

Generated (UTC): 2026-02-21T20:12:08.554479+00:00

Sites: [2, 3] | boundary=open | ordering=blocked | seed=7

Caps: per_method=15.00s, adapt_trial=3.00s, adapt_fixed_trial=4.00s

Gates: VQE(L2<=1.0e-08, L3<=1.0e-06) | UCCSD-fixed(L2<=1.0e-08, L3<=1.0e-06) | UCCSD-adapt(L2<=1.0e-07, L3<=1.0e-05) | CSE(gap>=0.90)

Warnings: L=2 adapt_uccsd_fixed: stopped due to budget:max_time_s. | L=2 adapt_uccsd_adapt: stopped due to budget:max_time_s. | L=2 adapt_cse_adapt: stopped due to

PASS/FAIL Matrix (Method x L)

Method	L=2	L=3
Hardcoded VQE (UCCSD)	FAIL dE =1.734e-08 <= 1.000e-08 reason=tol PASS	PASS dE =3.547e-09 <= 1.000e-06 reason=ok PASS
Qiskit VQE (UCCSD)	FAIL dE =5.600e-10 <= 1.000e-08 reason=ok FAIL	FAIL dE =3.795e-08 <= 1.000e-06 reason=ok FAIL
ADAPT-UCCSD (Fixed Sequence)	FAIL dE =3.281e-01 <= 1.000e-08 reason=timeout/cap FAIL	FAIL dE =1.467e-02 <= 1.000e-06 reason=timeout/cap FAIL
ADAPT-UCCSD (Adaptive)	FAIL dE =3.281e-01 <= 1.000e-07 reason=timeout/cap PASS	FAIL dE =7.516e-01 <= 1.000e-05 reason=timeout/cap FAIL
ADAPT-CSE (Adaptive)	PASS gap=0.938 >= 0.90 reason=timeout/cap	FAIL gap=0.856 >= 0.90 reason=timeout/cap

