_for_ria_2013_update.pdf

IMF: <http://www.imf.org/external/pubs/ft/wp/2015/wp15105.pdf>

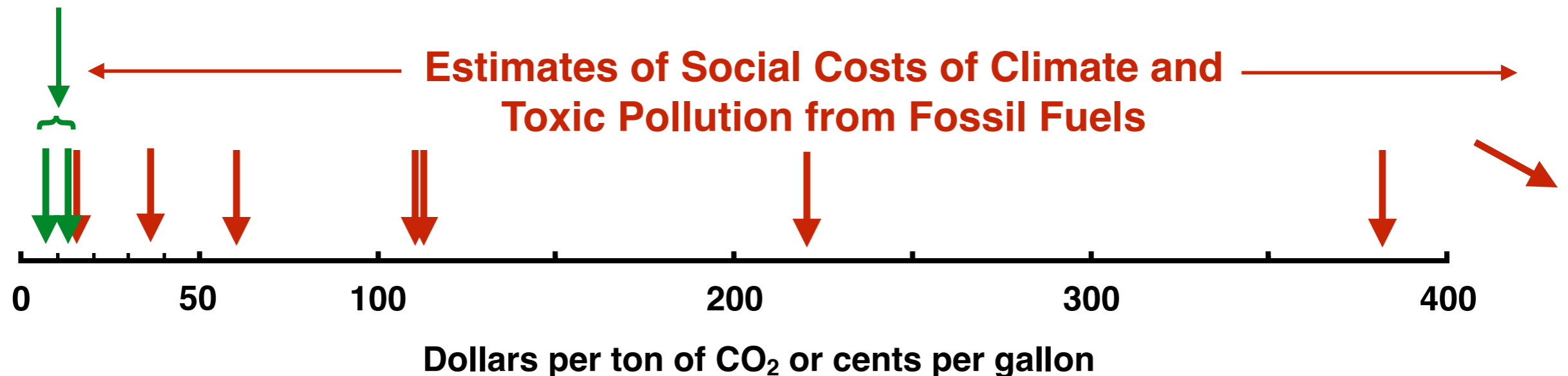
Moore and Diaz: <http://news.stanford.edu/news/2015/january/emissions-social-costs-011215.html>

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Prevention is Far Cheaper Than Fossil Fuel Pollution

Cost of prevention
(investments in
clean energy)



OMB: https://www.whitehouse.gov/sites/default/files/omb/inforeg/social_cost_of_carbon_for_ria_2013_update.pdf

IMF: <http://www.imf.org/external/pubs/ft/wp/2015/wp15105.pdf>

Moore and Diaz: <http://news.stanford.edu/news/2015/january/emissions-social-costs-011215.html>

