NYISO’s Plan to Price Carbon

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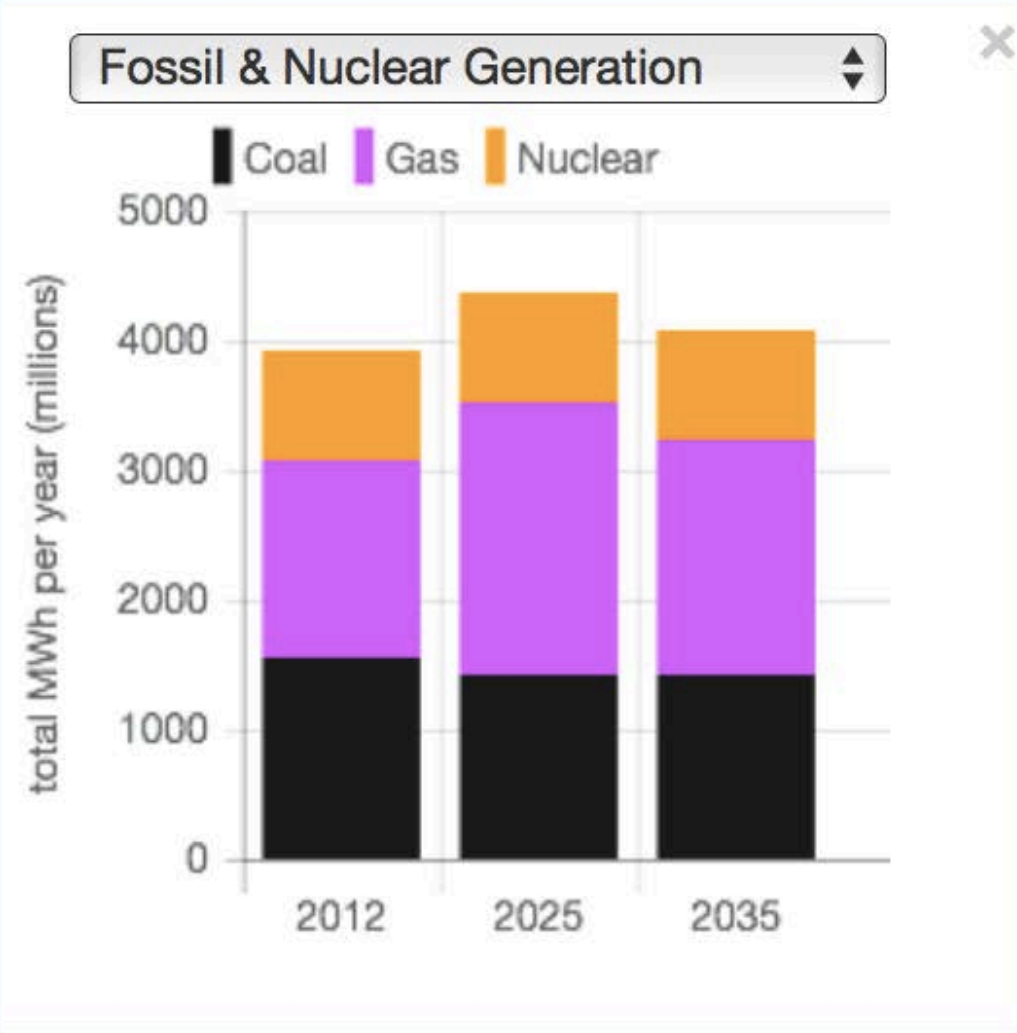
