June 21, 2022

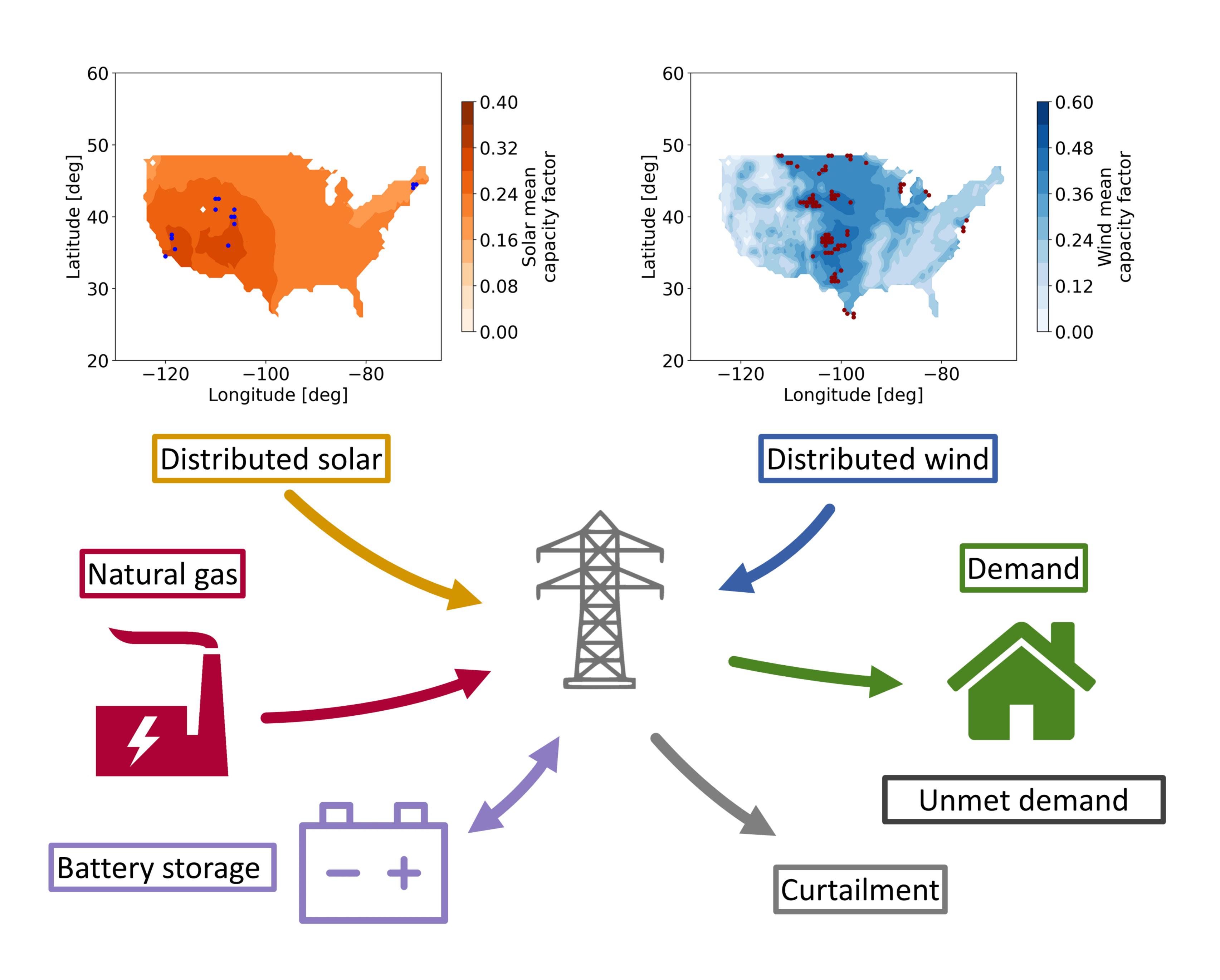
Macro-Energy Systems Workshop Stanford University, CA, USA

The quantity-quality transition in the value of expanding wind and solar power generation

Enrico Antonini Carnegie Institution for Science 260 Panama St, Stanford, CA, USA



Large-scale integration of wind and solar generation in decarbonized electricity systems



