*Yellow highlight = manual inputs

Step 1: Choose your energy goals

Cost savings ✅ clean energy ✅

Step 2: Select your technologies:

PV ✅ Battery ❌ Grid ✅

Step 3: Enter Your Site Data

1. Site and Utility
    a. Site Location = MSA (Metropolitan Statistical Area)
    b. Electricity Rate = Utility, Schedule RS - Residential Rate (time of use if available)
        i. Record utility name as it appears on REopt in output column F (Utility (REopt))
    c. Click "Rate Details" (underneath utility dropdown) and copy link into output column G (Utility Link (Rate Details from REopt) [OpenEI Link])

+ Optional Inputs

2. Location
    a. PV & wind space available: ❌ Land only ✅ Roofspace only ❌ Land & roofspace
    b. Roof space available (ft^2): Unlimited
3. Electrical
    a. Net metering system size limit (kW) (AKA System Capacity): **SEE COLUMN J in REOPT OUTPUTS "System capacity *100 (for 100 apartments)" (should be 0 if state has no NEM policy or a large number >= 1000, which we shouldn't hit)**
    b. Technologies that can net meter: ✅ PV ✅ Wind ❌ CHP
    c. Wholesale rate ($/kWh): 0
4. Solver Settings
    a. Solver optimality Tolerance (%) = 0.1%
5. Load Profiles

    Typical electrical Load

    a. Type of building: Midrise Apartment
    b. Annual electricity consumption: ✅Annual

    Electrical load adjustment

    c. Adjust electricity consumption → 100% of original consumption
6. Financial
    a. Analysis period (years): 25

b. Host discount rate, nominal (%): 5.64%
c. Electricity cost escalation rate, nominal (%): 1.9%

+ Advanced inputs

d. Host effective tax rate (%): 0%
e. O&M cost escalation rate (%): 2.5%

7. Renewable Energy & Emissions

Electricity Grid Emissions Factors → Hourly

a. Source of hourly grid emission factors: use default region
b. Projected annual percent decrease in grid emission factors (%/year): use default (1.174%)

Emissions Costs

c. Include climate costs in the objective? NO, just report costs
d. Include health costs in the objective? NO, just report costs

+Advanced Inputs

Treatment of Exported Electricity

e. Count renewable electricity (RE) exported to the grid towards annual RE goals? Yes
f. Count electricity exported to the grid towards emissions offsets? Yes

Climate Costs

g. CO_2 cost ($/t$CO_2$) = $185

Health Costs (defaults - auto-populate by location)

	From on-site fuel burn	**From grid emissions**
NO_x cost ($/t NO_x)		
SO_2 cost ($/t SO_2)		
PM2.5 cost ($/t PM2.5)		

CO_2 cost escalation rate, nominal (%) =
NOx cost escalation rate, nominal (%) =
SO_2 cost escalation rate, nominal (%) =
PM2.5 cost escalation rate, nominal (%) =

Clean Energy Goals

Clean energy target = renewable electricity

Minimum annual renewable electricity (%) – none
Maximum annual renewable electricity (%) – none

PV

System capital cost ($/kW-DC): $1,592
❌ Existing PV system?
Minimum new PV size (kW-DC): 0
Maximum new PV size (kW-DC): Unlimited
+ Advanced Inputs

PV System Characteristics

O&M cost($/kW): $17
Module Type: Premium
Array type: Rooftop, Fixed
Array azimuth: leave blank (default = 180)
Array tilt (degrees): 10
DC to AC size ratio: 1.35
System losses (%): 5%
PV generation profile: leave blank
PV Station Search Radius (mi): Unlimited

PV Incentives and Tax Treatment

	Incentive based on percentage of cost (%)	**Maximum dollar amount for incentive based on percentage of cost ($)**	**Rebate based on system size ($/kW)**	**Maximum dollar amount for rebate based on system size ($)**
Federal	30%	Unlimited	$0	Unlimited
State	0%	Unlimited	$0	Unlimited
Utility	0%	Unlimited	$0	Unlimited

Production Based Incentives

	Production incentive ($/kWh)	**Incentives duration (yrs)**	**Maximum incentive ($)**	**System size limit (kW)**

Total	$0	1	Unlimited	Unlimited

Tax Treatment
MACRS schedule: 5 years
MACRS bonus depreciation: 100%