

# Appendix

## Hyperparameter Settings

Table S1 lists the encoder and spiking neuron parameters used in all experiments. The values are fixed across datasets and prediction horizons for consistency.

Table 1: **Table S1.** Hyperparameters for encoder and spiking neurons.

Component / Parameter	Symbol	Value
Sub-steps per step	$T_s$	4
Membrane decay factor	$\beta$	0.99
Threshold	$V_{th}$	1.0
Reset potential	$V_{reset}$	0
Surrogate slope	$\alpha$	2

## Dataset and Training Setup

For reproducibility, we provide the detailed dataset preprocessing and training configurations. The settings include optimizer, learning rate, batch size, early stopping criteria, and key architectural parameters. Dataset splits follow chronological order to prevent information leakage. These details are summarized in Table S2.

Table 2: **Table S2.** Dataset and training configuration.

Component	Electricity	Solar-Energy
Window size ( $P$ )	168	168
Optimizer	Adam	Adam
Learning rate	0.001	0.001
Batch size	24	48
Early stopping	30	30
Kernel size	16	64
Hidden size	64	64
Num. levels	3	3
Dilation	2	2
Num. steps	4	4
Stride	1	1