



## Labor Principles for Climate Change Legislation

December 2020

The climate crisis is real and urgent. Energy labor unions support the Intergovernmental Panel on Climate Change's determination that industrial nations need to achieve net zero greenhouse gas emissions by 2050. We need an "all of the above" energy strategy that preserves electric reliability while creating significant new job opportunities. At the same time, we should avoid unrealistic near-term targets and timetables. Additional time and substantial resources are needed for advancing carbon capture, storage and utilization (CCUS) technologies, and for demonstrating advanced carbon removal technologies at scale.

Our unions strongly prefer a cap-and-trade program with technology incentives similar to the Waxman-Markey bill. We recognize, however, that a clean energy standard (CES) may be the preferred means for achieving given levels of carbon reductions in the utility sector. We have suggested that CES proposals incorporate alternative funding mechanisms - a BTU fee or a wires charge - to support funding both labor transition and advancement of carbon removal technologies.<sup>1</sup>

We are concerned that proposals to decarbonize the electric generation sector by 2035 are premature, and may have adverse consequences for near-term unemployment of hundreds of thousands of union workers. Without new incentives, CCUS will not be deployed at significant scale in a net zero 2035 context for two reasons: the short timeframe for the multiple steps required for financing, construction and permitting, and the lack of cost-effective CCUS technologies.

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<sup>1</sup> See, Comments of Energy Labor Unions to House Energy & Commerce Committee, May 5, 2020, available at <http://www.ujep4jobs.org/Portals/74/Documents/Union%20Memo%20to%20House%20EC%20Committee%20May%205%202020.pdf?ver=2020-06-24-104307-653>

Decarbonization of the electric sector would require replacement of two-thirds of the nation's electric generating capacity along with its associated transmission networks. The predominant sources of replacement generation for some 800 Gigawatts of retiring fossil coal and gas capacity would be wind, solar, batteries, and legacy nuclear and hydro capacity - an outcome inconsistent with the need for reliable baseload power across all regions. Moreover, the lack of major advancements in CCUS technologies during the 2021-2035 timeframe would impair the ability of major heavy industrial sources (petroleum, chemicals, metals, etc.) to deploy advanced CCUS during 2035-50 when these industries will need to achieve net zero emissions.

Electric utilities should lead

Electric utilities should lay the groundwork for CCUS proving that the technology works at scale, with reasonable cost and performance metrics. The power industry has repeatedly demonstrated its ability to manage technology cost and performance challenges, most recently in the case of high-efficiency NOx controls for ozone and for low-cost control of mercury and other toxic metals. Utilities recognize that the continued operation of natural gas combined cycle units - critical for providing backup support for large-scale renewable deployment - will require CCUS to meet future net zero emission targets.

Jobs at risk and transition needs

We estimate that a net zero carbon standard for electric generators in 2035 would displace nearly 1.5 million direct and indirect jobs in the coal, natural gas, railroad, and electric utility sectors.<sup>2</sup> These jobs contribute more than \$80 billion annually in direct and indirect wages for the families and communities of affected workers.

The political discussion about near-term elimination of fossil-based electricity needs to consider the impacts of job losses on families and communities. Many power plants, coal mines and other fossil energy facilities are located in rural areas, and often are the largest employers and sources of tax revenues for local communities. Indirect jobs in the community are supported through the high wages paid to fossil energy workers, and by the large supply chains needed to support energy facility operations and maintenance. Power plant workers, coal miners, and coal-dependent railroad employees typically are 50 to 60 years old, with few prospects for reemployment at comparable wages.

Transition assistance to workers in communities directly impacted by plant closures is a highly effective means to avoid severe community disruptions such as large-scale closures of businesses, destruction of housing values, and the human costs of unemployment - increased drug addiction, divorce, crime, and poor health. Funds received during the transition period would recirculate throughout communities, much as COVID-19 state and federal assistance helped many communities to avoid even more devastating losses to businesses and consumer-

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<sup>2</sup> See, Potential Energy Job Losses and Transition Assistance Needs With 2035 Electric Generation Decarbonization Target, available at: <http://www.ujep4jobs.org/Portals/74/Documents/Potential%20Fossil%20Energy%20Job%20Losses%20and%20Transition%20Needs%20Final%20101920.pdf?ver=2020-11-04-100313-437>

dependent sectors. Such assistance could be provided through a trust fund administered by the U.S. Department of Labor, with block grants to state labor departments for managing transition assistance programs. State programs in turn would be responsible for qualification determinations and disbursements.

Assuming replacement of 67% to 100% of current wages over a three year benefit period, and a phased reduction of jobs over 15 years, we estimate the costs of providing transition assistance range from \$12.3 to \$18.0 billion annually. Providing assistance to displaced workers at this level would represent just 0.06% to 0.09% of U.S. GDP in 2019.

#### Advancing CCUS with a net zero EGU target

Climate legislation must provide for substantial near-term increases in DOE funding for CCUS and other advanced carbon control technologies such as direct air capture. The Global CCS Institute reports that a 100-fold increase in global CCS capacity will be needed to meet Paris climate targets. See, <https://www.globalccsinstitute.com/resources/global-status-report>.

Costs for carbon capture are currently too great to advance CCUS deployments, even if 45Q tax incentives were made permanent. The bipartisan draft McKinley-Schrader bill identifies several critical improvements to current DOE efforts to advance CCUS technologies. Its recommendations deserve serious consideration in any comprehensive climate legislation adopting net zero emission targets.

Legislation requiring accelerated reduction of carbon emissions in the utility sector should provide extended compliance dates for plants applying CCUS, along with an immediate major infusion of R&D funding to DOE to accelerate second generation capture technologies.

- ✓ Unit owners willing to commit to the application of CCUS technologies on fossil units should qualify for up to a 5-year extension of compliance for these units, with system clean energy budgets adjusted accordingly. A safe harbor should be provided for these units against the imposition of any fees or alternative compliance penalties.
- ✓ The need to advance CCUS through commercial-scale EGU projects is compelling when the emission control requirements of other major industrial sectors are considered. A portfolio standard could be considered requiring systems to produce at least \_\_\_% of their clean energy Megawatt-hours from CCS-equipped fossil units achieving 95% or greater removal by 20\_\_\_, where system generation portfolios are consistent with this requirement as of 2020.
- ✓ Current 45Q support is not adequate to support CCS applications at EGUs. Assuming that the 45Q tax credit program can be provided with secure funding, additional Federal support of some \$50/ton of CO<sub>2</sub> captured likely would be needed to incentivize EGU applications of CCS within a 2035 or extended timeframe. A lower level of support may be appropriate for projects involving enhanced oil recovery.

- ✓ Alternative means of self-financing an additional CO<sub>2</sub> storage credit of this magnitude should be considered, such as through a small fee on all clean energy credits issued to electric power companies, or an auction of these credits with the proceeds allocated to labor adjustment and technology development programs.