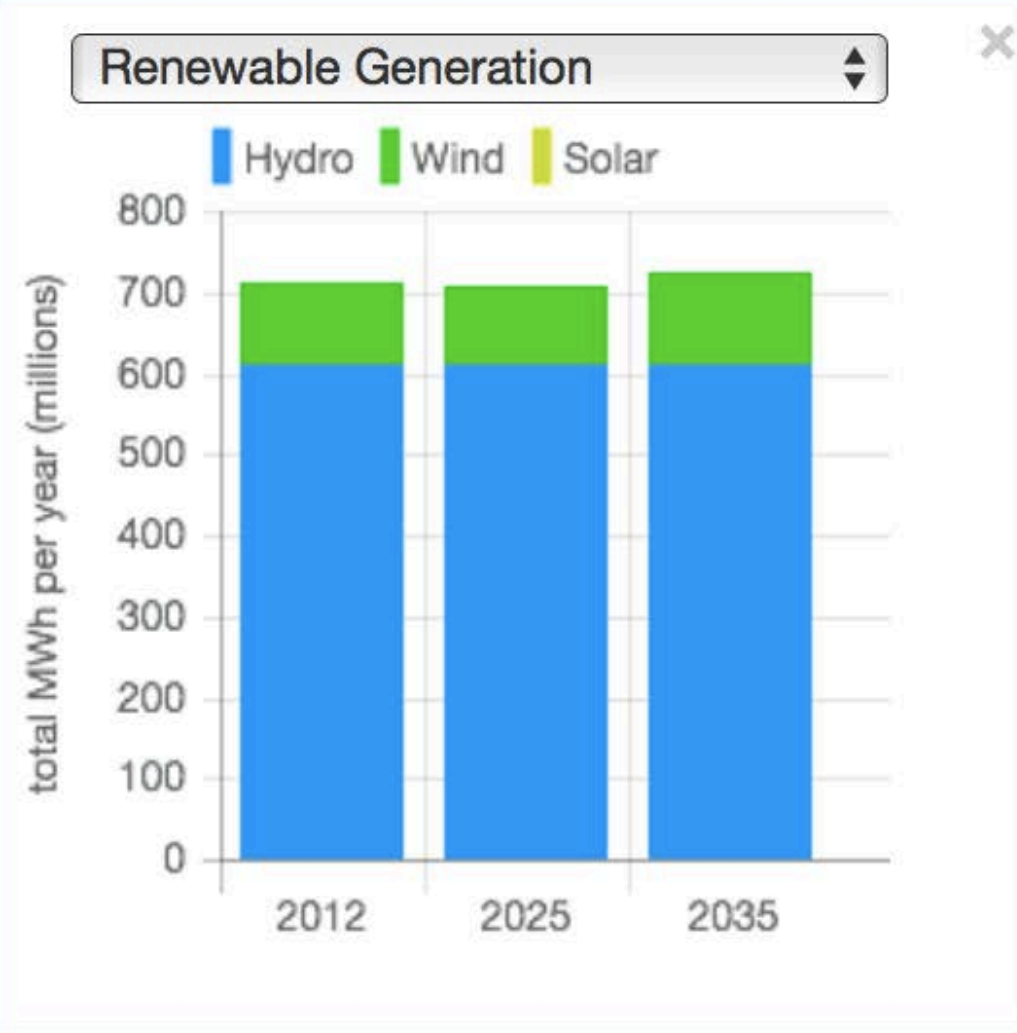
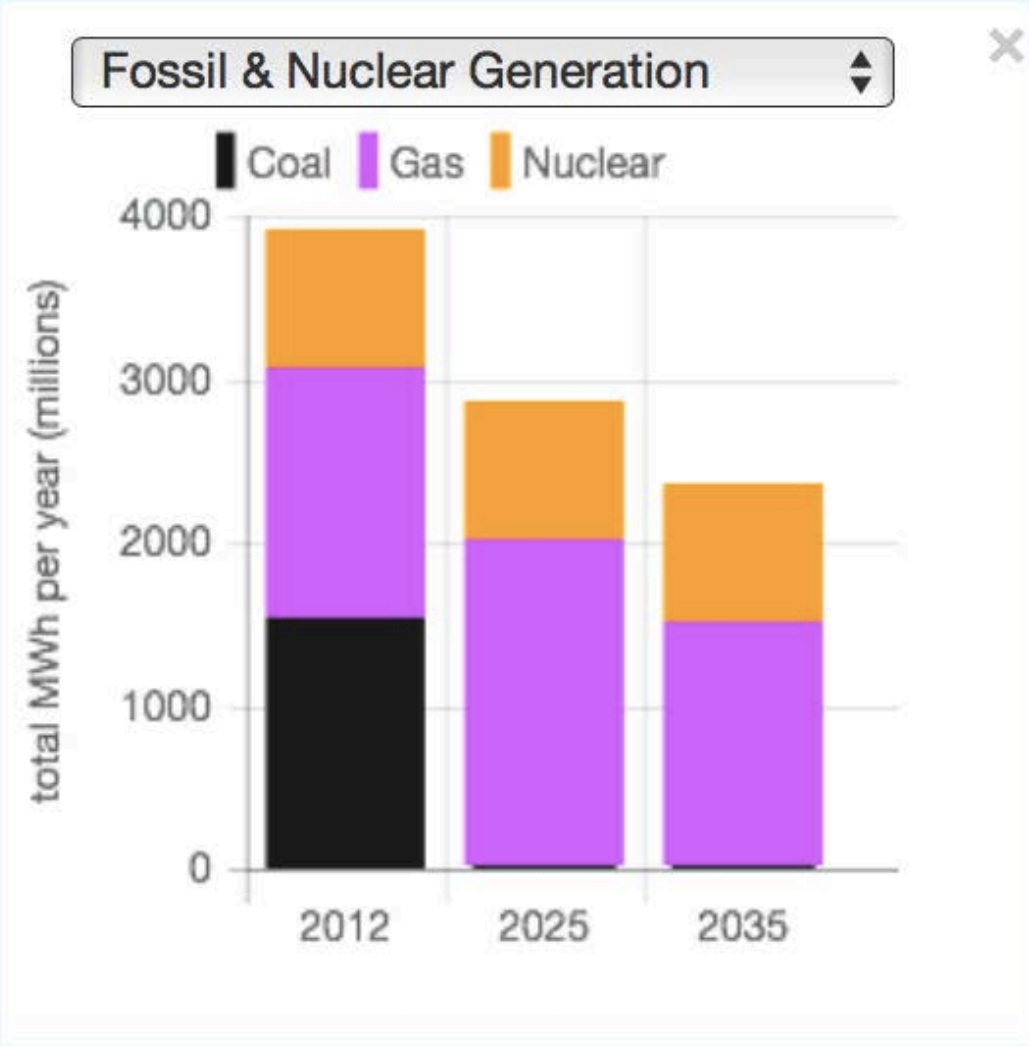
Why price CO2 at the social cost of carbon?