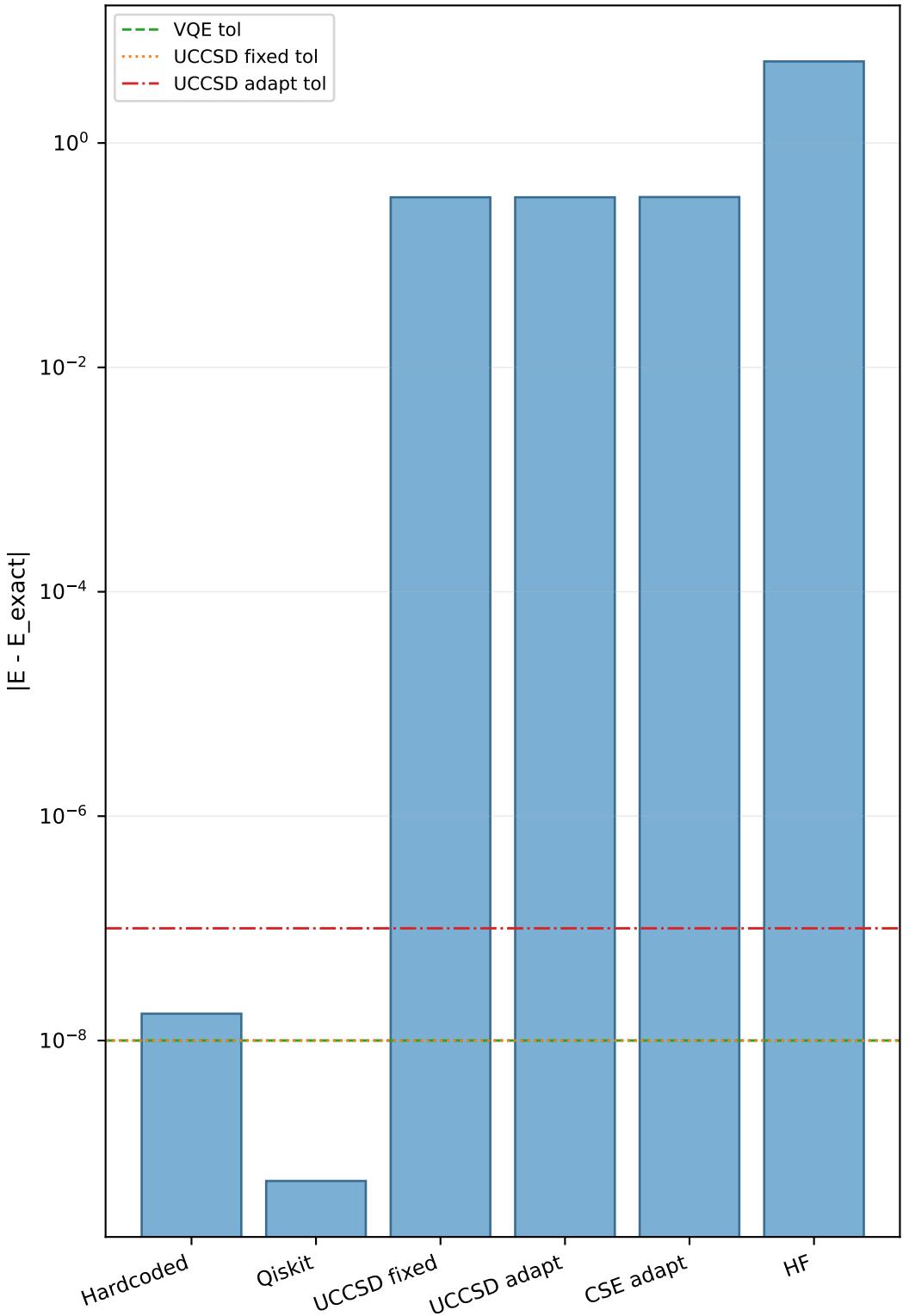
L=2 Best Results

L=3 Best Results

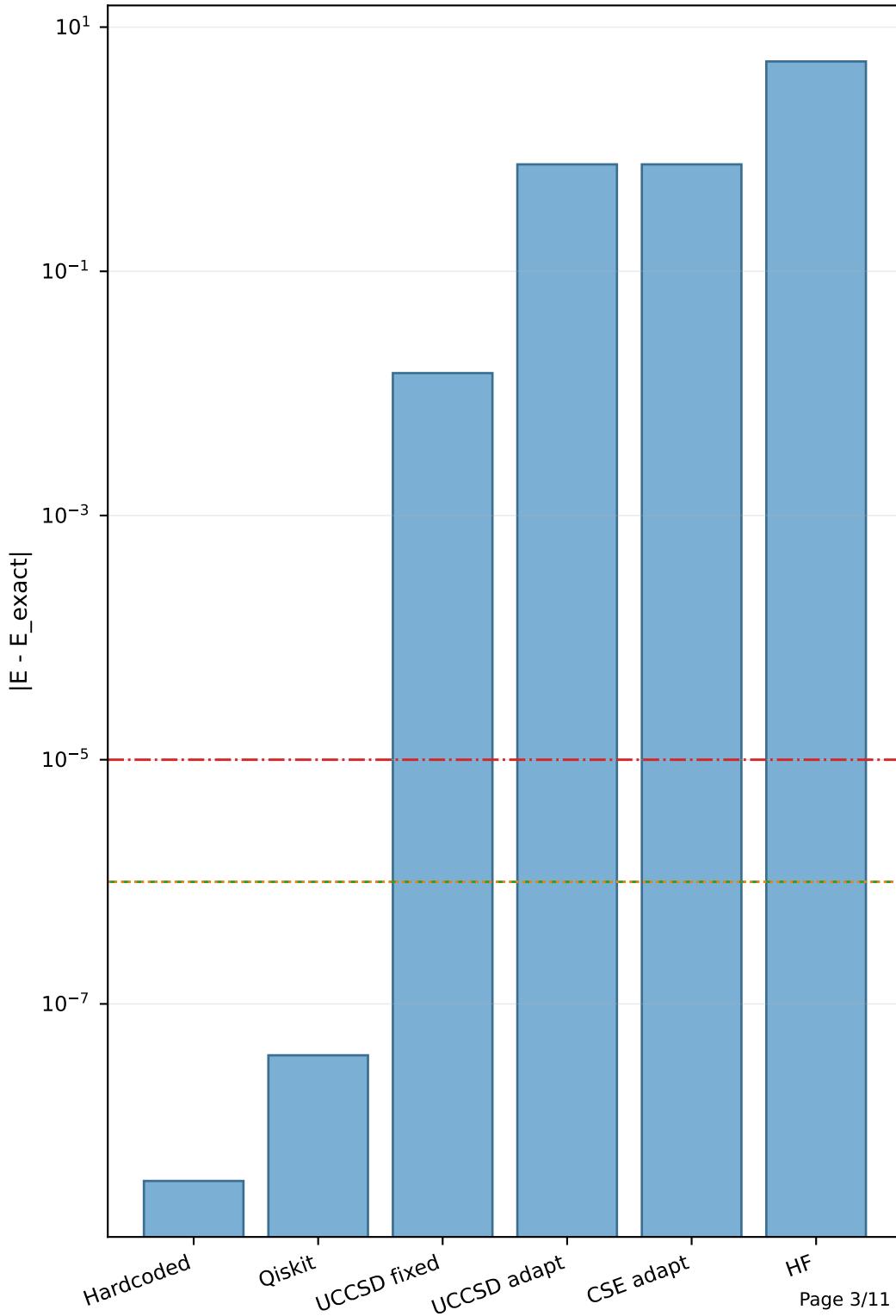
Method	E_best	dE	gap	Runtime	Gate	Reason	Method	E_best	dE	gap	Runtime	Gate	Reason
exact	0.3605710.000e+0	NA	0.00	PASS	reference		Exact	0.3606790.000e+0	NA	0.00	PASS	reference	
hartree	1.50000006336e+0	0.000	0.00	PASS	reference		Hartree	1.00000006236e+0	0.000	0.00	PASS	reference	
hardcoded VQE	0.3605710.734e-0	1.000	0.10	FAIL	tol	Hardcoded VQE	0.3606790.547e-0	1.000	4.30	PASS	ok		
Qiskit VQE	0.3605715.600e-1	1.000	1.81	PASS	ok	Qiskit VQE	0.3606793.795e-0	1.000	41.84	PASS	ok		
UCCSD	0.360793650.281e-0	0.939	7.53	FAIL	timeout	ADAPT-UCCSD (Fixed)	0.3607937.467e-0	0.997	336.92	FAIL	timeout/cap		
UCCSD	0.360793650.281e-0	0.939	14.85	FAIL	timeout	ADAPT-UCCSD	0.360443530.516e-0	0.856	3.66	FAIL	timeout/cap		
CSE	0.3631290.297e-0	0.938	5.41	PASS	timeout	ADAPT-CSE	0.360443530.516e-0	0.856	3.23	FAIL	timeout/cap		

