45Q Percentage capture proposal talking points

- The 75% facility-wide capture language that passed the House in the Build Back Better Act is unworkable and would block carbon capture deployment on most electric power plants, preventing important emissions reductions. The language is unworkable for two key reasons:
    - The language would require capture of 75% of all emissions from an electricity generating facility. But facilities often consist of multiple independent electric generating units, all units could not be retrofitted for capture at the same time, and carbon capture may not be viable on some units (e.g. older units near retirement). By requiring 75% capture from all units, it will be impossible to install capture on any units at most facilities.
    - The language would require facilities to capture 75% in each tax year in order to claim the 45Q credit. This means that if a facility does not capture 75% in any given year, even if it achieved 74%, it would receive zero 45Q credits. This is an intolerable investment risk. Capture facilities, like all industrial facilities, undergo a period of commissioning and optimization when they begin operating that may reduce operation time, so the risk of missing the 75% capture requirement will be significant in initial years.
- **The new proposed language achieves the same goal with equal rigor, but in a way that minimizes investment risk. This language has support from a broad range of power company, NGO, and union stakeholders.**
- **The proposal is for a 75% *capture design capacity* requirement applied on an electric generating unit basis (rather than facility-wide basis).**
    - **This requires carbon capture equipment to be designed and installed with *capacity* to capture at least 75% of CO_2 produced by an applicable electric generating unit.** This requirement would be met at beginning of construction, giving developers certainty that the carbon capture equipment will be qualified once in operation.
    - **This requirement is rigorous. Once capture equipment is installed with capacity to capture at least 75% of CO_2 production, developers have maximum incentive to capture as much CO_2 as possible since the 45Q tax credit is a performance-based credit earned for each ton of carbon oxide actually captured by the equipment.** Developers will have invested in the capacity and must maximize its use to earn the return on their investment.
    - There is precedent for such a design capacity requirement in the existing 48A tax credit.
- In setting a 75% capture design capacity requirement, a baseline quantity of annual CO_2 production from an electric generating unit must be defined. The capture equipment must be designed to capture 75% of this baseline quantity.

- For existing electric generating units, the baseline production is the average annual historical CO_2 production of an electric generating unit for up to 6 years prior to the beginning of construction of the capture equipment.
- For new electric generating units (or new units with less than 1 full year of production history), the baseline production is the design CO_2 production of the unit assuming 60% capacity factor (i.e. that the electric generating unit on average produces at 60% of its capacity). This was chosen because the average capacity factor of *new* NGCC units in the past decade is around 60% (older units have an even lower average), and capacity factors are expected to decline in the future as the penetration of renewables increases as we decarbonize the grid. Therefore, assuming 60% capacity factor is a conservative assumption that will ensure capture equipment on new electric generation units has capacity to capture a high percentage of CO_2 produced.
- Electric generating units do not operate all the time, so it does not make sense to design equipment based on the maximum electric output of a unit, since the full output may be rarely used—this would require over-design, waste capital and lead to fewer carbon capture projects and lower emissions reductions.