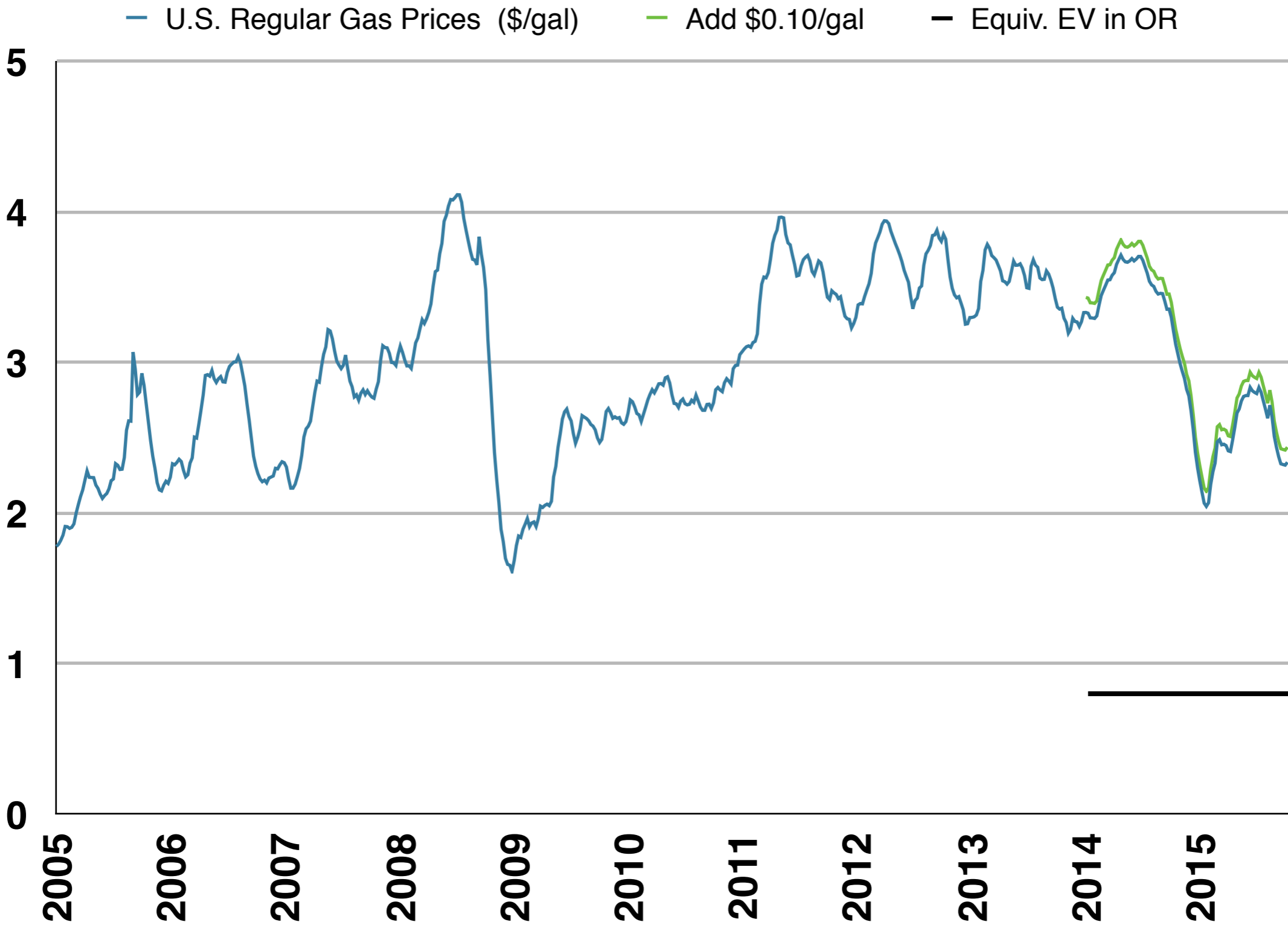
Shindell: <http://thinkprogress.org/climate/2015/03/05/3630136/social-cost-of-fossil-fuels/>

<http://download.springer.com/static/pdf/498/art%253A10.1007%252Fs10584-015-1343-0.pdf?originUrl=http%3A%2F%2Flink.springer.com%2Farticle>

[%2F10.1007%2Fs10584-015-1343-0&token2=exp=1447218427~acl=%2Fstatic%2Fpdf%2F498%2Fart%25253A10.1007%25252Fs10584-015-1343-0.pdf%3ForiginUrl%3Dhttp](http://10.1007%2Fs10584-015-1343-0&token2=exp=1447218427~acl=%2Fstatic%2Fpdf%2F498%2Fart%25253A10.1007%25252Fs10584-015-1343-0.pdf%3ForiginUrl%3Dhttp)

