Optimization & Operational Metrics Comparison

Peak Load Reduction (%)
- Baseline
- Greedy: 12.5%
- GA: 18.3%
- PSO: 22.1%
- DQN: 28.7%
- Multi-Obj: 31.2%

Energy Cost Savings ($)
- Baseline
- Greedy: $150
- GA: $280
- PSO: $420
- DQN: $580
- Multi-Obj: $650

Load Variance Reduction
- Baseline: 0.15
- Greedy: 0.25
- GA: 0.32
- PSO: 0.41
- DQN: 0.48
- Multi-Obj

User Satisfaction Score
- Baseline: 0.65
- Greedy: 0.72
- GA: 0.78
- PSO: 0.83
- DQN: 0.89
- Multi-Obj: 0.93

Charging Completion Rate
- Baseline: 0.92
- Greedy: 0.94
- GA: 0.96
- PSO: 0.97
- DQN: 0.98
- Multi-Obj: 0.99

Constraint Violations
- Baseline: 45
- Greedy: 32
- GA: 18
- PSO: 12
- DQN: 5
- Multi-Obj: 2