System architecture and cost for increasingly strict carbon emissions limits



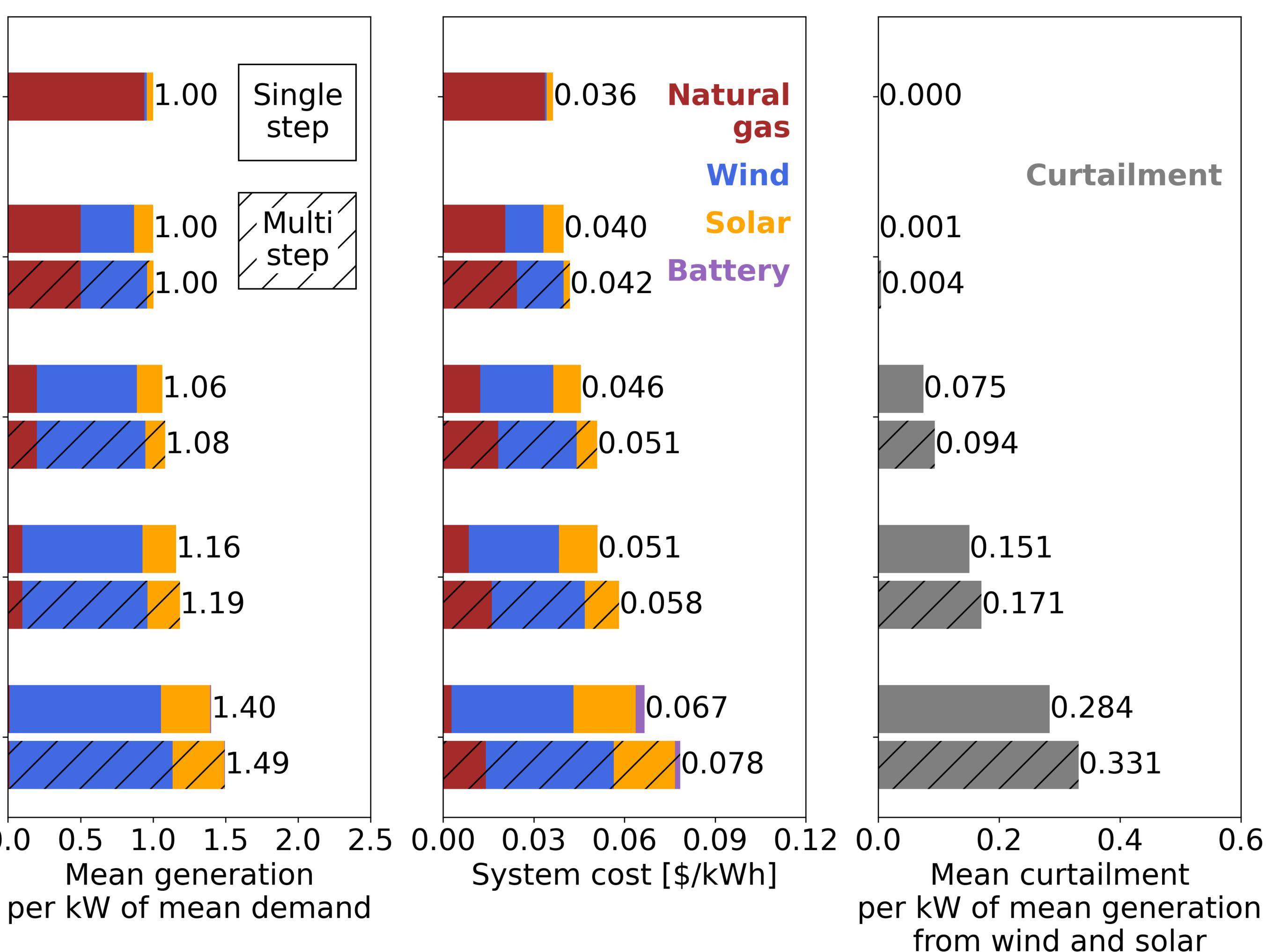
50% reduction

80% reduction

90% reduction

99% reduction

0.0 0.5



Quantity-quality transition in the value of expanding wind and solar generation for increasingly decarbonized energy systems