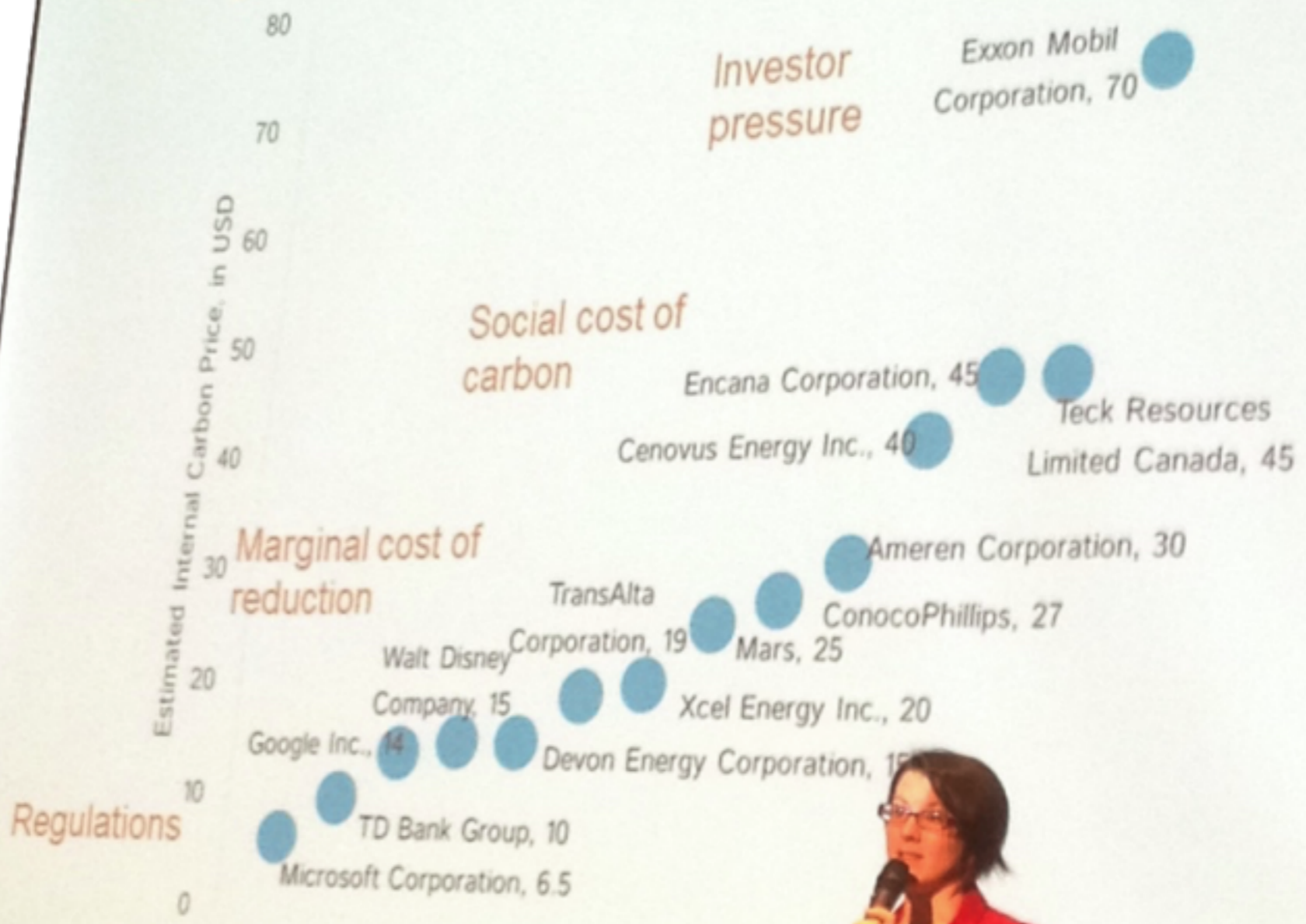
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\$10/ton is in the Noise of Price Volatility