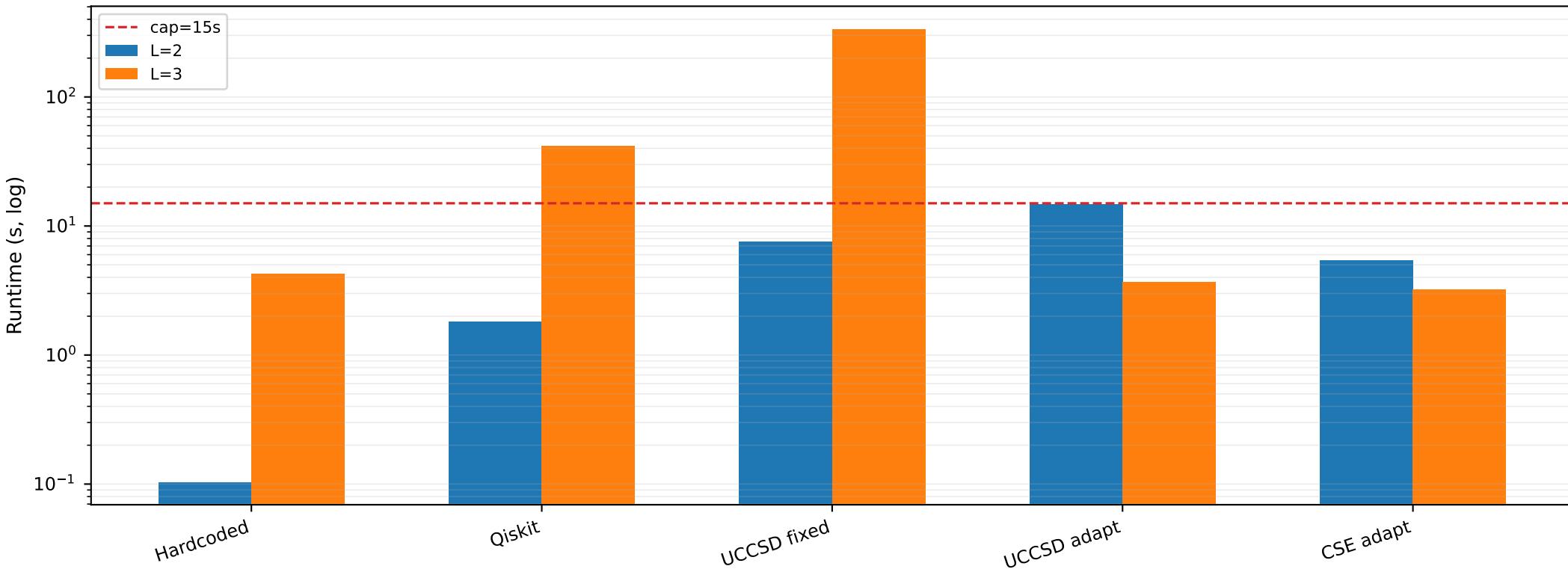
L	Method	E_best	 dE 	gap	Runtime(s)	Gate	Reason
L=2	Hardcoded VQE (UCCSD)	-0.836057100816	1.734e-08	1.000	0.10	FAIL	tol
L=2	Qiskit VQE (UCCSD)	-0.836057117595	5.600e-10	1.000	1.81	PASS	ok
L=2	ADAPT-UCCSD (Fixed Sequencer)	-0.507936507927	3.281e-01	0.939	7.53	FAIL	timeout/cap
L=2	ADAPT-UCCSD (Adaptive)	-0.507936507936	3.281e-01	0.939	14.85	FAIL	timeout/cap
L=2	ADAPT-CSE (Adaptive)	-0.506312970694	3.297e-01	0.938	5.41	PASS	timeout/cap
L=3	Hardcoded VQE (UCCSD)	-1.236067973953	3.547e-09	1.000	4.30	PASS	ok
L=3	Qiskit VQE (UCCSD)	-1.236067939546	3.795e-08	1.000	41.84	PASS	ok
L=3	ADAPT-UCCSD (Fixed Sequencer)	-1.221399776886	1.467e-02	0.997	336.92	FAIL	timeout/cap
L=3	ADAPT-UCCSD (Adaptive)	-0.484435331766	7.516e-01	0.856	3.66	FAIL	timeout/cap
L=3	ADAPT-CSE (Adaptive)	-0.484435331759	7.516e-01	0.856	3.23	FAIL	timeout/cap

