ABSTRACT: This talk deals with the operations of energy and commodity merchants. In particular, such merchants use various heuristics to value leasing contracts on storage facilities as real options and make inventory trading decisions. Two prominent heuristics sequentially reoptimize simple models, leading to the so-called rolling intrinsic (RI) policy and rolling basket of spread options (RSO) policy. The extant literature numerically demonstrates that these two policies are nearly optimal in many realistic settings and can be used with Monte Carlo simulation to obtain fairly accurate estimates of the value of storage contracts. This research provides a theoretical basis for the observed benefit of reoptimization with these heuristics and additional numerical evidence for the near optimal performance of the RI and RSO policies in several practical cases, but shows that the RI policy significantly outperforms the RSO policy in some of these cases. Moreover, this work develops efficient and effective dual bounds to assess the performance of merchant commodity storage heuristics. These bounds are immediately relevant to the developers and users of the two considered heuristics. If time allows it, this talk will also discuss extensions to the case of a network of energy transport and storage facilities, based on ongoing work with Selva Nadarajah.