The MWG recommends that the draft plan for reducing greenhouse gas emissions 40% by the year 2030 include an integrated suite of programs and policies designed to address the greenhouse gas emissions implications of natural gas development and usage. Together, these programs and policies should seek to:

- improve the state's accounting of the greenhouse gas emissions associated with natural gas;
- effectively address the leakage of methane from natural gas;
- accelerate conversion from natural gas to electric heating; and
- map out a path for phasing natural gas completely out of Maryland's energy grid.

We recommend that the following specific steps be taken, and that their consequences and/or projected outcomes be included in the draft 40 by 30 plan:

Improve the Inventory

The MWG recommends that MDE and the Public Service Commission work together to insure that Maryland's next scheduled greenhouse gas emissions inventory accounts for all in and out-of-state emissions associated with the production, processing, transmission and distribution of natural gas consumed in Maryland;

The MWG recommends that MDE and the Public Service Commission insure that Maryland's next scheduled greenhouse gas emissions inventory includes two radiative forcing estimates for methane – the 20-year and 100-year IPCC5 determined warming potentials; and

The MWG recommends that MDE should include presently unaccounted for sources of methane in Maryland's 2020 GHG emissions inventory.

Fix the Leaks

The MWG recommends that MDE and the PSC should, by 2020, enact regulations to markedly reduce methane emissions from all major in-state sources;

The MWG recommends that MDE and the PSC should establish mandatory leak detection and replacement requirements for natural gas compressor stations beginning by 2019;

The MWG recommends that the Maryland Comptroller undertake an assessment of the feasibility of establishing taxes on CH4, CO2, and black carbon emissions, and report the results of that assessment back to the MCCC by December 1, 2019.

Accelerate Conversion

The MWG recommends that MEA and the PSC establish incentives for switching from oil or gas heating systems to efficient electric heat pumps in the residential and light commercial building sectors before 2020;

The MWG recommends that MEA and the PSC enable EmPOWER Funds to be used for low income families to convert from propane, petroleum and gas systems to efficient electric heat pumps;

Roadmap for Phase Out

The MWG recommends that MDE and MEA jointly develop a strategy to begin phasing out natural gas usage by 2020, with the understanding that some entities are likely to use natural gas well into the future (i.e. 2040 and beyond). The strategy should inform and be included in the draft 40 by 30 plan.

Gerrit Knaap, National Center for Smart Growth, University of Maryland **Arjun Makhijani**, Institute for Energy and Environmental Research