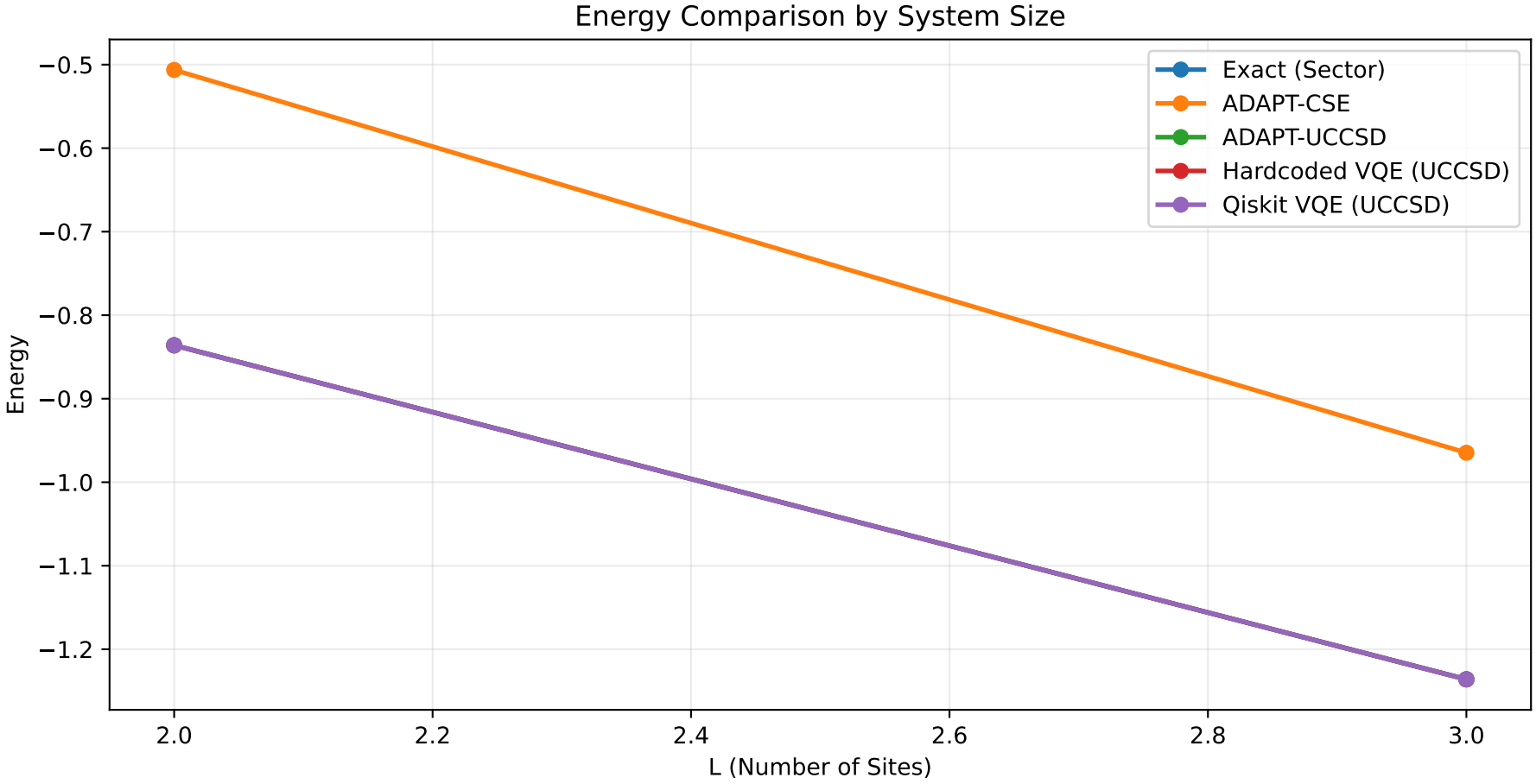
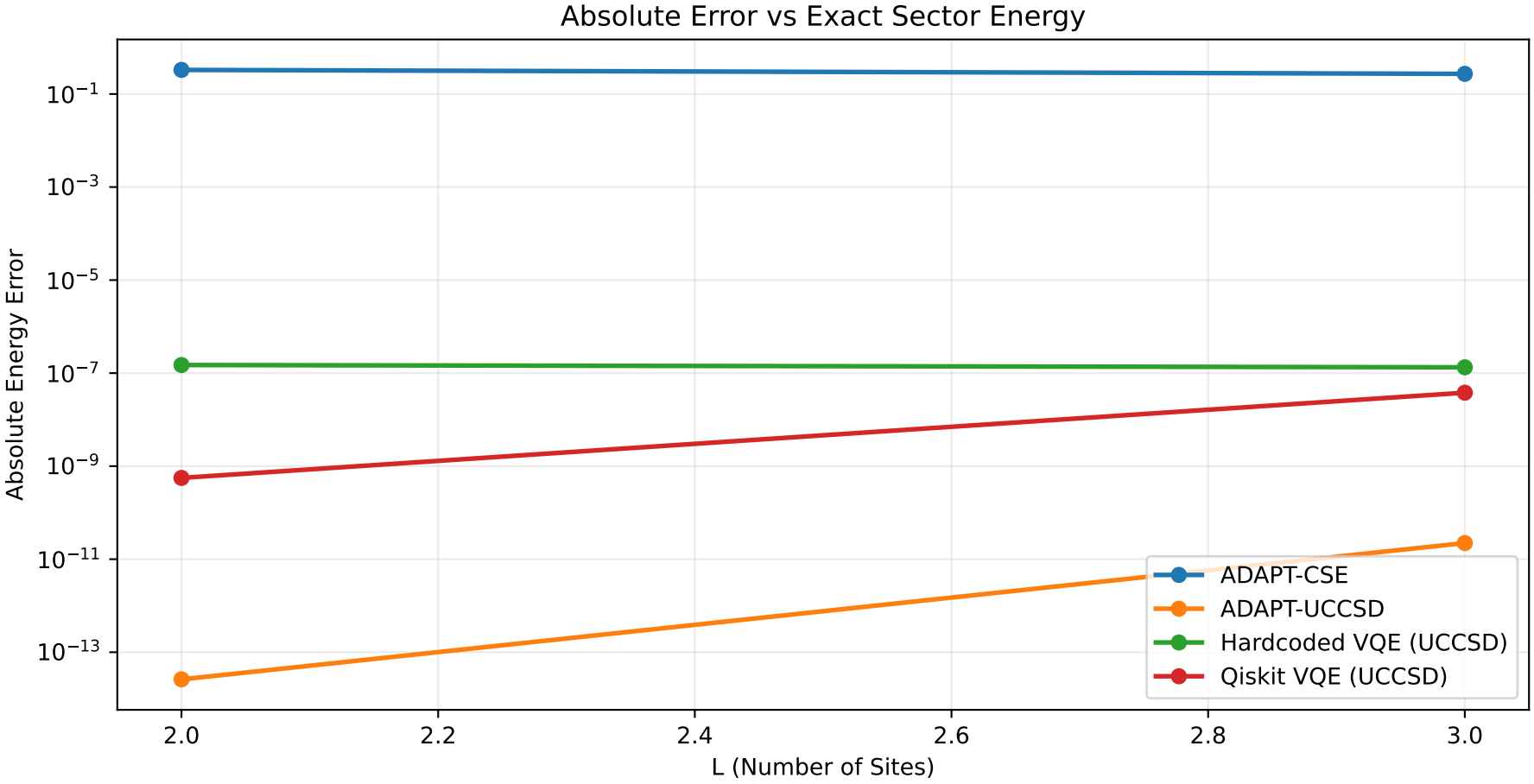
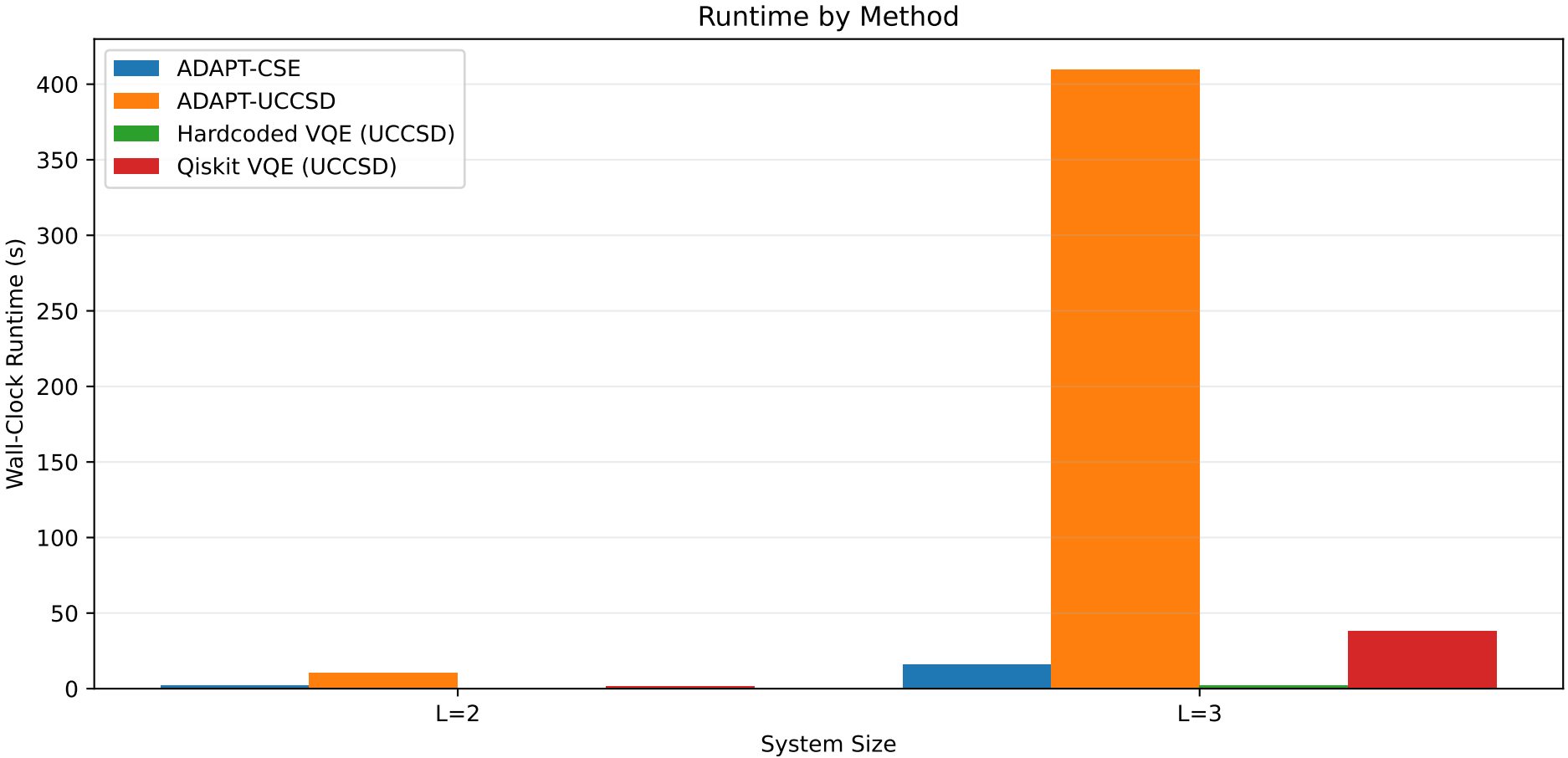
```
ADAPT/VQE Benchmark Summary
Generated (UTC): 2026-02-22T04:38:43.989625+00:00

Settings:
  sites=[2, 3] t=1.0 u=4.0 dv=0.5 boundary=open ordering=blocked odd_policy=min_sz
  ADAPT(inner_optimizer=lbfgs, inner_steps=80, max_depth=12, max_time_s=1800.0, allow_repeats=True)
  VQE(reps=2, restarts=1, maxiter=1000, seed=7)

L=2  (n_up=1, n_down=1)
  Exact (Sector)           E=-0.836057118155 |dE|=0.000e+00 t=0.00s
  ADAPT-CSE                E=-0.506312970693 |dE|=3.297e-01 t=1.97s
