Configuration

Select Optimization Method:

- ○ Gradient Ascent
- ○ ISGM Constant Step
- ◉ ISGM Decreasing Step

Select Sigma Values:

0.5 × 1 × 2 ×

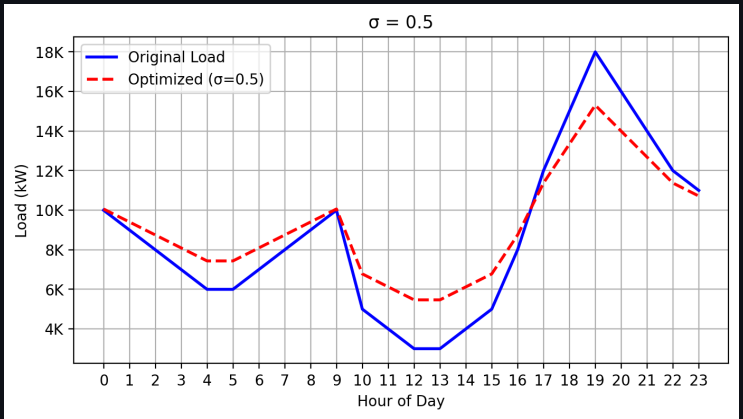
🦆 Duck Curve Optimization Visualizer

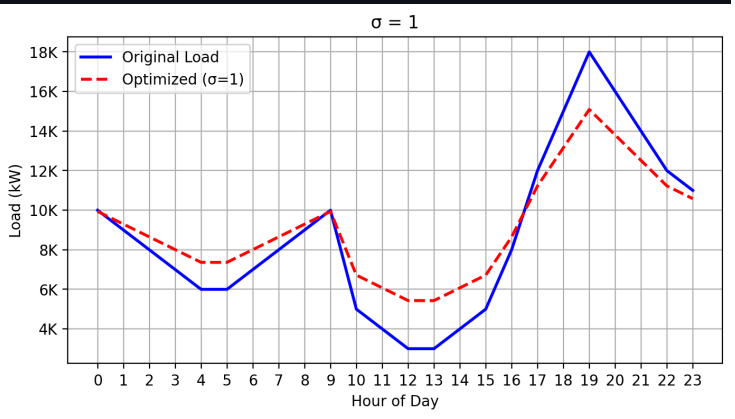
This application demonstrates different optimization methods for flattening the duck curve:

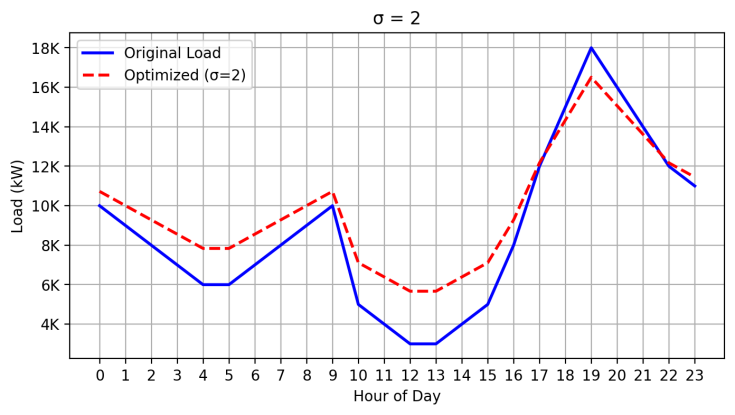
- **Gradient Ascent**: Traditional gradient ascent with fixed step size
- **ISGM Constant Step**: Incremental Stochastic Gradient Method with constant step size
- **ISGM Decreasing Step**: ISGM with dynamically decreasing step size

Individual Plots | Combined Plot

Individual Results for ISGM Decreasing Step







Method Explanation

ISGM with Decreasing Step Size:

- Advanced version with dynamic step size $\alpha_k = 1/((1 + N/\sigma)^2 + k)$
- Step size decreases with iterations (k)
- Typically provides better convergence guarantees
- More robust to initial parameter choices

