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We use positive  $S^1$ -equivariant symplectic homology to define a sequence of symplectic capacities  $c_k$  for star-shaped domains in  $\mathbb{R}^{2n}$ . These capacities are conjecturally equal to the Ekeland-Hofer capacities, but they satisfy axioms which allow them to be computed in many more examples. In particular, we give combinatorial formulas for the capacities  $c_k$  of any “convex toric domain” or “concave toric domain”. As an application, we determine optimal symplectic embeddings of a cube into any convex or concave toric domain. We also extend the  $c_k$  to functions of Liouville domains which are almost but not quite symplectic capacities. (Received August 29, 2016)