TABLE 1
LSTM MODEL PARAMETERS

Parameter	Value	Parameter	Value
Number of layers	3	Hidden units	64
Output dimension	1	Dropout rate	0.1
Activation (output)	ReLU	Optimizer	Adam
Learning rate	0.001	Batch size	32
Maximum epochs	100	Loss function	MSE
Sequence length	20	Prediction horizon	1 hour

TABLE 2
GRU MODEL PARAMETERS

Parameter	Value	Parameter	Value
Number of layers	3	Hidden units	64
Output dimension	1	Dropout rate	0.1
Activation (output)	ReLU	Optimizer	Adam
Learning rate	0.001	Batch size	32
Maximum epochs	100	Loss function	MSE
Sequence length	20	Prediction horizon	1 hour

TABLE 3
BiLSTM MODEL PARAMETERS

Parameter	Value	Parameter	Value
Number of layers	3	Hidden units (per direction)	64
Total hidden output	128	Bidirectional	True
Output dimension	1	Dropout rate	0.1
Activation (output)	ReLU	Optimizer	Adam
Learning rate	0.001	Batch size	32
Maximum epochs	100	Loss function	MSE
Sequence length	20	Prediction horizon	1 hour

TABLE 4
BiGRU MODEL PARAMETERS

Parameter	Value	Parameter	Value
Number of layers	3	Hidden units (per direction)	64
Total hidden output	128	Bidirectional	True
Output dimension	1	Dropout rate	0.1
Activation (output)	ReLU	Optimizer	Adam
Learning rate	0.001	Batch size	32
Maximum epochs	100	Loss function	MSE
Sequence length	20	Prediction horizon	1 hour

TABLE 5
Q-LEARNING LAYER PARAMETERS

Parameter	Value	Parameter	Value
Hidden layers	[128, 128]	Activation	ReLU
Learning rate (α)	0.001	Discount factor (γ)	0.95
Initial epsilon (ε)	0.1	Final epsilon (ε)	0.01
Batch size	64	Optimizer	Adam

TABLE 6
PPO LAYER PARAMETERS

Parameter	Value	Parameter	Value
Hidden layers	[128, 128, 128]	Activation	ReLU
Actor learning rate	3×10^{-5}	Critic learning rate	5×10^{-4}
Clip ratio (ϵ)	0.3	Discount factor (γ)	0.99
GAE lambda (λ)	0.95	Entropy coefficient	0.2
Value loss coefficient	0.5	Optimizer	Adam