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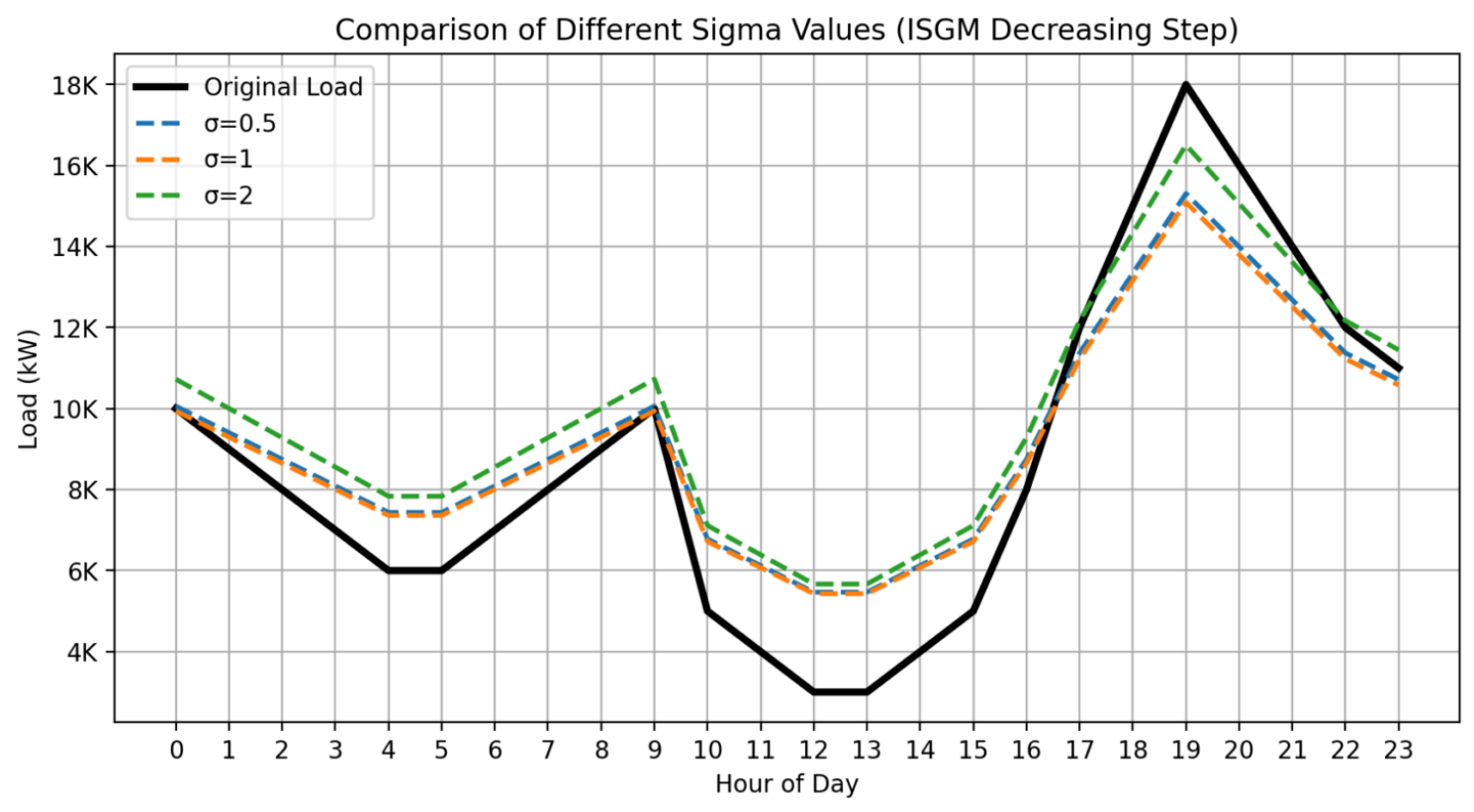
Combined Results for ISGM Decreasing Step



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