The National Research Council has released a new report (available for purchase here) on America’s energy future.  Here are some key take away points:

> *Use of existing energy-efficiency technologies* is the nearest-term and lowest-cost option for moderating our nation’s demand for energy, especially over the next decade. The potential energy savings available from theaccelerated deployment of existing energy-efficiency technologies in the buildings, industry, and transportation sectors could more than offset the Energy Information Administration’s projected increases in energy consumption through 2030.
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> *Renewable energy sources* could provide about an additional 500 TWh (500 trillion kilowatt-hours) of electricity per year by 2020 and about an additional 1100 TWh per year by 2035 through new deployments in favorable resource locations (total U.S. electricity consumption at present is about 4000 TWh per year).
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> *Coal-fired plants with carbon capture and storage (CSS)* could provide as much as 1200 TWh of electricity per year by 2035 through repower- ing and retrofits of existing plants and as much as 1800 TWh per year by 2035 through new plant construction. In combination, the entire existing coal power fleet could be replaced by CCS coal power by 2035.

If you do the math, this means we can hold power needs at the current 4000 TwH in the early 2030s and supply a total of about 3000 TwH through a combination of CCS coal-fired plants and renewables, meaning something like at **75% reduction in carbon.** Expanded use of nuclear might mean further reductions.

The NRC also points out the need for legal and policy advances (as well as technological advances) to make this happen:

> A number of current barriers are likely to delay or even prevent the accelerated deployment of the energy-supply and end-use technologies described in this report. Policy and regulatory actions, as well as other incen- tives, will be required to overcome these barriers.