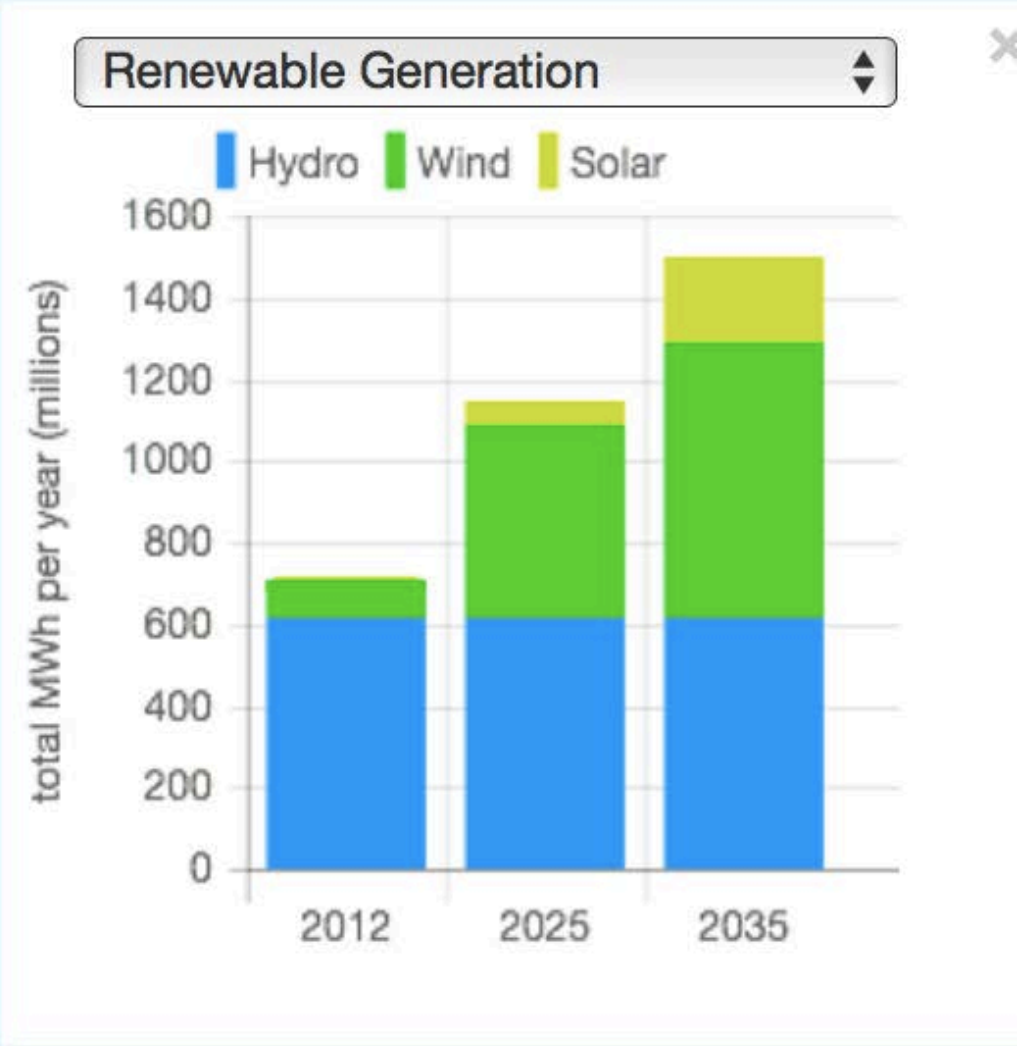
Base Case: No US national policy on carbon



