Abstract. Climate change is a global challenge that affects policy agendas across international, national, and local governments. International agreements to reduce greenhouse gas emissions have been made and reaffirmed through the U.N. Framework Convention on Climate Change (UNFCCC) Conference of the Parties for over two decades. Advancing energy technology innovation is one approach that can enable transitions to a lower carbon energy system. For energy innovation policy to effectively enable that shift, implementation must happen on a wide scale. This poses a challenge for federal countries participating in international climate agreements; while policies to enable innovation need to transcend governance levels to be successful, the policies of the subnational government may not be aligned with the political priorities of the national government. We explore these dynamics in the case of Canada – a federal system that has seen prolonged periods of federal government inaction on emissions reduction – by reviewing the incoherence between international commitments, national and subnational policies and technology diffusion. Our review enables a greater understanding about how the dynamics of federalist political systems influence the outcomes of national commitments to international agreements. The implications of our findings for other federalist political systems are discussed with specific reference to the United States, which is once again entering a period of federal inaction on climate policy under the new administration. During national leadership voids, subnational governments can implement climate policies while reducing emissions. This type of system supports the development of a coordinated strategy among
subnational governments in achieving international goals through cooperative federalism (via subnational policy compacts).

**Keywords**: Energy innovation; climate policy; greenhouse gas emissions, international commitments.