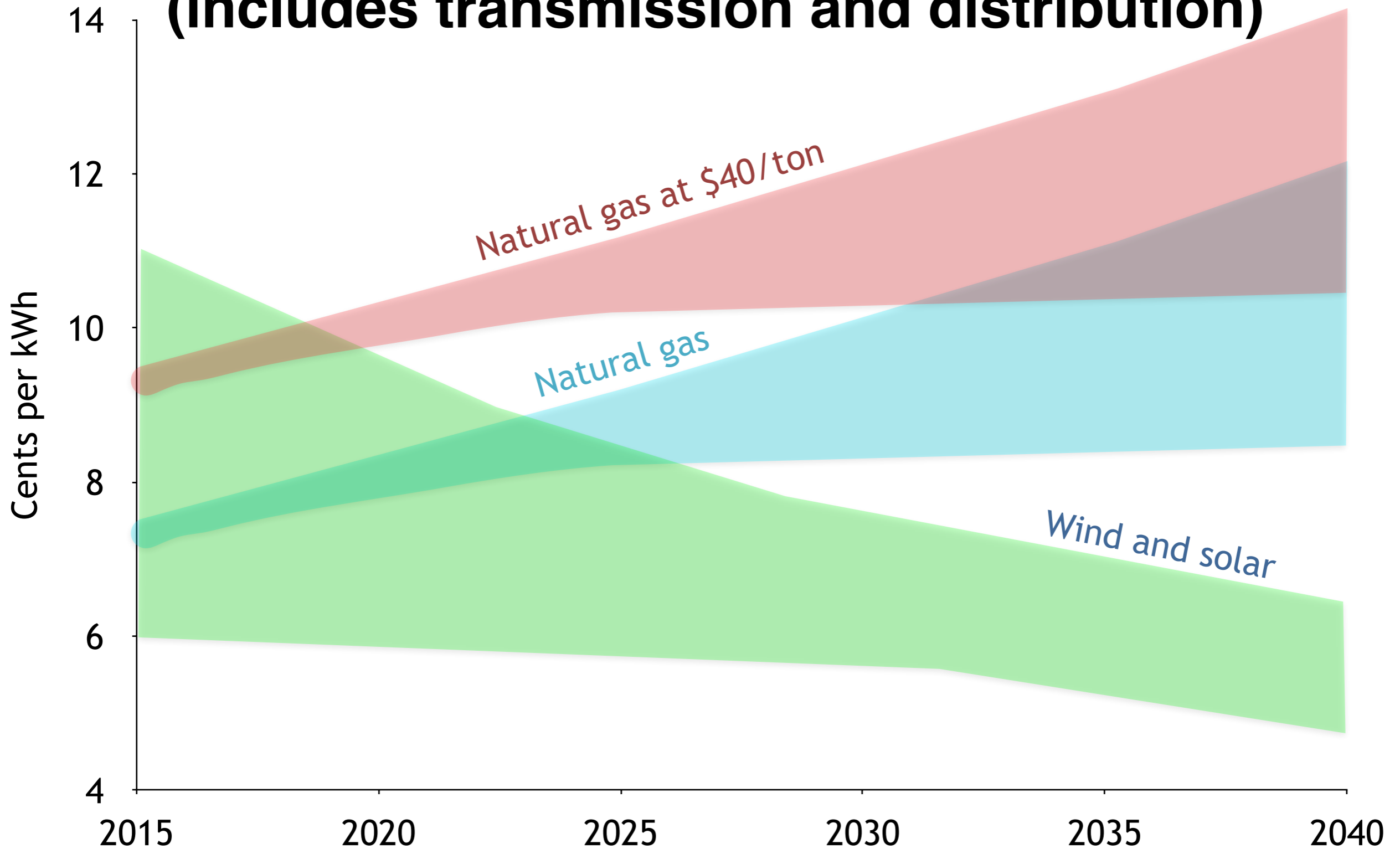


+ In Practice

Setting the Price



Data: Costs of New Energy (includes transmission and distribution)



Does not include costs of deploying storage or smart grid functions

Natural gas data from <http://www.utilitydive.com/news/the-top-10-trends-transforming-the-electric-power-sector/405798/>

Wind data from there and from https://www.ieawind.org/index_page_postings/WP2_task26.pdf

Solar data from lowest utility-scale PV costs at <http://www.agora-energiende.de/fileadmin/Projekte/2014/Kosten-Photovoltaik-2050/>

[AgoraEnergieende Current and Future Cost of PV Feb2015 web.pdf](http://www.agora-energiende.de/fileadmin/Projekte/2014/Kosten-Photovoltaik-2050/)

Jacobson adds 3.7 cents/kWh for T&D <http://web.stanford.edu/group/efmh/jacobson/Articles/I/WashStateWWS.pdf> Table 4