  ADAPT-UCCSD              E=-0.836057118155 |dE|=2.609e-14 t=10.43s
  Hardcoded VQE (UCCSD)    E=-0.836056968895 |dE|=1.493e-07 t=0.04s
  Qiskit VQE (UCCSD)       E=-0.836057117596 |dE|=5.588e-10 t=1.53s

L=3  (n_up=2, n_down=1)
  Exact (Sector)           E=-1.236067977500 |dE|=0.000e+00 t=0.00s
  ADAPT-CSE                E=-0.964712231458 |dE|=2.714e-01 t=16.10s
  ADAPT-UCCSD              E=-1.236067977478 |dE|=2.223e-11 t=409.40s
  Hardcoded VQE (UCCSD)    E=-1.236067844218 |dE|=1.333e-07 t=1.79s
  Qiskit VQE (UCCSD)       E=-1.236067939562 |dE|=3.794e-08 t=37.80s
```


Energy Comparison by System Size
Exact (Sector)
ADAPT-CSE
ADAPT-UCCSD
Hardcoded VQE (UCCSD)
Qiskit VQE (UCCSD)
Energy
−0.5
−0.6
−0.7
−0.8
−0.9
−1.0
−1.1
−1.2
2.0
2.2
2.4
2.6
2.8
3.0
L (Number of Sites)


Absolute Error vs Exact Sector Energy
Absolute Energy Error
$10^{-1}$
$10^{-3}$
$10^{-5}$
$10^{-7}$
$10^{-9}$
$10^{-11}$
$10^{-13}$
2.0
2.2
2.4
2.6
2.8
3.0
L (Number of Sites)
ADAPT-CSE
ADAPT-UCCSD
Hardcoded VQE (UCCSD)
Qiskit VQE (UCCSD)


Runtime by Method
ADAPT-CSE
ADAPT-UCCSD
Hardcoded VQE (UCCSD)
Qiskit VQE (UCCSD)
Wall-Clock Runtime (s)
0
50
100
150
200
250
300
350
400
L=2
L=3
System Size