

Measure	What	Gross Risk	Why	Net Risk	Why
AC and Heat Pump Tune-Up	Proper refrigerant charge	M	Need lots of field data to confirm - expensive	M	Very few people do this on their own, absent problems, making it a free rider risk
Anti-Sweat Heater Controls (Refrigerated Cases)	Turns door heaters off once fog burns off glass	M	Store conditions affect fogging	M	Common for new cases making it a free rider risk
Pipe Insulation	Steam and hot water pipes	M	Heat lost from pipes may be useable in a conditioned space; what existed before?	L	Assuming what was there before is a gross savings issue
Space Cooling - Air Conditioners, Chillers	Efficient cooling equipment	M	Units are typically oversized resulting in excessive reported savings	L	Can determine standard practice through contractor interviews
Chiller Tune-Up	Refrigerant charge	H	Need lots of customer-specific data to demonstrate savings	M	Necessary calls may be claimed – free riders
Geothermal Heat Pump	Ground-loop heat exchanger for heat pumps	L	Sizing, the primary risk, should be better than residential	M	Lots of customers are going to do this, but they do factor in incentives
Boilers/Furnaces	Efficient equipment	M	Often redundant equipment and units are oversized	M	Inefficient boilers still fairly common; furnaces depend on situation
Commercial New Construction	Whole building or equipment based	H	Actual performance regularly lags modeled. Baselines are risk depending on implementer	H	"Efficient" equipment is mostly standard practice - taking credit for the sunrise
Programmable Thermostat	Automatic scheduling of temperature	H	Rarely do buyers of auto temperature control not manually control temperature before purchase	M	Smart thermostats are still considered expensive to some; incentive makes a difference

Custom	Industrial and very large projects	M	Sound engineering required; things change, affecting savings	L	Net risk is low IF there is good documentation and baseline is defensible
Duct Repair/Sealing	Commercial and residential heating and cooling ducts	H	Nobody knows the leakage volume (baseline), leakage may not be wasted energy if in conditioned space	L	This measure is probably not going to happen without the program
ECMs (Efficient Motors)	Efficient electric motor for furnaces, refrigerated cases, etc.	L	Performance is well known, but baseline is a risk	L	Low for retrofit; higher risk for new equipment
Boiler/Furnace Tune-up	Air/fuel ratio for boilers; furnaces?	L	Low risk if stack gas testing is required, otherwise, very high risk	M	This is one measure that, for many customers, is a regular maintenance task
Insulation and Air Sealing	Wall and attic insulation, caulk, etc.	H	Savings depend primarily on pre-existing insulation and tightness; impossible or very expensive to assess	L	Customers understand it and look to their utility for help
Lighting Controls	Occupancy and daylighting controls	H	Savings depend on baseline; people are much better controllers than these things	M	Other than code, probably not the norm, if there is anything left after the gross analysis
Steam Traps	Essentially, stops steam leaks	H	About three people in the United States know how to accurately estimate steam loss from bad traps	L	As steam becomes less common, fewer steam techs exist; also easy to neglect and forget
Variable Speed Drives	Variable speed drives for electric motors driving fans and pumps, mostly	M	For any given application, risk is high, but when smeared over hundreds of units, not so much; equity factor	M	Low for retrofit (adding); high for new construction

Retro-Commissioning	Commercial and industrial controls optimization	M	Engineering expertise required; calculation templates only work for average measures	Zero	Low market penetration; few know what it is
---------------------	---	---	--	------	---