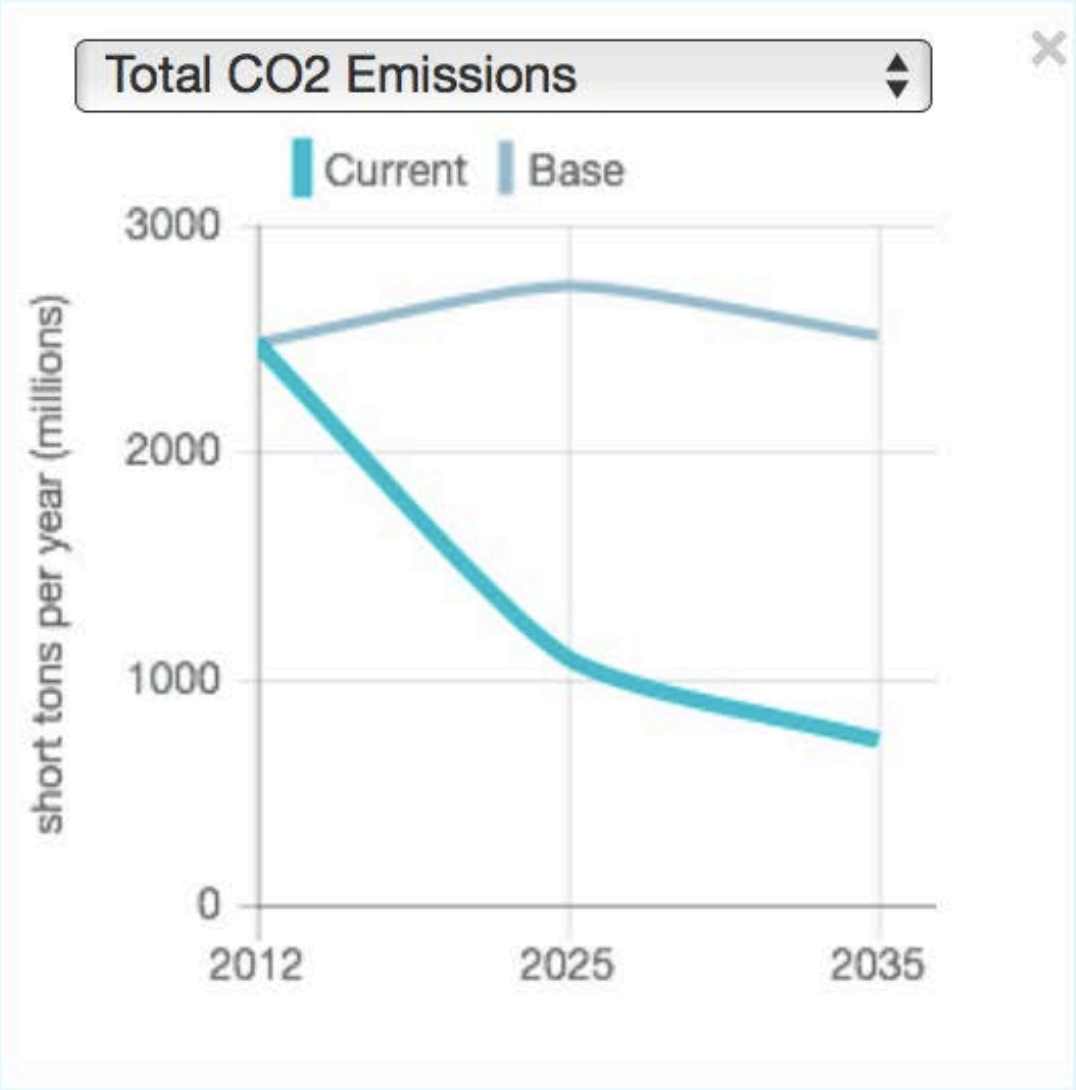


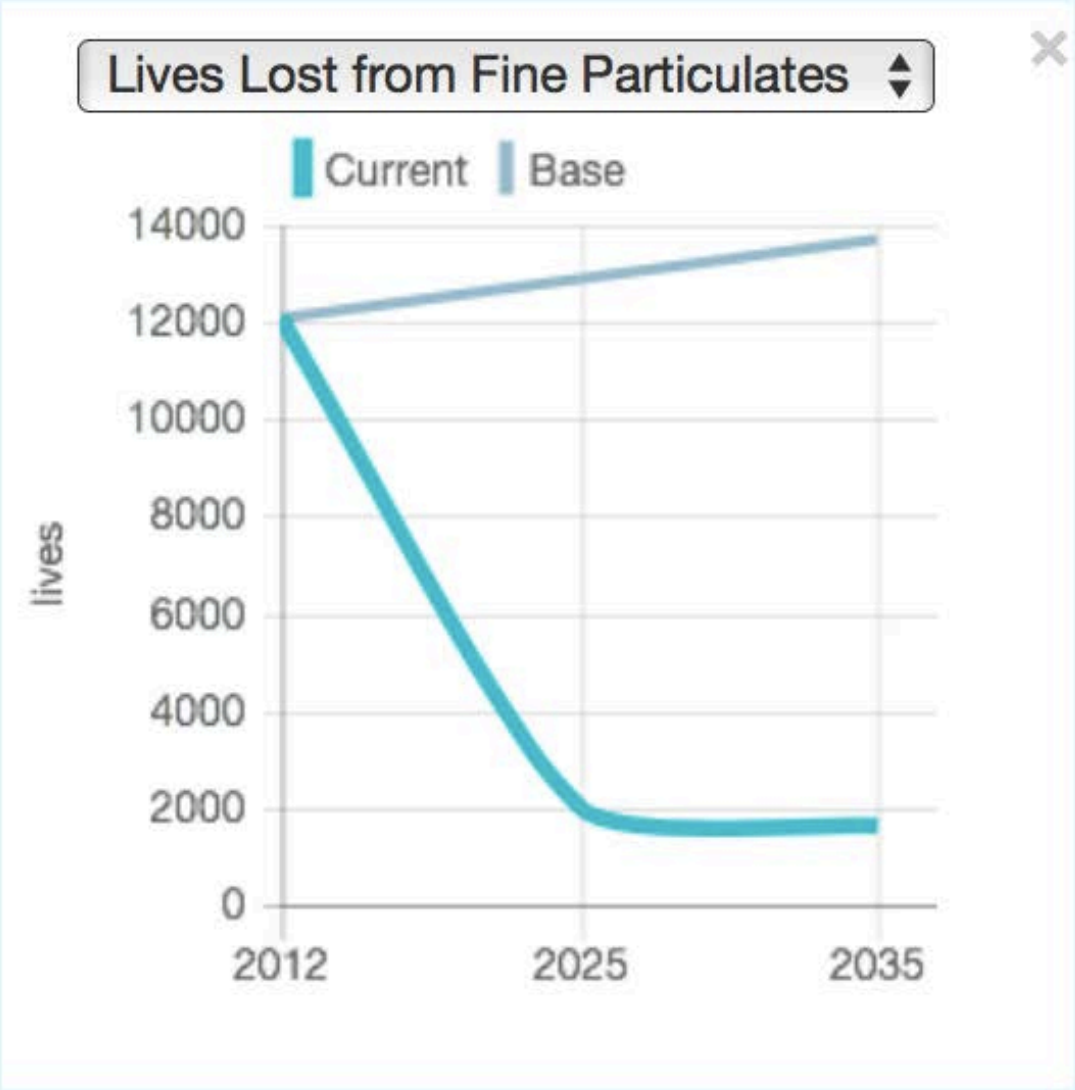
National impact of imposing the social cost of carbon on generators