L=2 Absolute Error

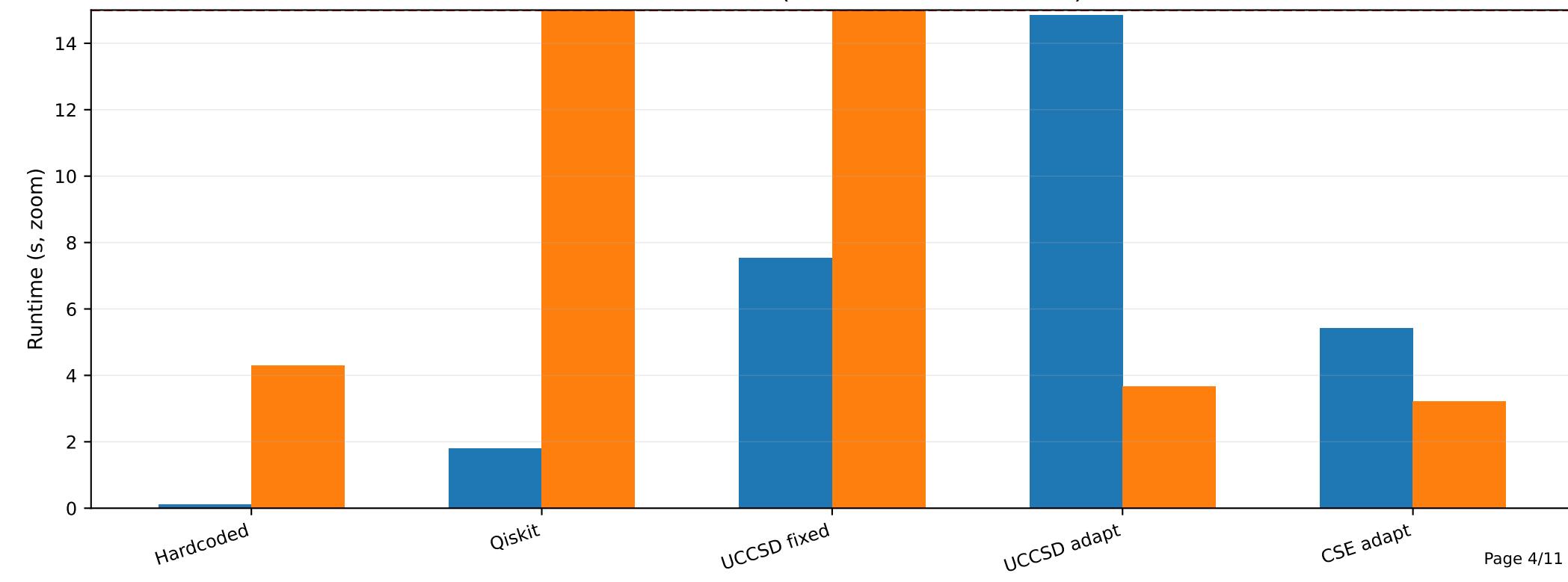


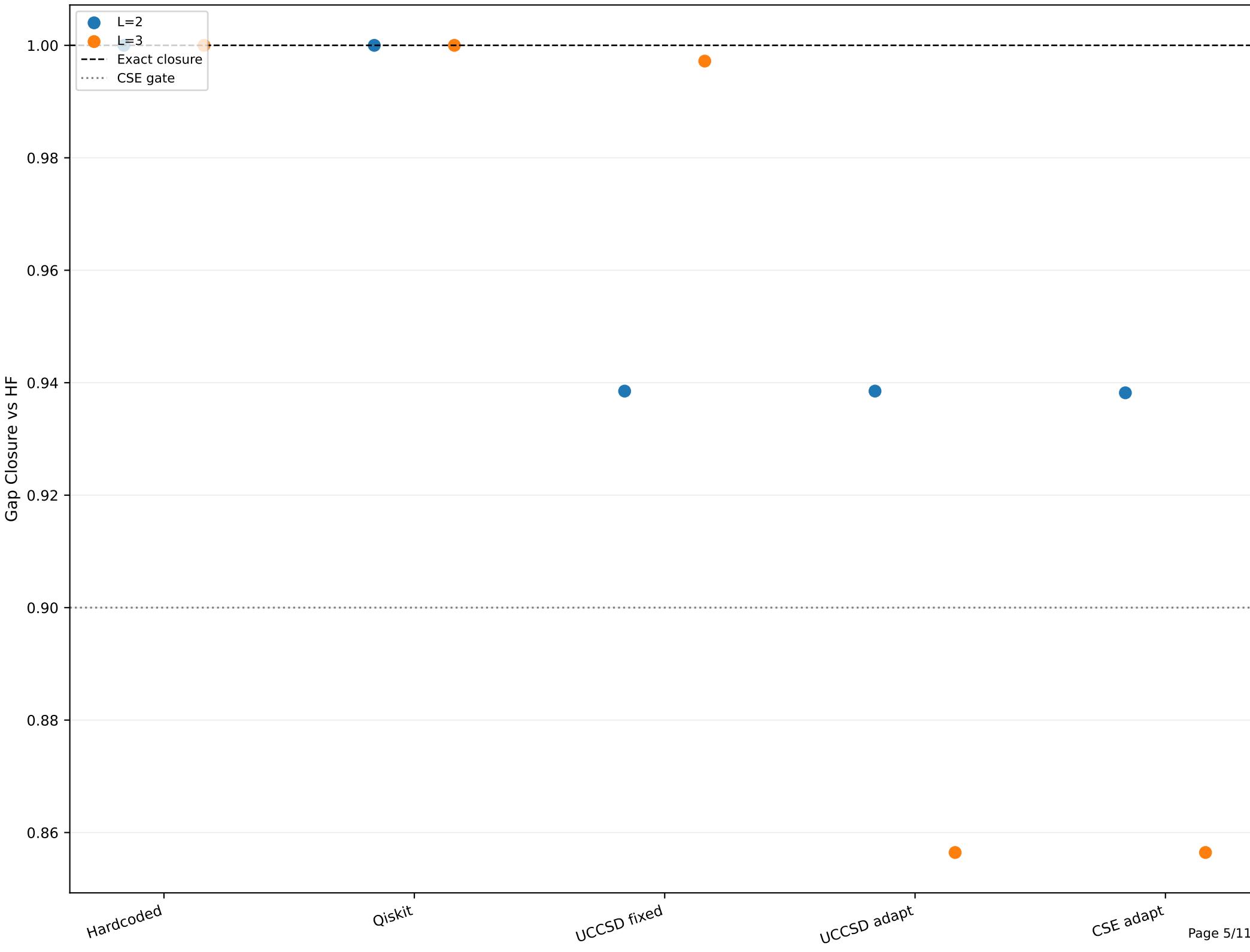
L=3 Absolute Error



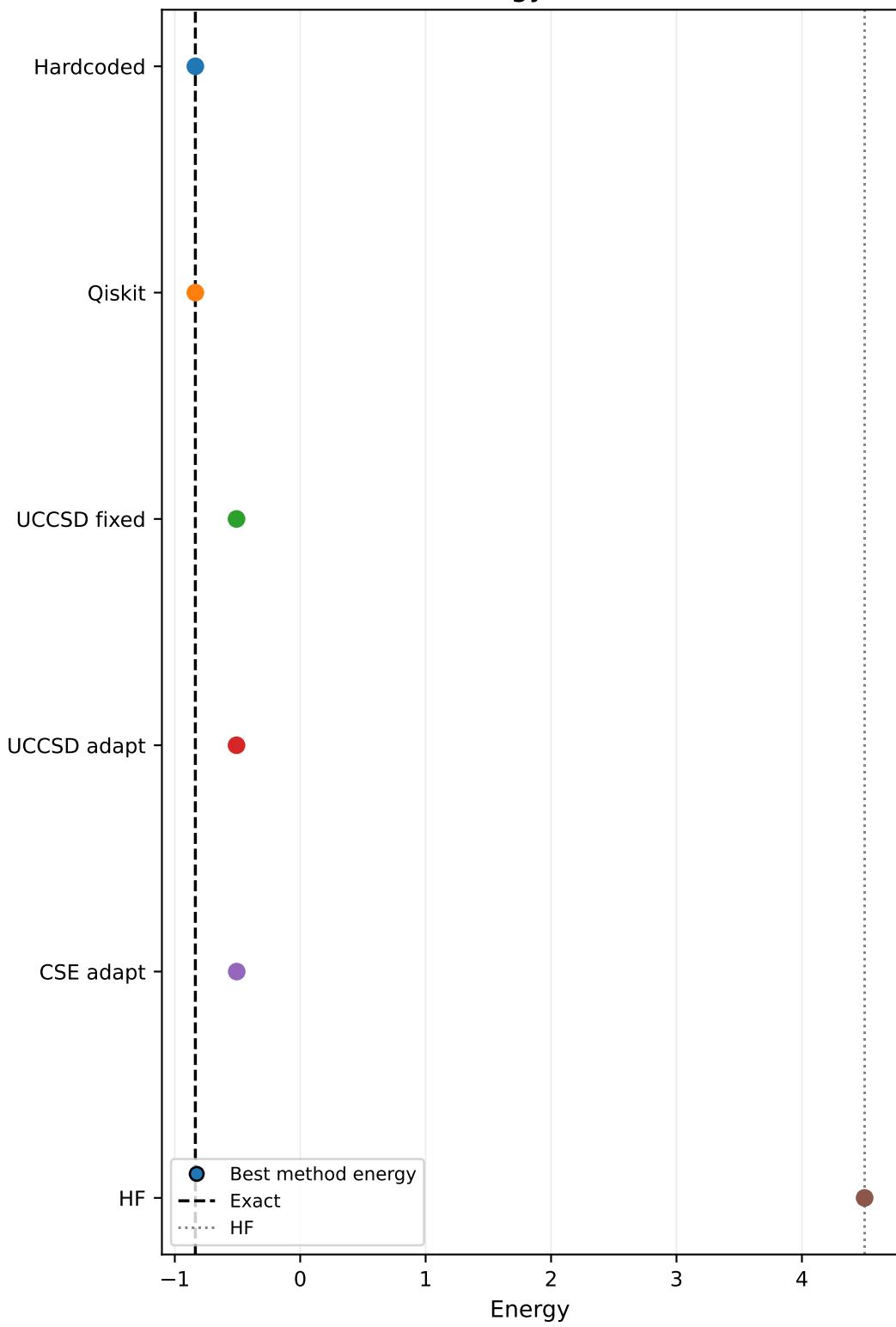


Runtime Zoom (small runtimes visible)