National impact of imposing the social cost of carbon on generators (results from e4st.com)





Brad Jones (left) proposed that the NYISO price carbon (the PSC will use the social cost of carbon or SCC to set the price) to give generators an incentive to reduce CO_2 at least cost. This also gives generators a certain path forward as opposed to the volatility of carbon markets. Note that carbon markets have been far more volatile than the US stock market, making planning difficult. Robert Fernandez (right), the new acting CEO, is an enthusiastic supporter off this idea Of course, the devil is in the details….

Details taken from a November briefing for the Environmental Advisory Committee

- The NYISO would apply a carbon price by debiting each energy supplier a charge for its carbon emissions at the specified price as part of its settlement.
- Suppliers would recover these carbon emissions charges by embedding these costs into their energy offers (referred to as the supplier's carbon adder in $/MWh) and thus incorporate the carbon price into the unit commitment, dispatch, and price formation through the NYISO's existing processes.
- In addition to charging internal generators, the NYISO would charge imports for emissions and credit exports for avoiding other emissions to prevent the carbon charges on internal generation from causing emissions leakage and costly distortions.

Details taken from a November briefing for the Environmental Advisory Committee

- A carbon price would raise the energy market clearing price whenever carbon-emitting resources are on the margin because the carbon charges on certain suppliers would increase the variable costs of carbon-emitting generation dispatched by the NYISO.
- All suppliers, including clean energy resources, would receive the higher energy price, net of any carbon charges due on their emissions.
- Low-emitting resources in New York, including efficient carbon-emitting units, renewables, hydropower, and nuclear generators, would benefit from higher net revenues.
- The NYISO would debit the LBMP *(local wholesale price)* from LSEs *(utilities)* for wholesale energy purchases, which would account for the carbon adder on the marginal units. The NYISO would credit the carbon charge residuals, which are the sum of the carbon charges debited from suppliers, to the LSEs.

Details taken from a November briefing for the Environmental Advisory Committee

- If the marginal resource is subject to the Regional Greenhouse Gas Initiative ("RGGI"), then the net SCC will be utilized to determine the carbon reference level for the resource.
  - Such resources will ultimately be charged the net SCC for emissions.
  - The net SCC is the gross SCC minus the RGGI costs.
- If the marginal resource is not subject to RGGI, then the gross SCC will be utilized to determine the carbon reference level for the resource.
  - Such resources will ultimately be charged the gross SCC for emissions.
- If the marginal resource is carbon free or qualifies under the Clean Energy Standard ("CES"), then the NYISO will utilize a $0.00 carbon reference level for the resource.
  - Such resources will ultimately not be charged for emissions.

Details taken from a November briefing for the Environmental Advisory Committee

- How to deal fairly with imported and exported power and RECs?
- For example, a New York generator charged a carbon price could not compete with a Pennsylvania generator that does not.
  - Apply carbon charges to external transactions such that they compete with internal resources (and each other) as if the NYISO was not applying a carbon charge to internal suppliers (i.e., on a status quo basis)
- Wheel-through transactions would pay the carbon impact at the import interface and would be paid the carbon impact at the export interface
- Similarly, generators with RECs will not get the carbon pricing component in their payments

Details taken from a November briefing for the Environmental Advisory Committee

- LSEs would continue to pay the full LBMP, including the effect of the carbon charge on LBMP, but they would be allocated the carbon charge residuals collected from suppliers.
- The NYISO recommends the proportional allocation approach. This allocation provides equal % of carbon payments.
- The proportional allocation option provides an equitable impact to consumers that is consistent with the current REC contract cost allocation to load.

Other concerns

- Methane not included, but the carbon charge will reduce demand for natural gas by generators
- Because consumers will not feel price increases from the carbon price, the program does not directly give incentives for consumers to conserve energy.
- The carbon charge does not incorporate damages to human health.
  - Note, reductions in health damages from fine particulates would have more than paid for the emissions reductions proposed in the Clean Power Plan