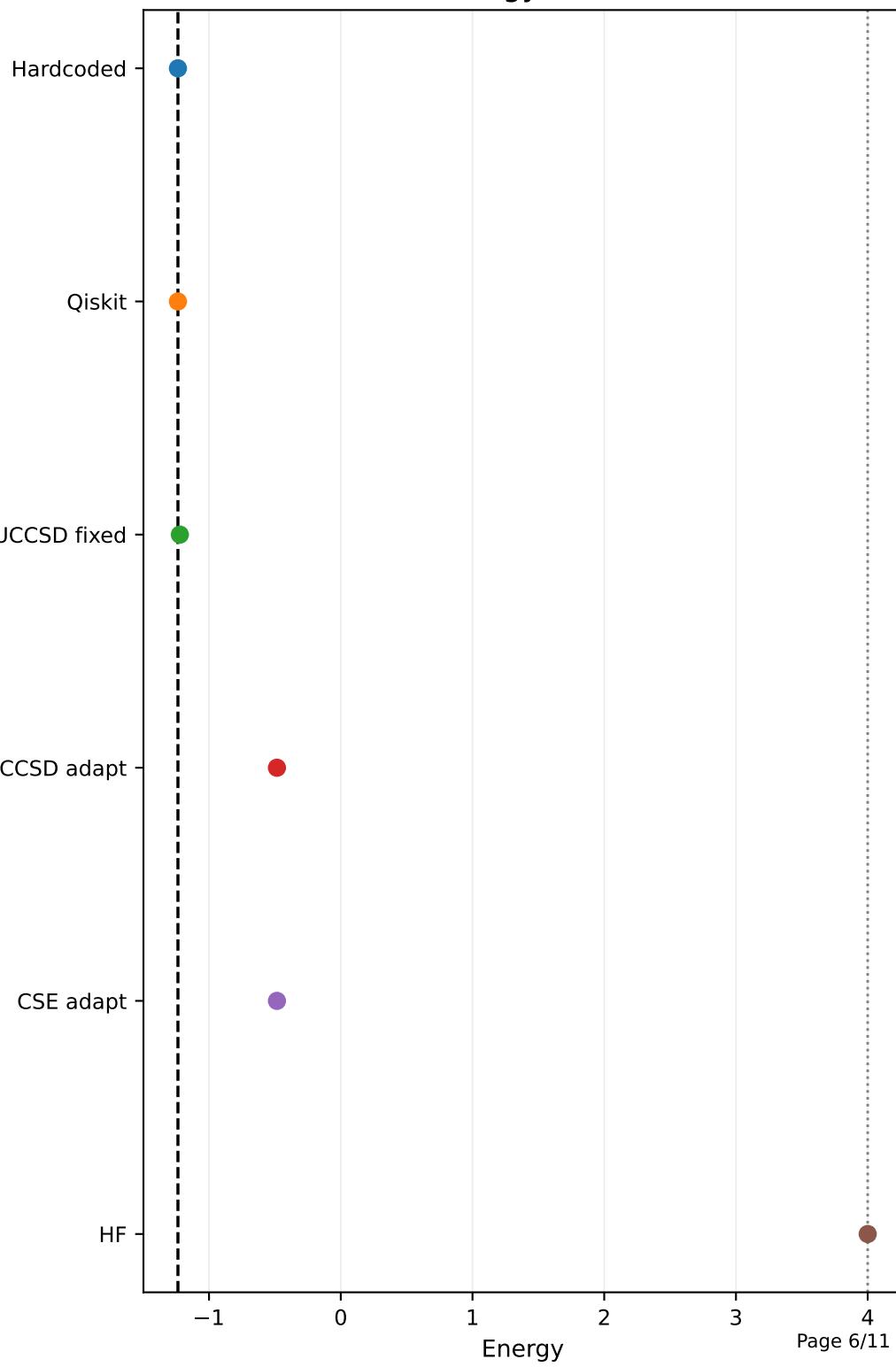


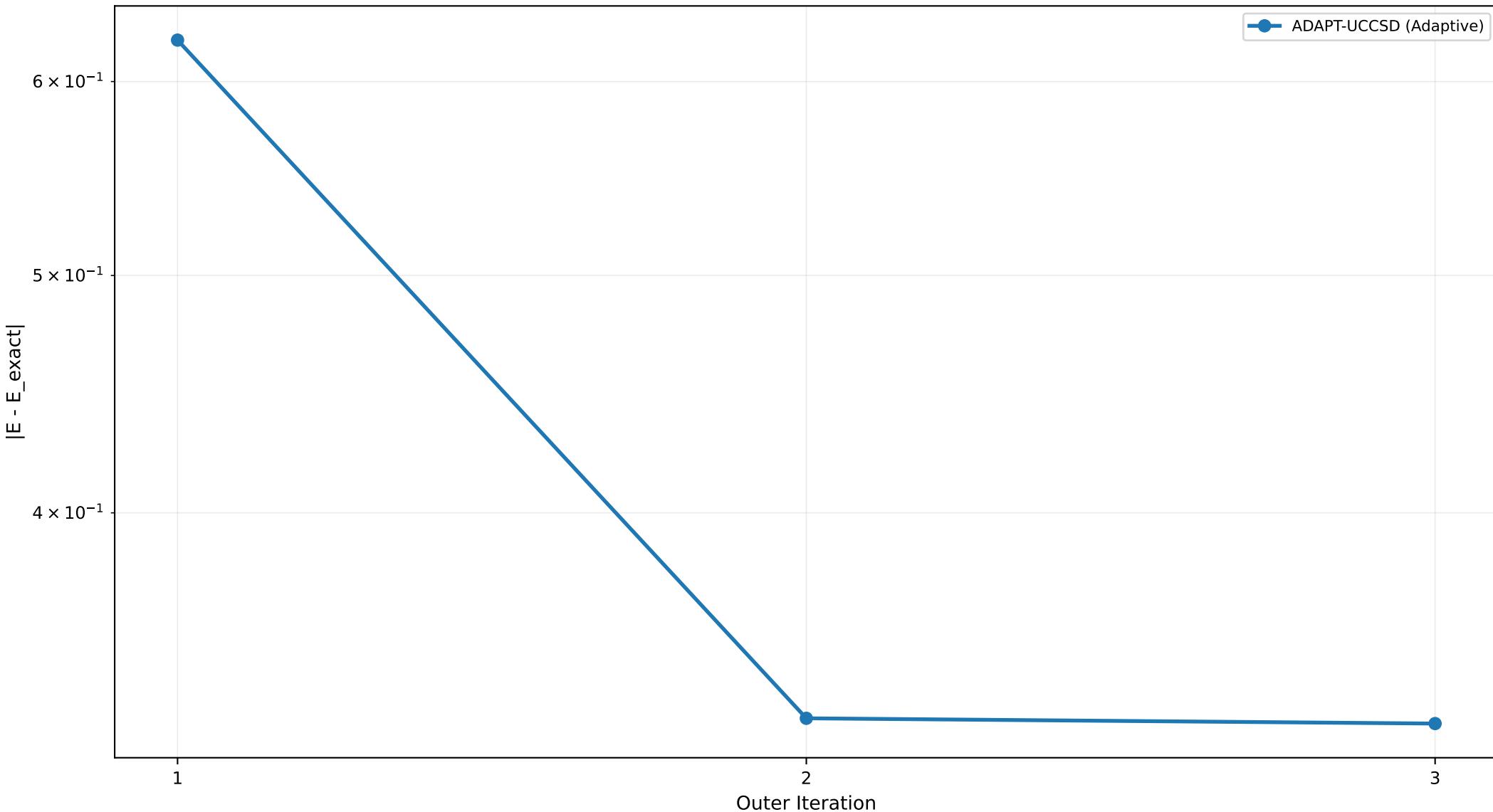


L=2 Energy Positions

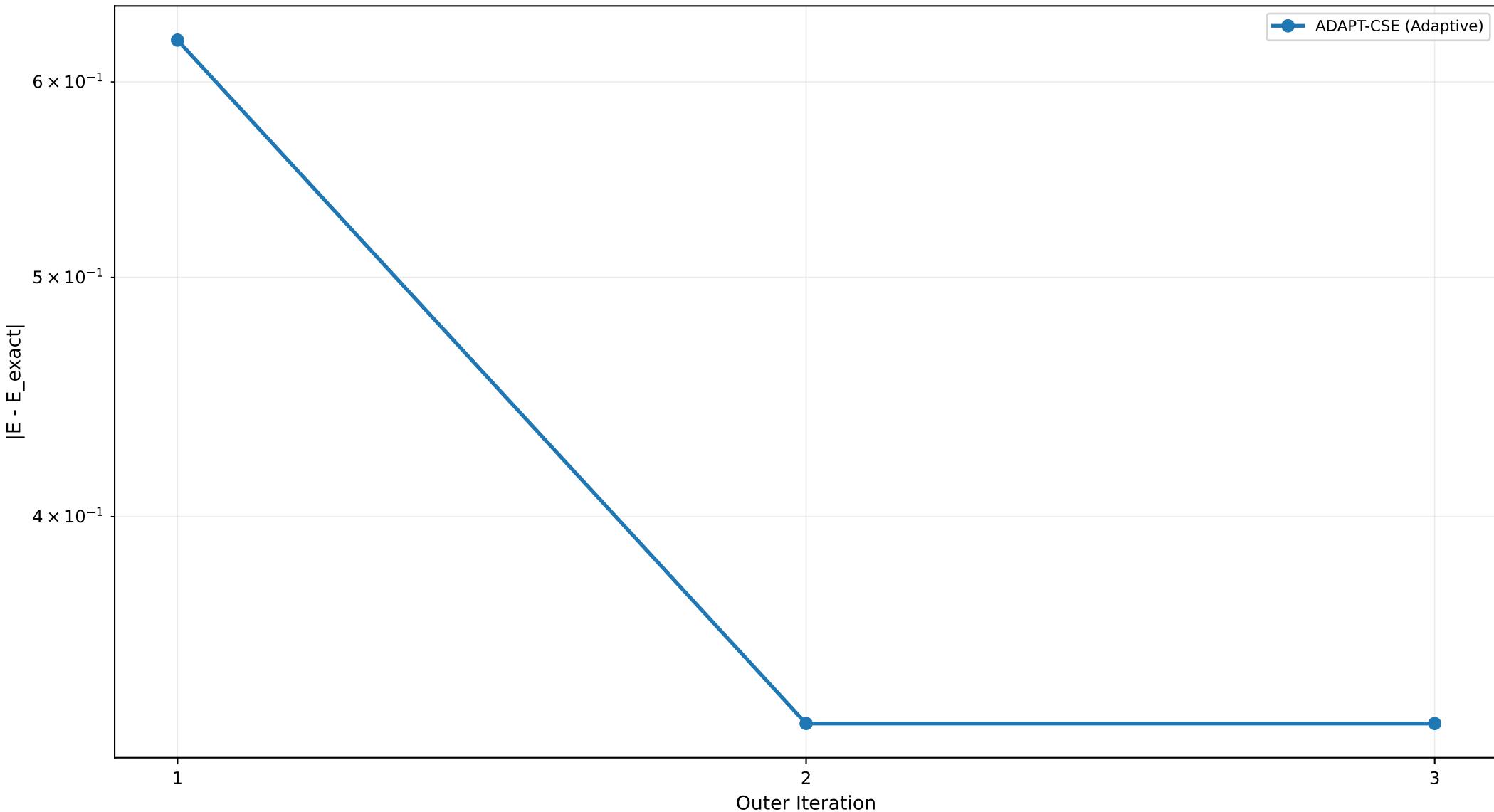


L=3 Energy Positions

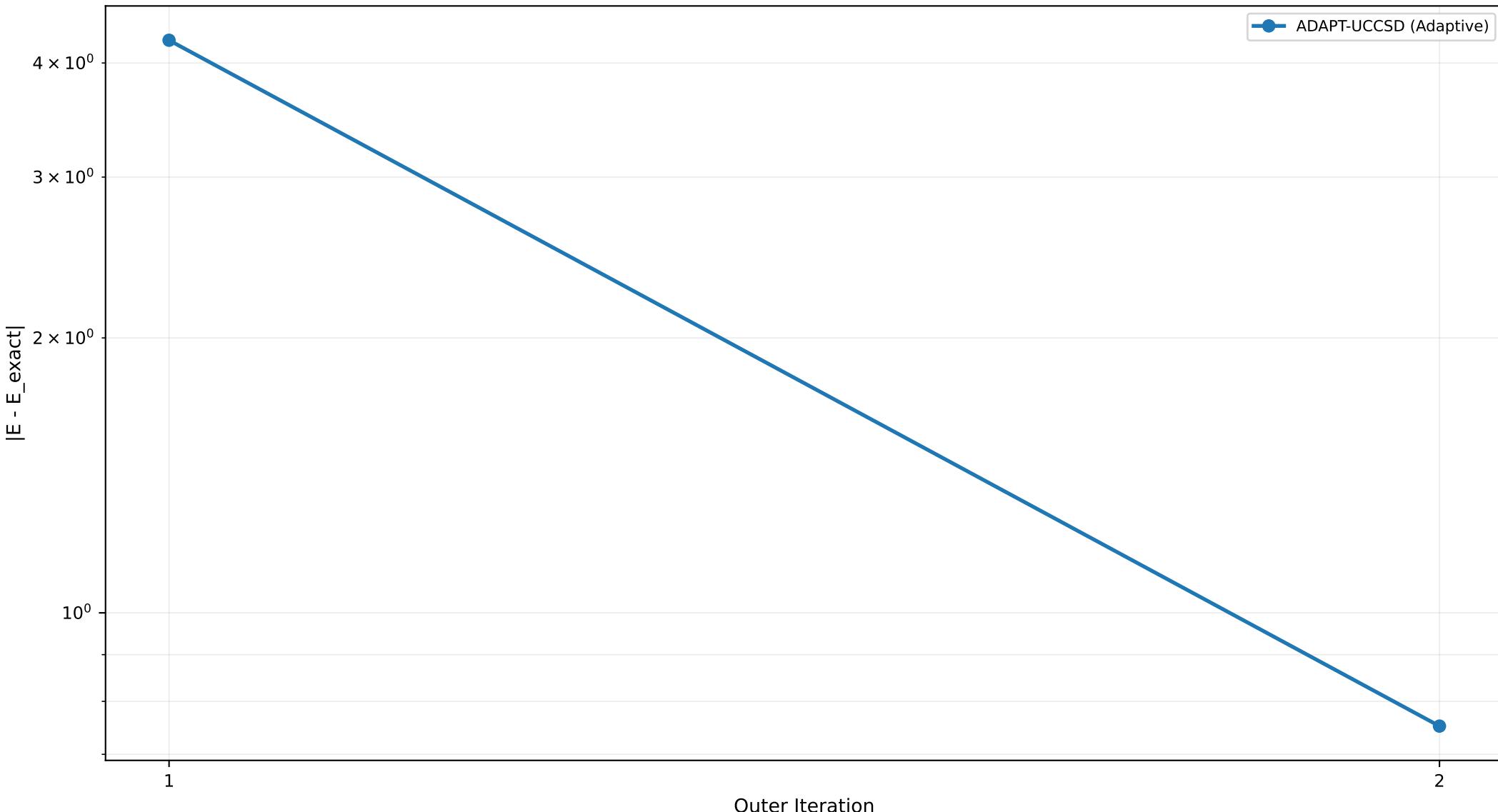




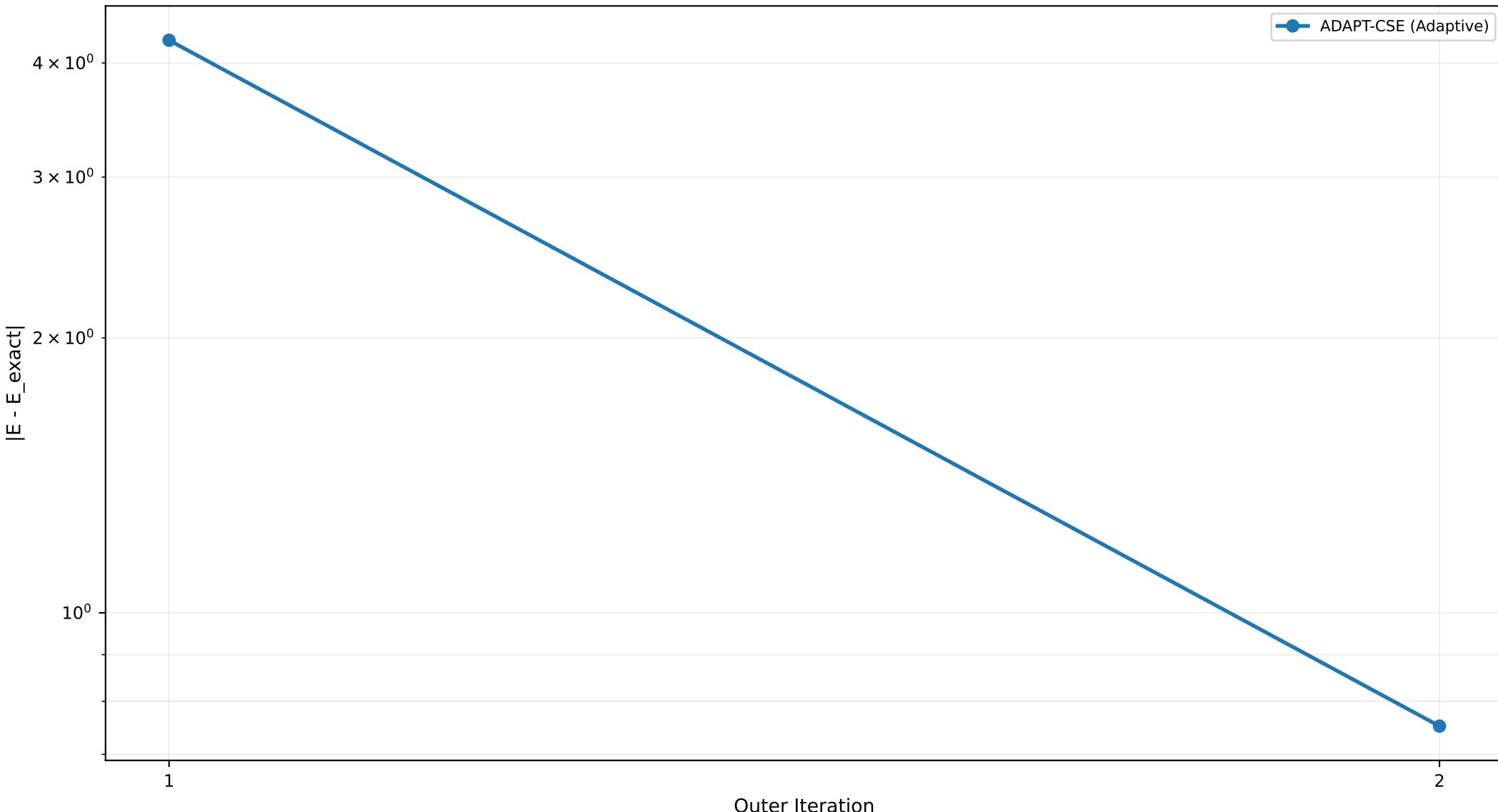
Method	N_iter	Final $ dE $	Runtime(s)	Stop/Note
ADAPT-UCCSD (Fixed Sequence)	1	3.281×10^{-1}	7.53	stopped after 1 iteration; stop=budget:max



Method	N_iter	Final $ dE $	Runtime(s)	Stop/Note
ADAPT-CSE (Adaptive)	3	3.297×10^{-1}	5.41	stop=budget:max_time_s



Method	N_iter	Final $ dE $	Runtime(s)	Stop/Note
ADAPT-UCCSD (Fixed Sequence)	1	1.467e-02	336.92	stopped after 1 iteration; stop=budget:max



Method	N_iter	Final $ dE $	Runtime(s)	Stop/Note
ADAPT-CSE (Adaptive)	2	7.516e-01	3.23	stop=budget:max_time_s

L	Method	E_best	 dE 	gap	Runtime(s)
L=2	Hardcoded	-0.836057100816	1.734e-08	1.000	0.10
L=2	Qiskit	-0.836057117595	5.600e-10	1.000	1.81
L=2	UCCSD fixed	-0.507936507927	3.281e-01	0.939	7.53
L=2	UCCSD adapt	-0.507936507936	3.281e-01	0.939	14.85
L=2	CSE adapt	-0.506312970694	3.297e-01	0.938	5.41
L=3	Hardcoded	-1.236067973953	3.547e-09	1.000	4.30
L=3	Qiskit	-1.236067939546	3.795e-08	1.000	41.84
L=3	UCCSD fixed	-1.221399776886	1.467e-02	0.997	336.92
L=3	UCCSD adapt	-0.484435331766	7.516e-01	0.856	3.66
L=3	CSE adapt	-0.484435331759	7.516e-01	0.856	3.23

Appendix: Warnings

- L=2 adapt_uccsd_fixed: stopped due to budget:max_time_s.
- L=2 adapt_uccsd_adapt: stopped due to budget:max_time_s.
- L=2 adapt_cse_adapt: stopped due to budget:max_time_s.
- L=3 qiskit_vqe: best runtime 41.84s exceeds cap 15.00s.
- L=3 adapt_uccsd_fixed: best runtime 336.92s exceeds cap 15.00s.
- L=3 adapt_uccsd_fixed: stopped due to budget:max_time_s.
- L=3 adapt_uccsd_adapt: stopped due to budget:max_time_s.
- L=3 adapt_cse_adapt: stopped due to budget:max_time_s.